

**Scientific Authority and Jewish Law in Early Modern Italy**

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## ABSTRACT

### **Scientific Authority and Jewish Law in Early Modern Italy**

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This dissertation examines the interactions between early modern science and traditional Jewish legal scholarship through the life and work of Italian rabbi and physician Isaac Lampronti (1679-1756). Lampronti produced both the first alphabetically organized encyclopedia (the *Paḥad Yiẓḥak*) and the first periodical (the *Bikurei kaẓir*) of rabbinic law, which refashioned the traditional rabbinic system according to scientific methodologies and emerging Enlightenment ideas. Unwilling to relinquish the authorities of either science or traditional Jewish law, Lampronti creatively mediated the tensions between the two. The dissertation shows that the intellectual movements of the period not only catalyzed innovation within the realm of religious belief, they transformed religious practice and study as well.

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Lastly, and most importantly, Harry: this work is yours too.

Any mistakes and flaws in the work are of course all my own.

## Introduction

Situated on a perfectly classic cobblestone street lined with old-world residences, not far outside the shadows of Castle Estense and Basilica San Giorgio, Ferrara's two main tourist attractions, the once home of Isaac Lampronti is identified by a modest but proud plaque: "In this house lived Isaac Lampronti, who was born in 1679 and died in 1756. He was among the most celebrated physicians and theologians, who honored his native land and was revered for his scientific contributions by the people of the city."<sup>1</sup>

The memorial was erected in 1872, more than a century after Lampronti's death, to commemorate the illustrious rabbi, prolific author, and respected physician. Yet unknown to passersby and historians alike is the significance of this man's life and work for the study of religion, science, and the Enlightenment in the early eighteenth century. During his lifetime, Lampronti boldly led an effort to integrate early modern scientific genres, methods, and epistemologies with traditional Jewish law (*halakhah*). He produced both the first alphabetically organized encyclopedia of Jewish law (the *Paḥad Yiṣḥak* - Awe of Isaac) and the first periodical (the *Bikurei kaẓir* - First Fruits of the Harvest) of rabbinic law, which refashioned the traditional rabbinic system according to scientific methodologies and emerging Enlightenment ideas. Unwilling to choose between sacred traditions or new modes of thinking, Lampronti creatively mediated the tensions between the two.

Lampronti was the central figure in a group of Italian rabbis -- including Isaac Cantarini, Samson Morpurgo, and Sabbatai Marini -- who obtained medical degrees from the University of

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<sup>1</sup> "*Abitò in questa casa Isacco Lampronti, nato nel MDCLXXIX., morto nel MDCCLVI. Medico Teologo tra i dotti celebratissimo. Onorò la patria. Riverenti alla scienza alcuni cittadini posero MDCCCLXXII.*"

Padua in the late seventeenth and early eighteenth centuries. During a period of profound transformation in the study and pedagogy of the natural sciences, especially in Italy, these men immersed themselves in a medical curriculum increasingly driven by empirical methods and the latest advances in anatomy, botany, and clinical medicine. Unlike the majority of their coreligionists in central and eastern Europe, Lampronti and his cohort were deeply influenced by the contemporary scientific method and neither pitted religious scholarship against it nor treated each discipline in isolation from the other. Rather, they sought to reconcile the seemingly incompatible systems by organizing and interpreting the halakhic corpus according to the novel genres and methodologies of their period. Lampronti's *Paḥad Yiẓḥak* and *Bikurei kazir* are the principal and superlative products of that effort.

In the *Paḥad Yiẓḥak*, Lampronti anthologized Jewish legal sources from the talmudic era to his lifetime in a database-like format: each entry contains a statement of topic, citations of the opinions of rabbis since antiquity who wrote on the subject, the relevant correspondence (responsa) of Lampronti's contemporaries, and often Lampronti's own commentaries. The work was revolutionary in both form and content. In form, Lampronti introduced alphabetical organization, popular in his lifetime in the genres of scientific dictionaries and encyclopedias, to the presentation of halakhic texts. Lampronti's adoption of that structure, this study contends, reflects an abandonment of the traditional hierarchical structure of rabbinic literature. Lampronti replaced the static organizational models of the Talmud and the fourteenth-century *'Arba'ah turim* (Four Columns) with an alphabetical arrangement that allowed for insertion of new information and legal opinions. And in content, Lampronti frequently drew upon sources of knowledge foreign to traditional Jewish scholarship. In contradistinction to the established

rabbinic reliance on exegetical methods and legal precedent, Lampronti often shaped his legal opinions on the basis of his own medical study and empirical observations of medical procedures. He commonly cited the findings of contemporary scientific authorities in his legal decisions and even went so far as to emphasize the importance of anatomy for understanding whole areas of halakhah, especially rabbinic discussions of Jewish ritual slaughter. Lampronti's work also accessed a vast network of like-minded rabbi/physicians, with the inclusion in the encyclopedia of hundreds of letters written by his rabbinic contemporaries. This correspondence lent the *Paḥad Yiṣḥak* a collaborative quality characteristic of the broader European Republic of Letters. Finally, in addition to his encyclopedic compilation, Lampronti also launched the first periodical of Jewish law, the *Bikurei kaṣir*. In functioning as a public forum for the latest rabbinic discussions, this work was strikingly similar in character to the contemporary Italian academic journal, *Giornale de' Letterati d'Italia*.

The following study presents the first scholarly examination of the interactions between early modern science and sectarian legal scholarship, using the life and work of Isaac

Lampronti.<sup>2</sup> Accordingly, this study offers original contributions to multiple connected bodies of scholarship, especially the history of science, European history, and Jewish history.

## History of Science

Within the history of science, this dissertation illuminates the role of university-educated physicians in disseminating new scientific methods within even the most seemingly insular religious settings. To best understand the contribution, a few important historical and historiographical subjects must frame the outset of this study: scientific revolution, Italian science, and religion and science.

Only in the last generation have scholars abandoned the simplistic notion of a scientific revolution as “the most profound revolution achieved or suffered by the human mind” -- an

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<sup>2</sup> The previous articles on Lampronti and the *Pahad Yitzhak* include: Isaiah Sonne, “Foundation Stones for the History of Italian Jewry: Texts and Studies about the circle of Ramhal and R. I. Lampronti,” [Hebrew] *Hovev* 5-6 (1939-1940): 76-114; Boaz Cohen, “A List of Authors of Responsa Printed in the *Pahad Yitzhak*,” in *Festschrift für Aron Freimann zum 60. Geburtstag*, ed. Alexander Marx and Hermann Meyer (Berlin, 1935), 141-43; idem, “*Mazkeret mehabrei ha-teshuvot be-sefer Pahad Yitzhak* (A List of Authors of Responsa Printed in the *Pahad Yitzhak*), *Sefer ha-yovel likhvod Profesor Aleksander Marks be-melot lo arba'im shanah li-kehunato betor safran be-Yisra'el*, ed. David Frankel (New York, 1943), 41-57; Meir Benayahu, “Rabbi Yitzhak Lampronti ve-Rabbi Sabbatai Elhanan min ha-Zekenim,” [Hebrew] in *Sinai Sefer ha-yovel*, ed. J.L. Maimon (Jerusalem, 1957-8), 491-503; Yizhak Raphael, “Rabbi Yitzhak Lampronti,” [Hebrew] in *Rishonim ve-aharonim: perakim be-toldot Yisra'el ve-sifrut* (Tel Aviv: A. Tsiyoni, 1957); Yehudah A. Klausner, “An Unknown MS of R. Isaac Lampronti’s Sermons,” [Hebrew] *Qiryat sefer* 36 (1960-1): 123-36; David Margalit, *Hakhmei Yisra'el ke-rof'im* (Jerusalem, 1962), 152-74; Harry A. Savitz, “Doctor Isaac Lampronti (1679-1757): Rabbi, Physician, Teacher, Preacher, and Encyclopaedist,” *Panminerva medica* 4,4 (April, 1962); Saul Jarcho, “Dr. Isaac Lampronti of Ferrara,” *Koroth* 8, 11-12 (1985): 203-206; David B. Ruderman, “Contemporary Science and Jewish Law in the Eyes of Isaac Lampronti of Ferrara and Some of his Contemporaries,” in *The Frank Talmage Memorial*, Vol. II, ed. Barry Walfish, (Haifa: Haifa University Press, 1992), 211-224; Germano Salvatorelli, “*Isacco Lampronti medico e talmudista*,” in *La Figura del Medico: Aspetti Religiosi Culturali, Sociologici, Sanitari*, [terzo] *Convegno di studi*, Ferrara, 9 giugno, 1996, (Ferrara: Comunità Ebraica di Ferrara, 1998), 13-23; Ephraim Urbach, “R. Isaac Lampronti and his *Pahad Yitzhak*,” [Hebrew] in *Collected Writings in Jewish Studies*, ed. Moses D. Herr and Yonah Fraenkel (Jerusalem: The Hebrew University Magnes Press, 1999) 385-90; David Gianfranco di Segni, “*Il problema dello storione secondo Rabbi Yitzchak Lampronti nella Ferrara del '700*,” *Zakhor* 4 (2000): 115-125; David Malkiel, “Between Worldliness and Traditionalism: Eighteenth-Century Jews Debate Intercessory Prayer,” *JSIJ* 2 (2003): 169-198; David Malkiel, “The Sambation River and the Ten Tribes in the *Pahad Yitzhak*,” [Hebrew] *Pe'amim* 94-95 (2003): 159-180; David Malkiel, “*Ebraismo, tradizione e società: Isacco Lampronti e l'identità ebraica nella Ferrara del XVIII secolo*,” *Zakhor* 8 (2005): 9-42; David Malkiel, “Empiricism in Isaac Lampronti’s *Pahad Yitzhak*,” *Materia Giudaica* 10,2 (2005): 341-351; David Malkiel, “The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the *Pahad Yitzhak*,” *Jewish Law Annual* 16 (2006): 93-132; David Malkiel, “Law and Architecture: The Pollution Crisis in the Italian Ghetto,” *European Journal of Jewish Studies* 4, 2 (2010): 255-284.

abrupt and overarching force like few others in European history.<sup>3</sup> Historians of science are now more concerned with the ways individuals used natural knowledge and related to nature than in looking for the precipitating forces of modern science. Indeed, the primary pitfall of the previous historiography was its teleology: the “Scientific Revolution” supposedly marked the beginning of the ultimate end point of modern science. Despite the widespread rejection of this approach and its accompanying dogma, historians of science cannot ignore the emergence and acceptance of a “new philosophy” that took place to varying degrees and in various places throughout Europe in the early modern period.<sup>4</sup> The historian’s view of what constitutes science and scientific authority has expanded, but shifting grounds are still seen. In order to account for change without falling victim to teleology, scholars have narrowed and carefully framed their studies around specific local contexts and the activities of a few scientific practitioners in these communities.

This dissertation takes a similar approach by analyzing Lampronti specifically within the immediate intellectual environment he encountered during his time as student at the University of Padua. Through archival research concerning the educational experience of Jewish students and extensive secondary reading on the educational programs and leanings of the medical scholars closest to Lampronti’s Jewish circle, a clearer understanding of what exactly the “new

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<sup>3</sup> Alexandre Koyré expressed the sentiment in 1943. The above is quoted from Steven Shapin, *The Scientific Revolution* (Chicago: University of Chicago Press, 1996), 1. This view is also epitomized in the work of Herbert Butterfield: Herbert Butterfield, *The Origins of Modern Science, 1300–1800*, rev. ed. (New York, 1965).

<sup>4</sup> Steven Shapin quipped in the introduction to his textbook on the scientific revolution, “there was no such thing as a scientific revolution, and this is a book about it.” Steven Shapin, *The Scientific Revolution* (Chicago: University of Chicago Press, 1996), 1.

philosophy” meant to Lampronti and how he integrated it into his work is reached.<sup>5</sup> At the University of Padua in the late seventeenth and early eighteenth centuries, the medical education was characterized by a coexistence of the older scholastic tradition and newer empirical methods. This union is seen in Lampronti’s authoritative use of specific medical texts and his application of empirical methods to the textual analysis of the rabbinic tradition. Lampronti was primarily involved in medical studies, though the contemporary scientific methods he employed were not unique to medicine but present in other efforts to understand the natural world, such as astronomy. At times I employ the anachronistic word “science” for heuristic purposes, but specifically I am referring to contemporary efforts to understand the natural world through both analysis of scientific texts and empirical methods. The various and contingent definitions of “science” in the early modern period mean that to fully understand the use of scientific knowledge by Jews in early modern Italy one must carefully examine each specific context and not project from the goings-on elsewhere in Europe. To this end, a consideration of the historiography of science in Italy is requisite.

For many years historians considered Italian science primarily from the perspective of Galileo, arguing that the end of Italy’s scientific dominance came with Galileo’s trial and condemnation.<sup>6</sup> The result was a skewed perception of seventeenth- and eighteenth-century Italian science as stagnant, if not backwards. The narrative of a decline of Italian science can be

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<sup>5</sup> I use the term “science” throughout this study despite its anachronism for the early modern period. Early modern individuals did not refer to their activities as “science” but rather “new philosophy,” “new experimental philosophy,” and “active science” among others. For an excellent statement of the problems of terminology for early modern historians of science and the heuristic benefit of using the term “science” albeit imprecisely for the early modern period see: Pamela H. Smith, “Science on the Move: Recent Trends in the History of Science,” *Renaissance Quarterly*, Vol. 62, No. 2 (Summer 2009): 345.

<sup>6</sup> Notably as well, Giordano Bruno’s trial and condemnation some years prior.

found as early as two decades after Lampronti's death in the work of Paolo Frisi.<sup>7</sup> Modern historians continued the trope well into the 1990s by focusing their research primarily on Galileo and his contributions, and paying relatively little attention to other scientific endeavors of the period.<sup>8</sup> Connected to this older narrative was also the view that experimental science was primarily "Galilean" and took place mostly in the scientific societies.<sup>9</sup> According to this approach, the end of the *Accademia del Cimento* with the lack of Medici support brought a close once and for all to Italian scientific creativity while the center of scientific advances shifted to northern Europe. A result of this assessment was that for a very long time most scholarship on Italian science focused on the sixteenth century, whereas most northern European scholarship covered the seventeenth and eighteenth centuries.<sup>10</sup>

The context of eighteenth-century science, however, is far more complex. Historians in recent decades have shown that the new philosophy continued in universities free from patronage support and there was not an overarching Church resistance to science.<sup>11</sup> Indeed, the University of Padua became the center of Italian experimental philosophy, with the innovative work of

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<sup>7</sup> Paolo Frisi, *Elogi* (Livorno, 1774).

<sup>8</sup> See for example: Ugo Baldini, "La scuola galileiana," in *Scienza e tecnica nella cultura e nella società dal Rinascimento a oggi*, *Storia d'Italia, Annali* 3, ed. Gianni Micheli (Turin: Einaudi, 1980); Michael Segre, *In the Wake of Galileo* (New Brunswick: Rutgers University Press, 1991), 141.

<sup>9</sup> Emblematic of this older view is: William Middleton, *The Experimenters: A Study of the Accademia del Cimento* (Baltimore and London, 1971).

<sup>10</sup> An early challenge to the decline of Italian science narrative came from: Mario Biagioli, "Scientific Revolution, Social Bricolage, and Etiquette," in *The Scientific Revolution in National Context*, ed. Roy Porter and Mikulas Teich (Cambridge: Cambridge University Press, 1993), 11. Brendan Dooley also challenges this narrative in his work and argues that English scientific ideas were marginal in Italy as the *Giornale de' letterati d'Italia* contained very few articles on Newtonian science: Brendan Dooley, *Science, Politics, and Society in Eighteenth-Century Italy: The Giornale de' letterati d'Italia and its World* (New York: Garland Publishing, 1991), 107-8; 110-111.

<sup>11</sup> See for example: Luciano Boschiero, *Experiment and Natural Philosophy in Seventeenth-Century Tuscany: The History of the Accademia del Cimento* (Dordrecht: Springer, 2007); Luigi Pepe, "Universities, Academies, and Sciences in Italy in the Modern Age" in *Universities and Science in the Early Modern Period*, eds. Mordechai Feingold and Victor Navarro-Brotos (Dordrecht: Springer, 2006), 141-151; Rivka Feldhay, *Galileo and the Church: Political Inquisition or Critical Dialogue?* (Cambridge: Cambridge University Press, 1995).

Antonio Vallisneri, Giambattista Morgagni, and others.<sup>12</sup> There was no encompassing wide-ranging decline in Italian science after Galileo and the scientific societies. The Church gave its primary attention to the fields of cosmology and astronomy and it continued to search for heresy related to those subjects, while other natural fields, such as medicine and anatomy, remained relatively free of scrutiny. Also, the Church did not directly challenge the methods Galileo employed as much as the conclusions to which they led. Thus men of science could apply Galileo's experimental methods to subjects other than those of sharp ecclesiastic interest and, so long as their findings did not pose major challenges to religious tradition. Those two criteria made medicine a fruitful and safe home for many Italian scientists.<sup>13</sup> Most of the Italian members of the Royal Society of London received medical training, including Giambattista Morgagni and Antonio Vallisneri.<sup>14</sup> As an area already relatively free of ecclesiastical scrutiny, medicine is also the field in which we find significant Jewish participation.<sup>15</sup>

Recent scholarship of religion and science in the early modern period has also emphasized the continuing unity of religious belief and active participation in the "New

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<sup>12</sup> See for example: Ugo Baldini, "*L'attività scientifica del primo settecento*" in *Storia d'Italia Annali 3 Scienza e tecnica nella cultura e nella società dal Rinascimento a oggi*, ed. Gianni Micheli (Turin: Einaudi, 1980), 515; Cesare Maffioli, *Out of Galileo: The Science of the Waters, 1628-1718* (Rotterdam: Erasmus Publishing, 1994), 12. Chapter 3, 4, and 5 discuss the importance of Padua and the experimental science encountered there.

<sup>13</sup> "Scientists" is an anachronistic term (it originated in the nineteenth century), but it is a more concise replacement for "men of science" which I try to use more regularly throughout this work.

<sup>14</sup> Morgagni and Vallisneri both had contact with the rabbinic circle at Padua and will be discussed later in the dissertation.

<sup>15</sup> As Chapter 4 will explain, this is important because the broader conflicts between science and religion had ramifications for Jewish scholars reading the works of their Catholic and Protestant counterparts. It is not coincidental that Jews found their home in the areas least riddled with scandal and most inclined towards integration.

Science,” looking especially at how great scientific thinkers remained religiously devout.<sup>16</sup>

These studies emphasize the ways in which the natural sciences were invested with religious meaning, showing that science was not pursued in a separate secular realm as scholars once assumed.<sup>17</sup> Less scholarly attention, however, has been paid to how the pursuit of scientific knowledge shaped religious practice and study. We know relatively little about how university-educated physicians carried and transmitted their knowledge to new contexts, especially religious ones. It is very difficult for historians to identify sources as ways into a comprehension of the religious lives of physicians of the period because they did not often address religious ideas or concepts in their writing.<sup>18</sup> Many individuals were not willing to write about the major questions at the meeting points of religion and science, but that does not necessarily mean their religious

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<sup>16</sup> See for example: John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991); Sachiko Kusukawa, *The Transformations of Natural Philosophy: The Case of Philip Melancthon* (Cambridge: Cambridge University Press 1995); James Bono, *The Word of God and the Languages of Man* (Madison: University of Wisconsin Press, 1995); Peter Harrison, *The Bible, Protestantism, and the Rise of Natural Science* (Cambridge: Cambridge University Press, 1998); Richard G. Olson, *Science and Religion 1450–1900: From Copernicus to Darwin* (Baltimore: Johns Hopkins University Press, 2006). On specific figures in early modern science there is also a large body of literature concerning the reconciliation of religious and scientific thought. On Newton alone see for example: James Force and Richard Popkin eds., *Essays on the Context, Nature, and Influence of Isaac Newton's Theology* (Boston: Kluwer, 1990); Scott Mandelbrote, “Isaac Newton and Thomas Burnet: Biblical Criticism and the Crisis of Late Seventeenth-Century England,” in *The Books of Nature and Scripture: Recent Essays on Natural Philosophy, Theology, and Biblical Criticism in the Netherlands of Spinoza's Time and the British Isles of Newton's Time*, eds. Force and Popkin (Boston: Kluwer, 1994) 149-178; Matt Goldish, “Newton on Kabbalah,” in *The Books of Nature and Scripture*, eds. Force and Popkin, 89-104; James Force, “The God of Abraham and Isaac (Newton),” in Force and Popkin, 179-200. This subject is discussed at greater length in Chapter 5.

<sup>17</sup> Peter Harrison's work emphasizes not only that science was invested with religion, but that early modern science had fundamentally religious foundations. See especially: Peter Harrison, *The Fall of Man and the Foundations of Science* (Cambridge: Cambridge University Press, 2007).

<sup>18</sup> It is also often assumed that physicians were more inclined towards irreligious beliefs. See for example the opening essay of Ole Peter Grell and Andrew Cunningham eds., *Medicine and Religion in Enlightenment Europe* (Burlington: Ashgate, 2007): “Where there are three physicians, there are two atheists.” In the late seventeenth and eighteenth centuries the term “atheist” broadly encompassed religious and philosophical heterodoxy, or outright disrespect for traditional values. For more on this notion in the period see: Michael Hunter, “Science and Heterodoxy: An Early Modern Problem Reconsidered,” in *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain* by Michael Hunter (Woodbridge: Boydell Press, 1995): 225-244. For more on the concerns over the associations between the new science and atheism or iconoclasm see: Michael Hunter, “The Debate over Science,” in *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain* by Michael Hunter (Woodbridge: Boydell Press, 1995): 101-119.

studies or daily lives were not influenced by their scientific learning in the university.<sup>19</sup>

Lampronti, as an exceptionally talented and accomplished individual but not an individual on the forefront of empirical study of the natural world, provides an unusual vantage point for understanding how the latest ideas in academic medicine diffused through society and shaped non-scientific endeavors in new and interesting ways. The world of halakhah also presents a rare body of sources for the historian of science to understand the transmission and wide applications of new scientific knowledge acquired in universities.

### **European History**

Within broader European history, my research highlights the centrality of religious law to the study of religion and the Enlightenment. The dissertation argues that historians cannot confine the influence of early modern scientific and Enlightenment thought on religion to changes in religious belief alone. Rather, thorough consideration must be paid to how novel academic methodologies transformed religious practice and study as well. By means of this approach, scholars can better appreciate how deeply the various intellectual movements of the period affected and refashioned the traditional religious cultures of eighteenth-century Europe, Jewish and non-Jewish alike.

Lampronti's lifetime (1679-1756) is often referred to in European history as the "Hazard generation." This classification follows the influential 1935 work of Paul Hazard who famously designated a late seventeenth- and early eighteenth-century crisis, a period when profound uncertainty began to emerge within the thought of European intellectuals. According to Hazard,

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<sup>19</sup> Again, this is not to say that men of science were not religiously devout and that their religious thought and philosophy was not informed by scientific study. As addressed at greater length in Chapter 5, natural theology and physico-theology were important intellectual strains in the seventeenth and eighteenth centuries. Much has been made especially of the most prominent figures in early modern science and how they reconciled their religious and scientific thought. Among more 'average' university-educated physicians in particular, however, one finds fewer sources that attest to how their religious lives were informed by their medical study in the university.

that crisis led to new understandings of society, government, and nature -- changes that ultimately paved the way for the French Revolution. For Hazard, the transformation took place almost overnight: "One day the French people, almost to a man, were thinking like Bossuet. The day after, they were thinking like Voltaire. No ordinary swing of the pendulum, that. It was a revolution."<sup>20</sup> The late seventeenth and early eighteenth centuries were the age of Benedict de Spinoza, Pierre Bayle, John Locke, and Isaac Newton.<sup>21</sup> The period witnessed the emergence of libertine thought and new genres such as encyclopedias and periodicals that laid the ground for the development of a sustained Enlightenment culture in the period that followed.<sup>22</sup> Hence, some also called it the "Age of Reason" or "Age of Skepticism."<sup>23</sup> Though historians no longer see the period in such general and binary terms, and Hazard's work has been challenged on multiple grounds, the significance of the era remains.<sup>24</sup> In Italy especially these years were significant ones for the development of a specifically *Italian* Enlightenment, or the *Illuminismo* as it was called in Italy in the eighteenth century.

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<sup>20</sup> Paul Hazard, *The European Mind*, trans. J. Lewis May (London: Hollis & Carter, 1953) xv.

<sup>21</sup> For Hazard the change came about through rationalism as well as emotion. These individuals challenged the cultural traditions of the past, leading to the decline of traditional religious culture and the emergence of a secular space.

<sup>22</sup> "Libertine" is an eighteenth-century term used widely to describe anyone with unconventional ideas, but its most precise definition refers to individuals who rejected Christian revelation.

<sup>23</sup> For an eighteenth-century work that bore "age of reason" in the title see: Thomas Paine, *The Age of Reason: Being an Investigation of True and Natural Theology* (London, 1794). Twentieth-century works that classify the eighteenth century as the "age of reason" include: Harold Nicolson, *The Age of Reason: The Eighteenth Century* (Doubleday, 1961); Dino Carpanetto and Giuseppe Ricuperati eds., *Italy in the Age of Reason, 1685-1789* translated by Caroline Higgitt (New York: Longman, 1987). For the "age of skepticism" see: Richard Popkin, *The History Of Scepticism From Erasmus To Spinoza* (Berkeley: University of California Press, 1979); Brendan Dooley, *The Social History of Skepticism* (Baltimore: Johns Hopkins University Press, 1999).

<sup>24</sup> See for example: Margaret C. Jacob, "The Crisis of the European Mind: Hazard Revisited," in *Politics and Culture in Early Modern Europe*, eds. Phyllis Mack and Margaret.C. Jacob (New York: Cambridge University Press, 1987), 251-71.

Historians once neglected the study of the Enlightenment in Italy in favor of the more prominent phenomena elsewhere in Europe.<sup>25</sup> According to these scholars, the Renaissance was the peak of Italian cultural production and the Counter-Reformation the reason for its subsequent decline; the Enlightenment period in Italy was of little note. In 1969, Franco Venturi overturned this view and pioneered the intellectual history of Italy in the eighteenth century. Venturi emphasized Italy's connections with the rest of Europe in the early modern period, and the political, social, and economic frameworks in which intellectual ideas made their way from France and England and gained acceptance in Italy.<sup>26</sup> He emphasized the specifically Italian character of the Enlightenment in Italy, in which efforts focused on reforming civil society. Subsequent historians followed in Venturi's tracks, highlighting the intellectual and cultural significance of Italy during the period.<sup>27</sup> Vincenzo Ferrone's *The Intellectual Roots of the Italian Enlightenment*, for example, argues that the influence of Newtonianism in Italy was one path by which Italy made its way to the Enlightenment.<sup>28</sup> According to Ferrone, this was a course charted by figures in the religious establishment who sought reform from within.<sup>29</sup> Along these

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<sup>25</sup> The French Enlightenment was traditionally favored against the Dutch, Italian, German, and Russian Enlightenments. For a classic, but outmoded, general interpretation of the Enlightenment see: Peter Gay, *The Enlightenment: An Interpretation*, 2 vols. (London, 1967-70). The philosophical approach to the Enlightenment was epitomized by Ernst Cassirer, *Die Philosophie der Aufklärung* (Tübingen, 1932) trans. F. C. A. Koelln and J. P. Pettegrove as *The Philosophy of the Enlightenment* (Princeton, 1951).

<sup>26</sup> See Franco Venturi, *Settecento Riformatore* (Torino: G. Einaudi, 1969).

<sup>27</sup> For a discussion of recent Italian Enlightenment studies see Francesca Bregoli, *Mediterranean Enlightenment: Livornese Jews, Tuscan Culture, and Eighteenth-Century Reform* (Stanford: Stanford University Press, 2014), 35.

<sup>28</sup> Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenment: Newtonian Science, Religion, and Politics in the Early Eighteenth Century*, trans. Sue Brotherton (Atlantic Highlands, NJ: Humanity Books, 1995).

<sup>29</sup> The problem with Ferrone's work is that he looked primarily at the influence of Newtonianism in Italy, while overlooking more indigenous Italian developments in science. For this criticism see: Brendan Dooley, *Science, Politics, and Society in Eighteenth-Century Italy* (Chicago: University of Chicago Press, 1986), 109-110.

lines, most recent scholarship on the Enlightenment emphasizes its pluralist nature -- multiple Enlightenments took place in different ways in regionally specific contexts.<sup>30</sup>

The influence of religion in the Enlightenment is also a subject of more recent historical analysis. David Sorkin notably challenged the dominant view associating the Enlightenment with secularization by emphasizing the existence of a moderate or religious Enlightenment that existed across Catholics, Protestants, and Jews.<sup>31</sup> Sorkin profiled six religious figures, examining their thought and showing that each tried to steer a middle way between unbelief on the one side and unchallenged religious dogma on the other. Though the results of these individuals' efforts were mixed and often short-lived, their significance remains. Another more recent approach to religion in the Enlightenment is that of Jonathan Sheehan, who showed that the enduring focus of scholars and thinkers on the Bible as a source of authority during and past the Enlightenment is strong evidence that the Enlightenment did not completely secularize society and destroy the power of religious authority. Sheehan argues that the Bible was

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<sup>30</sup> The idea of the national context of Enlightenments or “family of Enlightenments” became particularly popular in the 1970s and 1980s. See for example: Roy Porter and Mikulás Teich eds., *The Enlightenment in National Context* (Cambridge: Cambridge University Press, 1981). Robert Darnton’s work was influential in the plea for a social instead of an intellectual approach to the Enlightenment, identifying the existence of both “high” and “low” Enlightenments: Robert Darnton, “The High Enlightenment and the Low-Life of Literature in Pre-Revolutionary France” *Past & Present*, 51 (1971): 81-115. Margaret C. Jacob was the first to distinguish a “radical” Enlightenment from a “moderate” one: Margaret C. Jacob, *The Radical Enlightenment: Pantheists, Freemasons and Republicans* (London: Allen & Unwin, 1981). Jonathan Israel subsequently adopted the idea, arguing that the radical Enlightenment, which he characterized as representing egalitarian, republican, and democratic impulses, was the most important aspect of the Enlightenment. See his trilogy on the Enlightenment: Jonathan Israel, *The Radical Enlightenment: Philosophy and the Making of Modernity 1650-1750* (New York: Oxford University Press, 2002); Jonathan Israel, *Enlightenment Contested: Philosophy, Modernity, and the Emancipation of Man, 1670-1752* (New York: Oxford University Press, 2006); Jonathan Israel, *Democratic Enlightenment: Philosophy, Revolution, and Human Rights 1750–1790* (New York: Oxford University Press, 2011). For a discussion of the utility of multiple perspectives see: Fania Oz-Salzberger, “New Approaches Towards a History of the Enlightenment: Can Disparate Perspectives Make a General Picture?” *Tel Aviver Jahrbuch für deutsche Geschichte* 29 (2000): 171-82.

<sup>31</sup> David Sorkin, *The Religious Enlightenment: Protestants, Jews, and Catholics From London to Vienna* (Princeton: Princeton University Press, 2008).

transformed into a product of cultural significance and imbued with new meaning for the new context of the Enlightenment and beyond.<sup>32</sup>

Sorkin and Sheehan have contributed to an on-going scholarly challenge to the strict binary once drawn between reason and faith, religion and secularization in the period.<sup>33</sup>

However, these and other recent studies examining the capacious middle ground forged between religion and secularization focus exclusively on religious thought and philosophy. The seemingly more hermetic world of religious law has received little scholarly attention. This raises the question of what implications scientific activity in the early modern period had for religious practice and study. If empiricism gained credibility in the university and was increasingly treated as a source of authority there, if not one mitigated by other sources, how did that carry over to systems entrenched in scholastic or casuistic modes of study? Or more broadly, what were the practical implications of the shifting foundations for establishing and evaluating truth? These are fundamental questions the following study addresses.

For a long time historians primarily covered the most radical challenges to religion and attacks on sacred knowledge.<sup>34</sup> Despite attention paid in recent years to religious and moderate

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<sup>32</sup> Jonathan Sheehan, *The Enlightenment Bible: Translation, Scholarship, Culture* (Princeton: Princeton University Press, 2007).

<sup>33</sup> For more recent work see for example Charly Coleman, *The Virtues of Abandon: an Anti-Individualist History of the French Enlightenment* (Stanford: Stanford University Press, 2014) as well as the volumes based upon the journal *Religion in the Age of Enlightenment (RAE)*: Brett C. McInelly ed., *Religion in the Age of Enlightenment*, Vol. 1 (Brooklyn: AMS Press, 2009); Brett C. McInelly ed., *Religion in the Age of Enlightenment*, Vol. 2 (Brooklyn: AMS Press, 2010); Brett C. McInelly ed., *Religion in the Age of Enlightenment*, Vol. 3 (Brooklyn: AMS Press, 2012); Brett C. McInelly ed., *Religion in the Age of Enlightenment*, Vol. 4 (Brooklyn: AMS Press, 2013); Brett C. McInelly ed., *Religion in the Age of Enlightenment*, Vol. 5 (Brooklyn: AMS Press, 2015). In discussions of religion and the Enlightenment it is also important to note the older work of Peter Harrison: Peter Harrison, *'Religion' and the Religions in the English Enlightenment* (Cambridge: Cambridge University Press, 1990).

<sup>34</sup> The large number of studies on figures such as Spinoza, Bayle, and Locke represent the bias towards the major challenges to religion at the expense of smaller shifts. Jonathan Israel represents the extreme of this camp in his focus on the "radical Enlightenment." For a shorter statement of Israel's view see: Jonathan Israel, *A Revolution of the Mind: Radical Enlightenment and the Intellectual Origins of Modern Democracy* (Princeton: Princeton University Press, 2010).

Enlightenments, historians still focus primarily on either sources of conflict between reason and faith or major reevaluations of received tradition. In doing so, they largely overlook the smaller shift changes that were often so embedded in traditional frameworks that they are not readily apparent. This study contends that those seemingly smaller changes made by individuals not seeking to subvert, undermine, or significantly challenge received tradition are very significant, perhaps more so than the “big” questions, for understanding the culture of the period. Lampronti was not alone in his unwillingness to entertain grand challenges to his tradition and faith, while simultaneously internalizing the same methods and subjects that provoked those questions. The smaller, less radical, changes in traditional religious practice and study that emerged from the efforts of these individuals presented new possibilities for the religiously devout, and meant that cultures could coexist and develop creatively. This dissertation shows that to fully appreciate the intellectual and cultural history of the period, careful and incisive scholarly analysis must unearth and explain the scope of such integrative attempts.

### **Jewish History**

Finally, within Jewish history, this dissertation both contributes to a number of understudied subfields and challenges the reigning notion that the path paved by Jewish university graduates led only towards secularization. The following summary of the state of scholarship concerning Jews and science, early modern rabbis, and eighteenth-century Jewish culture illuminates this contribution.

Two decades ago, David Ruderman pioneered the study of Jews and scientific thought in the early modern period with his comprehensive overview of the subject.<sup>35</sup> He built upon a small

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<sup>35</sup> David B. Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995).

body of scholarship concerning Jews and science, both synthesizing previous and adding new research.<sup>36</sup> The scope and analysis of his study are impressive and his work remains the touchstone for the subject. Nevertheless, due to its broad scope it sometimes lacks nuanced distinction. The work treats the whole of “science” across geographical regions, among different types of Jews, and over the course of centuries. In doing so, it does not always sufficiently account for significant distinctions between how different Jews, in different contexts, related to different sciences. One does not understand for example the significance of the differences between Jewish treatment of ancient and contemporary medical authorities among Paduan educated physicians or implicit distinctions made by Polish rabbis between astronomical knowledge acquired through medieval treatises translated into Hebrew versus the observations made by contemporary astronomers such as Copernicus or Tycho Brahe. The impression one gains from Ruderman’s study is that Jewish culture was always inherently receptive to science -- broadly defined -- and in the early modern period Jewish scientific endeavors blossomed.<sup>37</sup> Vast strides have been made in the history of science in the past few decades, and yet, the methods and content of these studies have not been meaningfully combined with Jewish history.

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<sup>36</sup> For previous studies see: Harry Friedenwald, *The Jews and Medicine* (Baltimore: Johns Hopkins Press, 1944); Michael Nevins, *The Jewish Doctor: A Narrative History* (Northvale: Jason Aronson, 1996); Nathan Koren, *Jewish Physicians: A Biographical Index* (Jerusalem: Israel University Press, 1973); Joseph Shatzmiller, *Jews, Medicine, and Medieval Society* (Berkeley: University of California Press, 1994).

<sup>37</sup> Others have subsequently sought to expand upon the study of Jews and science, through more in-depth scholarly analysis of more narrow subjects. Andrew Berns for example treated the biblical interpretations of sixteenth-century Italian physicians: Andrew Berns, *The Bible and Natural Philosophy in Renaissance Italy: Jewish and Christian Physicians in Search of Truth* (New York: Cambridge University Press, 2015). Francesca Bregoli treated Jewish physicians in eighteenth-century Livorno: Francesca Bregoli, *Mediterranean Enlightenment: Livornese Jews, Tuscan Culture, and Eighteenth-Century Reform* (Stanford: Stanford University Press, 2014). And Maoz Kahana recent articles address alchemy and science among rabbis in central Europe: Maoz Kahana, “The Scientific Revolution and the Encoding of Sources of Knowledge: Medicine, Halakhah, and Alchemy in Hamburg-Altona, 1736,” [Hebrew] *Tarbiz*, Vol 82: Issue 1 (2013): 165-212; Maoz Kahana, “An Esoteric Path to Modernity: Rabbi Jacob Emden’s Alchemical Quest,” *Journal of Modern Jewish Studies* 12:2 (2013): 253-275.

This study aims to rectify that problem by taking a single topic and showing, by means of extensive research covering multiple angles of inquiry, the influence of late seventeenth- and early eighteenth-century Paduan science on rabbinic law. Limiting the investigation to this subset of Jewish discourse, as it was practiced by one individual in particular, accomplishes two goals. First, it allows for more careful application and examination of the specifics of scientific authority as encountered by Jews at the University of Padua. Second, the examination of halakhah in particular, a religious legal system as opposed to a theological or philosophical treatise, provides the historian with access to new perspectives on a major question of early modern history. Religious and philosophical treatises might straightforwardly address the relationship between religion and science, but these sources offer only a certain point of view -- the well thought out and articulate position, often intended as polemic. One cannot understand the inner-workings of a system, however, by looking only at its defenses. The system itself must be closely examined to understand how it operates and brings to bear its influences. Halakhah, as Lampronti presented it in the *Paḥad Yiṣḥak*, provides an ideal vantage for understanding in practice how Italian rabbis treated the relationship between religion and science.

There are vast bodies of sources concerning early modern rabbis in general and Italian rabbis in particular, much of which remain uncritically examined by historians. The basic biographies and contributions of these individuals are well known, but a broader and more comprehensive understanding of the Jewish intellectual history of the period is still being written. Recent studies have sought to fill this void, and others, in process, are continuing that

path.<sup>38</sup> One of the most significant current methodological innovations is the application of book history to the study of Jewish legal literature. Historians have increasingly sought to treat the books authored by rabbis as material objects, platforms for conveying knowledge that do not simply transmit data in a vacuum, but possess communicative values that shape the way readers comprehend and relate to the information contained within.<sup>39</sup> Rabbis did not study texts in the abstract -- as older historical scholarship at times might have one believe -- rather they encountered textual knowledge embedded in certain frameworks and presented in material forms that carried with them underlying epistemologies. This study hopes to continue to rectify this problem in the historical treatment of halakhah.

Another significant and burgeoning field in early modern Jewish history is the history of Jews in the eighteenth century specifically. Regarding Italian Jewish history in particular, scholars once considered the eighteenth century as a period of decline. Following the general scholarship on Italy prior to Venturi, Italian Jewish cultural production was considered to have prematurely peaked in the sixteenth century. The period of the Renaissance brought a flourishing of Jewish cultural production that was later squelched by the Counter-Reformation.<sup>40</sup> In recent years scholars have increasingly shown the robust intellectual production by Jews of the period

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<sup>38</sup> Elhanan Reiner most significantly advanced the significance of the technological means of producing halakhic works: Elhanan Reiner, "The Ashkenazi Elite at the Beginning of the Modern Era: Manuscript vs. Printed Book," *Polis* 10 (1997): 85-98. The forthcoming dissertation of Tamara Morsel-Eisenberg tackles this subject in more comprehensive form: Tamara Morsel-Eisenberg, "The Organization of *Halakhic* (Jewish Legal) Knowledge in the Early Modern Period: *Ashkenazic* Responsa as a Case Study" (PhD diss., University of Pennsylvania, 2017).

<sup>39</sup> From 2012-2014 the Center for Jewish History hosted a scholars working group on the Jewish book at which a number of scholars of the period, including Adam Shear, Marjorie Lehman, Joshua Teplitsky, and Francesca Bregoli, presented studies that applied the methods of book history to Jewish history.

<sup>40</sup> For more on the historiography of Italian Jews in the eighteenth century see: Francesca Bregoli, "Jewish Modernity in Eighteenth-Century Italy: A Historiographical Survey," *Jahrbuch des Simon-Dubnow-Instituts* 6 (2007): 67-78.

in Europe in general and Italy in particular.<sup>41</sup> My research has been part of an on-going effort in the past few years among scholars of early modern Jewish history to understand the implications of, and re-think, the so-called “Hazard generation” on Jewish culture and the extent to which Jews were involved in the broader intellectual transformations of the period.<sup>42</sup>

Despite these efforts to bring attention to the culture of Jews in early eighteenth-century Europe, much of the existing scholarship still maintains a binary between religion and secularization that is no longer useful. David Ruderman considered the University of Padua a crucible of modernity, the first means by which Jews gained significant and systematic access to secular knowledge.<sup>43</sup> Shmuel Feiner, as well, identified Jewish physicians in particular as “proto-haskalah” figures, individuals who internalized even prior to the Jewish Enlightenment proper its fundamental principles.<sup>44</sup> In Feiner’s view, Jewish doctors were the first *secular*

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<sup>41</sup> For recent studies on eighteenth-century Italy see especially: Bregoli, *Mediterranean Enlightenment*; David Sclar, “‘Like Iron to a Magnet’: Moses Hayim Luzzatto’s Quest for Providence” (PhD diss., the City University of New York, 2014). Lois Dubin’s earlier work on eighteenth-century Trieste was an important contribution as are the studies of David Malkiel and David Ruderman, which cover specific eighteenth-century Italian Jewish intellectuals (including Lampronti): Lois C. Dubin, *The Port Jews of Habsburg Trieste: Absolutist Politics and Enlightenment Culture* (Stanford: Stanford University Press, 1999); for Malkiel and Ruderman see their works listed in previous footnotes. Recent studies of Jews in eighteenth-century Europe in general include: Joshua Teplitsky, “Between Court Jew and Jewish Court: David Oppenheim, the Prague rabbinate, and eighteenth-century Jewish political culture” (PhD diss., New York University, 2012); Matt Goldish, “The Spirit of the Eighteenth Century in the Anti-Sabbatean Polemics of Hakham David Nieto,” in *The Legacies of Richard Popkin* ed. Jeremy D. Popkin (Dordrecht: Springer, 2008), 229-243; Maoz Kahana, “From Prague to Pressburg: Halakhic Writing in a Changing World. From the Noda BeYehuda to the Hatam Sofer, 1730- 1839,” (PhD diss., Hebrew University of Jerusalem, 2010). See also the 2010 special issue of *Jewish History* edited by Francesca Bregoli and Federica Francesconi: “Tradition and Transformation in Eighteenth-Century Europe: Jewish Integration in Comparative Perspective,” *Jewish History*, Special Issue, Vol. 24, Nos. 3-2, 2010.

<sup>42</sup> Matt Goldish and Shmuel Feiner organized both a two-part panel at the annual Association for Jewish Studies conference in December 2013 and a separate Early Modern Workshop: Resources in Jewish History in August 2015.

<sup>43</sup> See Ruderman’s comments on pages 11, 19, and 104 in particular as well as his chapter on Padua: Ruderman, *Jewish Thought and Scientific Discovery*, 11; 19; 104; 100-117.

<sup>44</sup> Shmuel Feiner, *The Jewish Enlightenment*, trans. Chaya Naor (Philadelphia: University of Pennsylvania Press, 2002), 21-67. Feiner expands upon his secularization thesis in a later work: Shmuel Feiner, *The Origins of Jewish Secularization in Eighteenth-Century Europe*, translated by Chaya Naor (Philadelphia: University of Pennsylvania Press, 2010).

Jews.<sup>45</sup> My dissertation challenges this concept, arguing that in the early modern period rabbinic leaders were inspired by their scientific studies to innovate within the halakhic system, the fortress of tradition.<sup>46</sup>

Lastly, the categorization of rabbi/physician has become something of a prototype for early modern Jewish history. It is often drawn upon and used, but there is no in-depth treatment of its meaning and full ramifications.<sup>47</sup> This study shows that in Lampronti's case, the dual-label "rabbi/physician" meant something more profound than "doing both." He was not just "both" a rabbi and a physician, the two roles were integrally intertwined and difficult to separate. The relationship was reciprocal and what this actually meant for the realm of Jewish scholarship with which he primarily worked will become clear in the following pages.

## Research and Method

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<sup>45</sup> There are important differences between Ruderman and Feiner that should be noted. Ruderman argues that eighteenth century Jewish culture represents an extension of earlier Jewish efforts. The eighteenth century is merely part of the early modern period in his view; nothing in particular distinguishes the century from the previous ones. Feiner, however, thinks the eighteenth century marks the beginning of a new era for Jewish culture. The Jewish intellectuals in his view who were more open to non-Jewish learning were not continuing old processes, but starting new ones. For a useful side-by-side statement of their views see the introductions they both wrote to the volume Resianne Fontaine, Andrea Schatz and Irene Zwiep eds., *Sepharad in Ashkenaz: Medieval Knowledge and Eighteenth-Century Enlightened Jewish Discourse* (Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen, 2007), 1-22.

<sup>46</sup> As previously discussed, David Sorkin challenged the religion and secularization paradigm with respect to the later sustained Jewish Enlightenment movement, but his work again addresses only the realm of religious belief. Moses Mendelsohn was a moderate religious reformer because he did not reject the authority of halakhah. But he also did not seek to transform the halakhic system. The *Haskalah* reform efforts typically sought to take emphasis away from Talmud study by adding Bible and philosophy to the curriculum. Historians have not noted efforts in the period to remake Talmud study itself. For more on Sorkin's view of Mendelsohn specifically see: David Sorkin, *Moses Mendelsohn and the Religious Enlightenment* (Berkeley: University of California Press, 1996).

<sup>47</sup> Meir Benayahu first identified a "rabbi-doctor-poet" model: Meir Benayahu, "R. Abram ha-Kohen mi-Zante u-lahaqat ha-rofim ha-meshorerim be-Padova," *Ha-sifrut* 7, 26 (1978): 108-40. Robert Bonfil and David Ruderman subsequently discussed the phenomenon as well: Robert Bonfil, *Rabbis and Jewish Communities in Renaissance Italy* (Oxford: Littman Library of Jewish Civilization, 1990); David Ruderman, *Jewish Thought and Scientific Discovery*. Francesca Bregoli notes this literature and contrasts the model with that of the Livornese rabbi/physician Joseph Attias in particular, who did not synthesize his rabbinic and medical worlds but rather kept them strictly compartmentalized. See Bregoli, *Mediterranean Enlightenment*, 39-67.

Lampronti's work is vast and rich, and much of it is untouched by scholarly analysis. Rather than delve into all aspects of his work, this project is focused on Lampronti's use of natural scientific genres, knowledge, and methods. This primary attention was selected because, fundamentally, his work cannot be understood without the scientific context that underlay it. Lampronti also provides an ideal centering point for a study of rabbi/physicians in early eighteenth-century Italy. Accordingly, this is a study of a man and his work, but also more broadly about the influence and reach of Italian scientific culture in the period.

This study, therefore, is less an intellectual biography than a micro-history of a movement best expressed through the work of a single individual. The dissertation considers Lampronti's biography as a prelude to in-depth analysis of his work and its significance. The biography of the man remains in the background, as the focus is most importantly on the cultural, intellectual, and social circumstances that prompted the novel and creative endeavor of this individual and his colleagues -- and what historians can learn from that project. This methodological choice also seeks to place this study outside the camp of rabbinic biographies that at one time dominated Jewish historical scholarship. The biography is still an important scholarly tool, but this work chooses to depart from that model in order to contribute to multiple and broader bodies of scholarship as outlined in the previous section.

To best understand the novelty and significance of Lampronti's work, this study draws from many subfields including intellectual, cultural, religious, and social histories, as well as the histories of the book, science, and law. Thus, it applies multiple methods of historical analysis.

The primary work from which I conducted my research is the *Paḥad Yiṣḥak*, a vast text containing diverse sources that lend an archival quality to it.<sup>48</sup> I analyzed all fourteen printed volumes of the work and identify its departures from traditional halakhic scholarship. From such research, I highlight Lampronti's deep investment in medical sources and methods and show the complex processes by which he weighed them in the adjudication of halakhah. I also reconstruct Lampronti's intellectual network and community from the hundreds of rabbinic correspondences included in the *Paḥad Yiṣḥak*. Additionally, I examined the writings of Lampronti's contemporaries to understand how they too confronted and reconciled scientific knowledge.

My research also yields conclusions about how Lampronti conceived of and executed his encyclopedic project, and where it fits within the history of knowledge management. As the only premodern encyclopedia that is known to be extant in multiple hand-written manuscript editions, the *Paḥad Yiṣḥak* provides unusual insight into the early modern process of encyclopedic writing. I chart how the text developed as Lampronti circulated the manuscript editions among his close associates and students and the two volumes printed during Lampronti's lifetime reached rabbis further afield. I also examine the continuities and differences between the *Paḥad Yiṣḥak* and *Bikurei kaṣir* journal and other Jewish legal works, scientific dictionaries, alphabetically organized compendia, and periodicals.

Lastly, this study examines archival sources found in Padua, especially the roster of graduation records at the city's university concerning Lampronti and other Jewish students. The University of Padua was one of the most important institutions of higher learning on the continent and in the seventeenth century, and it was also the first university to permit significant

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<sup>48</sup> This is analyzed in particular in Chapter 1.

Jewish matriculation. In the archives I found extensive documentation of the university's Jewish students and their educational programs. From this research, I reconstruct the place of the rabbi/physicians in the culture of the university and directly compare Lampronti's thought with that of both his Jewish and Christian colleagues at Padua.

This dissertation covers a chronological period of approximately 75 years, but fully understanding the significance of Lampronti's works during his lifetime required, at times, lengthy analyses of Jewish texts over a much longer period. Further, digressions into explanations of the works of his predecessors and contemporaries, both Jewish and non-Jewish, were also necessary for sufficiently establishing the novelty of Lampronti's project.

The primary languages employed in this study are rabbinic Hebrew, Italian, and Latin. Original languages have not been provided in the footnotes as the printed text of the *Paḥad Yiẓḥak* is easily accessible. Instead, a few key passages have been provided in the original language and in full translation in the appendices of the dissertation. Selected images of manuscripts, letters, matriculation and graduation records, as well as some charts that synthesize archival information have also been provided in the appendices. In some cases, full transcriptions and translations of key documents have been provided as well.

## **Chapter Summary**

Chapters 1 and 2 begin the dissertation by addressing the novelty of the organization of the *Paḥad Yiẓḥak* and explaining the fundamental contents of the work. Chapter 1 first situates Lampronti's work in the broad context of halakhic writing in which only a few dominant organizational models persisted throughout the centuries (e.g., Talmud and 'Arba'ah turim),

showing the radical departure of alphabetical order in this context. The chapter then examines contemporary recognition of the novelty of Lampronti's form by looking at both the extra-textual aspects of the work that identify the newness of the structure and the unusual hand-written manuscript composition of the work, which shows that nothing like it had before been produced for this corpus of material. Chapter 2 explains how Lampronti classified and organized information within the work, the scope of material included, and the range of rabbinic sources upon which he drew. The chapter then analyzes Lampronti's jurisprudential method with a focus on the primary ways in which his approach departed from his contemporaries' rabbinic works.

After having established three novel elements of the *Paḥad Yizḥak* with parallels in contemporary scientific culture, Chapter 3 considers Lampronti's precise place in the scientific community through examination of the importance of the University of Padua in the social and intellectual lives of Lampronti and his cohort. First, the chapter shows the networks Jewish students established among themselves at the university. Then, the chapter explores the educational experience of Jewish students.

Chapters 4, 5, and 6 return to the three novel aspects of the *Paḥad Yizḥak* identified in Chapter 2, offering more in-depth analysis. Chapter 4 examines specific instances in which Lampronti employed medical knowledge to adjudicate matters of Jewish law. It shows that he authoritatively used non-Jewish medical texts as well as the knowledge he gained from actual medical practice in his legal reasoning. The chapter argues that Lampronti saw the rabbinic and scientific systems as fundamentally complementary; so, integrative endeavors characterize his work more often than considerations of conflict between the two systems. Nonetheless, Lampronti was not blind to the conflicts that arose in the union of those branches of knowledge

and in those instances, he employed a nuanced method of reconciliation. Chapter 5 then offers both comparative analyses as well as examination of Lampronti's use of empirical authority. The chapter begins by looking at how Lampronti's non-Jewish contemporary, Antonio Vallisneri, confronted and reconciled his religious and medical commitments. It highlights the significance to Vallisneri of an empirical method and discusses the evolution of empirical ways of investigating the natural world throughout the medieval and early modern periods. The chapter then explores how Lampronti weighed textual and empirical sources of authority through analysis of three examples from the *Paḥad Yiẓḥak*. Lastly, the novelty of Lampronti's approach is contrasted with those of his central European rabbinic counterparts. The final Chapter 6 places Lampronti's chosen genres in further comparative perspective, looking at both the formal and epistemological similarities between Lampronti's works and contemporary non-Jewish encyclopedias and journals. The chapter expands upon the critical point that Lampronti's work on religious law embraced the form and meaning of contemporary genres, especially the importance of establishing knowledge in collaborative and public spaces. The concluding chapter also offers a brief reception history of the *Paḥad Yiẓḥak* and considers its place in the intellectual culture of Jews in the eighteenth-century and beyond.

### **Biographical Prelude**

Let us now begin with a brief introduction to the protagonist of this study.<sup>49</sup> The details of Lampronti's life come to us mainly from the late nineteenth-century biography written by

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<sup>49</sup> As stated previously, there are a number of short articles on Isaac Lampronti, but no comprehensive study of his life and work.

Benedetto Levi.<sup>50</sup> Best categorized as a rabbinic hagiography, it emphasizes primarily the learned qualities of the subject under discussion and provides no citations of evidence for the portrait it draws. Nonetheless, this work is still useful for laying out the following biographical details of Lampronti's life.

Isaac Lampronti was born in Ferrara, Italy on the 21<sup>st</sup> day of *Shevat* in 1679.<sup>51</sup> His great-grandfather -- a successful Sephardic merchant -- had, years before, emigrated from Istanbul and established himself in the northern Italian city of Ferrara. Isaac's education was supported by his family's wealth and from a young age he studied in a traditional *yeshiva*. In Ferrara during his youth, he received the instruction of Rabbis Sabbatai Elhanan Recanati and Sabbatai Elhanan Sanguinetti in particular. Showing great promise in his studies, Lampronti continued his education in Lugo in northern Italy with R. Manoah Provencal. From Lugo, Lampronti made his way to Padua to study medicine and at the age of just 17 completed his medical studies there.<sup>52</sup> Afterwards, he finished his rabbinic studies in Mantua with the prominent Rabbi Judah Briel.<sup>53</sup> In 1701, Lampronti returned to his birthplace, where he served as a teacher in the Talmud Torah school and spent early mornings tending the sick. In addition to these duties, he became preacher in the Sephardic congregation in 1704, *parnas* of the Sephardic synagogue in 1710, and

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<sup>50</sup> Levi first wrote the biography in Italian: Benedetto Levi, *Della vita e dell'opera Isacco Lampronti* (Padua, 1869). Shortly thereafter it was translated into Hebrew to be printed with the *Mikizei nirdamim* society's printing of the later volumes of the Paris manuscripts: Benedetto Levi, *Sefer Toldot ha-Rav ha-Gadol Yitzhak Lampronti* (Lyck: *Mikizei Nirdamim*, 1871). The manuscript editions of the *Paḥad Yiṣḥak* will be explained in Chapter 1 and the printing history of the work in the Conclusion. We also learn some details of Lampronti's life from Nepi and Ghironi: Hananel Nepi and Mordekhai Ghironi, *Toledot gedolei Yisra'el* (Trieste: Tipografia Marenghi, 1853), 131.

<sup>51</sup> I have used the Hebrew month here because that is how it appears in Levi.

<sup>52</sup> More on this is explored in Chapter 3.

<sup>53</sup> According to Levi, he returned to Ferrara to teach for a short period before completing his rabbinical studies in Mantua.

in 1717 preacher in the Italian congregation as well.<sup>54</sup> He eventually also assumed the role of rabbi of the Sephardic community and head of the *yeshiva* of Ferrara.

A few communal and archival records of Lampronti's time in Ferrara remain, which confirm and add to some of the biographical details laid out by Levi.<sup>55</sup> An extant record book, not previously analyzed, of the Spanish-Levantine community of Ferrara for the years 1715-1811, consisting of copies of decisions of the ruling board, reveals Lampronti's active participation in communal matters.<sup>56</sup> From the beginning of the document in 1715 through 1753, Lampronti is consistently listed among the *parnasim* of the community.<sup>57</sup> A second source that affirms Lampronti's participation in the Jewish community of Ferrara are books of statutes the community printed and presented to their Papal rulers.<sup>58</sup> Lampronti's name is listed in pamphlets identified from 1707, 1718, 1722, 1734, 1737, 1747, and 1751.<sup>59</sup> Appended to the end of many of these booklets are also Hebrew writs of excommunication for those who violated the laws

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<sup>54</sup> The three congregations were housed in the same building.

<sup>55</sup> For broader context on the Jewish community of Ferrara in the eighteenth century see: Werther Angelini, *Gli Ebrei di Ferrara nel Settecento: I Coen e altri mercanti nel rapporto con le pubbliche autorità* (Urbino: Argalia, 1973); Abraham Pesaro, *Memorie storiche sulla comunità israelitica ferrarese* (Ferrara, 1878).

<sup>56</sup> New York, Sotheby's, Valmadonna Collection, Ms. 276, *Pinkas* of the Spanish Levantine Synagogue in Ferrara, 1715-1811. This record book has not been previously analyzed by historians or noted in studies of Lampronti. An additional communal related document is a broadside poem that Lampronti wrote upon the dedication of a new Torah ark for the Sephardic congregation in Ferrara in 1710: New York, Jewish Theological Seminary, B. (NS)PP436. I have not yet examined any of these biographical sources in great depth, as my focus in the dissertation was primarily on Lampronti's halakhic works.

<sup>57</sup> Lampronti's name is variously recorded as "*Ecc. S. D. Isac Lampronti*," "*Ecc. m. Isaach Reffael Vita Lampronti*," "*Morenu Lampronti*," "*M. dottor Isac Lampronti*." He is also sometimes listed as both *parnas* and *sofer*. Both of his sons' names appear in later years, as *parnas* or *sofer*. On page 75r, for example both appear: "*Ecc. S.D. Salomon Lampronti*" and "*Ecc. Sig. D. Samuel Vitta Lampronti*."

<sup>58</sup> I located copies of these printed books both in the Central Archives for the History of the Jewish People (CAJP) in Jerusalem and in the Biblioteca Ariostea Ferrara: Jerusalem, Central Archives for the History of the Jewish People, IT/Fe 31-2, 34, 124B; Ferrara, Biblioteca Comunale Ariostea, M.F. 233: 3, 7, 8, 11, 12. Local cardinals named in the pamphlets include: Cardinal Piazza, Cardinal Barnus, Cardinal Crescenzi Arcivescovo, Cardinal Mosea Legatus, Cardinal Aldobrandini, Cardinal Patritius, Cardinal Ruffus.

<sup>59</sup> These books were found in CAJP and Biblioteca Ariostea Ferrara.

stated therein, undersigned by Lampronti among others.<sup>60</sup> Notarial records found in the State Archives of Ferrara additionally show Lampronti's participation in various monetary transactions.<sup>61</sup> In addition to archival sources, there remain a few collections of hand-written *drashot* (homilies) by Lampronti composed in both Hebrew and Italian, as well as a few small collections of correspondences.<sup>62</sup> Further, from sources such as a poem written by Immanuel Ricchi of Ferrara, we know Lampronti married Rachel Norzi the daughter of Moses Israel.<sup>63</sup> Lampronti also made mention of his wife Rachel in the *Paḥad Yiẓḥak*, "the daughter of the great and powerful Moses Israel of Norzi," and the birth of his firstborn son Samuel Hai Lampronti.<sup>64</sup> Finally, a record book of Jewish deaths in Ferrara lists Isaac Lampronti's on December 6, 1756.<sup>65</sup> The deaths of his daughter Ester (married to Moise Vita Rietti) in 1782 and his son Samuel Lampronti in 1783 are similarly recorded.<sup>66</sup> With this general biographical information in mind, we will now begin our primary subject with examination of the form of the *Paḥad Yiẓḥak*.

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<sup>60</sup> Lampronti signed the excommunication writs of 1722, 1734, 1737, 1747, 1751.

<sup>61</sup> Ferrara, ASFe, ANAF, matr. 1235, *pacco* 6; matr. 1378, p. 2; matr. 1378, p. 4; matr. 1467, p. 2; matr. 1474, p. 4; matr. 1501, p.2; matr. 1560, p. 4.

<sup>62</sup> The *drashot* are found in three separate collections: Jerusalem, Ben-Zvi Institute, Ms. 4032; Mantua, Biblioteca Comunale, Ms. 1047; Jerusalem, National Library of Israel, Ms. Var. 222. For more on Italian Jewish preaching see: David B. Ruderman ed., *Preachers of the Italian Ghetto* (Berkeley: University of California Press, 1992). There is also a manuscript at the British Library in London that contains exercises in Hebrew composition initiated by Lampronti for his students (from 1714-1715). The manuscript contains some translations from Italian to Hebrew of his *drashot*. British Library, Ms. Add. 26895. The Ben-Zvi Institute in Jerusalem also has a small collection of letters either copied by Lampronti or received by his contemporaries: Ben-Zvi Institute, Ms. 4008. Most of the original hand-written correspondences are preserved within the Paris and Valmodonna manuscript editions of the *Paḥad Yiẓḥak* as discussed in Chapter 1.

<sup>63</sup> Simon Bernstein, *Mi-Shirei Yisra'el be-Italia* (Jerusalem: Darom, 1938), 99-103.

<sup>64</sup> Vol 10, p. 4r-4v, s.v. "pidyon bekhor" (Lyck, 1871).

<sup>65</sup> Ferrara, ASCFe, ASCoFe, *Liber Iudeorum Defunctorum*, 32v.

<sup>66</sup> According to the *Liber Defunctorum* Ester died on April 3, 1782: *Liber Defunctorum*, 115r. Samuel died on October 28, 1783: *Liber Defunctorum*, 125v.

## CHAPTER 1: Originality of Form

The principal feature of the *Paḥad Yiṣḥak* that distinguishes it from the Jewish legal (halakhic) works that preceded it is the manner in which the information is presented to the reader: in alphabetic rather than topical order. Of the thousands of halakhic books in existence by the early modern period, most followed the organizational models found in either the Bible, Talmud, *Mishneh Torah*, or 'Arba'ah turim. Lampronti's initiation of a new way to organize information was a bold and unprecedented move as it represented a conscious choice not to link his text with the existing authoritative works and signified a deliberate shift from the traditionally dominant writings as primary reference points.

In order to best understand Lampronti's originality, this chapter begins with an explanation of the organizational structure of halakhic literature prior to the *Paḥad Yiṣḥak*. It explains the different genres of halakhic texts and especially notes how the organization of knowledge is socially situated and shapes the ways in which readers comprehend written information. In doing so, the overview highlights the novelty and significance of Lampronti's use of alphabetical order instead of the few dominant systematic models employed prior to his time.

After placing Lampronti's chosen organizational structure in the broad context of halakhic writing up until the eighteenth century, the chapter then turns to contemporary recognition of the novelty of Lampronti's chosen form in his colleagues' and his own writings. An analysis of the extra-textual elements of the work (the proofreader's introduction, the censor's permit, and the development of Lampronti's hand-written manuscript editions) highlight

the contemporary appreciation of the newness of the organizational method and establishes that the subject matter of the work had never before been approached in the manner of Lampronti.

### **The Organization of Halakhic Works**

In the two millennia preceding Lampronti's project, the major organizational formats of Jewish law were substantially reinvented only four times. To fully appreciate the ambitiousness and daring nature of the transformation undertaken by Lampronti, it is necessary to explain each of those major pivot points -- the Bible, Mishnah and Talmud, *Mishneh Torah*, and 'Arba'ah *turim* -- and the relationship between the organizational structures and the circumstances of time and place that shaped them.

#### **Bible**

The first significant organizational model of Jewish law is the Bible. Though the Hebrew word for the Pentateuch, *Torah*, means "instruction" or "law," referring to the legal elements contained within, the work is structurally driven by its narrative. The first nine biblical books are organized chronologically, telling a story of the creation of the world in the first book (Genesis) through the building of Solomon's temple (Kings). It is a national history, in which theology, moral instruction, and law are interwoven into the foundational story of the Israelite people.

The canonical biblical texts consist of 24 books, though the legal elements are contained mostly within the first five books, i.e., the Pentateuch.<sup>1</sup> There are a few theories that may explain why the first portions of the Bible were divided into five separate books. The first is

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<sup>1</sup> Joseph Blenkinsopp, *The Pentateuch* (New York: Doubleday, 1992), 44-5. The division of the first portions of the Bible into five books appears at least by the first century C.E., as attested in Josephus: "Five are the books of Moses, comprising the laws and the traditional history from the birth of man down to the death of the lawgiver..." Scholars have argued, however, that based on other internal Jewish evidence, especially Qumran scrolls, the existence of the division of the work into five distinct books can be dated to as early as the second century B.C.E..

practical: the work was collected in separate volumes in order to fit scrolls that could be more readily used. Scrolls theoretically could be produced of any length, and some were considerably lengthy, such as those containing the entire *Iliad* and *Odyssey*. A single lengthy, large, and heavy scroll, however, would be unwieldy making its use on a regular basis difficult and cumbersome, whereas multiple shorter, smaller, and lighter scrolls were more manageable.<sup>2</sup> Other conjectures hold that the logic of the narrative prompted the division into five separate books or that the arrangement was a structuring device that set the middle three works apart from the first and last.<sup>3</sup> The first and last books are of similar length and could be standalone books, whereas the middle book is the shortest and the middle three possibly part of a single narrative. The division into five rather than some other number of books may have been a deliberate choice that had significance at the time.<sup>4</sup>

Regardless of the original motivation behind the division of the biblical texts into separate books, the structure came to be seen as an integral part of the work that framed how readers approached the text over the centuries. Though additional divisions and finding aids such as chapters and verses were added over time as manuscript and print technologies developed (for example, the transition from scroll to codex and the addition of chapters and

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<sup>2</sup> Blenkinsopp, 46.

<sup>3</sup> Blenkinsopp, 46-7.

<sup>4</sup> Blenkinsopp, 47.

verses), the fundamental organization and structure of the canonical works into five and 24 books was not altered.<sup>5</sup>

Though the structure of the Bible continued to be used in legal works past antiquity, especially in medieval *Sifrei ha-miẓvot* (Books of Commandments) and other early rabbinic compilations that were organized by outlining and explaining the laws in the order they appear in the biblical texts,<sup>6</sup> the Mishnah -- a rabbinic compilation that extracted the legal elements from the written biblical texts and added other laws and narrative elements into a new textual framework -- came to be the primary organizational model and reference point for Jewish legal works.

### **Mishnah and Talmud**

The Mishnah was the first systematic attempt to organize rabbinic doctrines in a comprehensive textual format. The commonly accepted ancient story of the Mishnah holds that sometime between the end of the second and the beginning of the third century C.E. Rabbi Judah the Patriarch committed to writing the rabbinic traditions that had been circulating orally among rabbis in Palestine so that the teachings would not be forgotten. According to the traditional

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<sup>5</sup> Jewish codices appear as early as the end of the eighth and beginning of the ninth centuries. Useful studies of the implications of transition from scroll to codex on the Bible include Irven M. Resnick, "The Codex in Early Jewish and Christian Communities," *Journal of Religious History* 17.1 (1992): 1-17 and Peter Stallybrass, "Books and Scrolls: Navigating the Bible," in *Books and Readers in Early Modern England: Material Studies*, ed. Jennifer Andersen and Elizabeth Sauer (Philadelphia: University of Pennsylvania Press, 2002), 42-79. Stephen Langton (1150-1228), Archbishop of Canterbury, introduced chapters into the structure of the Vulgate, which were then adopted later in the medieval period in Hebrew manuscripts. Verse division by number was introduced in the sixteenth century, though the division of verses by word appeared in Jewish culture in the talmudic period. The division into *parshiot* appeared earlier with the separation of the text into 150 sections to be read over three to three and a half years (according to the tradition in Palestine) and 54 sections to be read over a year (according to the tradition in Babylonia). Blenkinsopp, 42. For more on more general tools used to manage information see: Ann Blair, *Too Much to Know: Managing Scholarly Information Before the Modern Age* (New Haven: Yale University Press, 2010).

<sup>6</sup> Examples of this genre include halakhic *midrash*, legally oriented expositions of the Bible, such as *Mekhilta de-r. ishmael*, *Sifrei*, *Sifrei zuta*, *Sifra*, and *Mekhilta de-r. shim'on b. yoh'ai*. The eighth-century *Sefer ha-she'ilot* by Aha of Shabha is an example of a halakhic text from the *ge'onic* period organized according to the sequence of the Bible.

rabbinic view, the Mishnah was the written version of the oral Torah, which God imparted to Moses at Sinai along with the written text, and contained both additional laws and the correct interpretations of the written word. According to modern scholarship, the Mishnah is not the precise word of God given to Moses at Sinai, but careful selections of material shaped over the course of many years by the interests, including the self-interests, of a series of editors or redactors.

The Mishnah contains diverse elements that make it difficult to easily define the genre. As a result, scholars have variously defined the Mishnah as a code, collection of sources for study, introductory textbook, lecture notes, and philosophical work.<sup>7</sup> Each genre has its merits and shortcomings as a classification, and ultimately no one genre correctly encompasses the work as a whole.<sup>8</sup> Part of the difficulty in categorizing and explaining the text is its lack of consistency (the text is replete with inner contradictions and unresolved disputes) and comprehensiveness (it does not cover all areas of rabbinic law). Though the Mishnah is not strictly a code of law, which would resolve all legal disputes and leave in every case a bright line to be followed, it nonetheless came to be viewed as an authoritative legal work.<sup>9</sup>

The Mishnah is divided into six general topical sections called orders: *Zer'aim* (Seeds), *Mo'ed* (Festivals), *Nashim* (Women), *Nezikin* (Damages), *Kodashim* (Holy Things), and *Taharot* (Purities). The six orders are then divided into subsections called tractates, the tractates divided

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<sup>7</sup> Yaakov Elman, "Order, Sequence, and Selection: The Mishnah's Anthological Choices," in *The Anthology in Jewish Literature*, ed. David Stern (New York: Oxford University Press, 2004), 53-80.

<sup>8</sup> Elman's article presents the best summary of each characterization and the scholarship behind it. Elman ultimately rejects the usefulness of classification altogether and argues that no one genre fits the work in entirety.

<sup>9</sup> The standard academic opinion holds that the Mishnah remained an orally transmitted text at least until the eighth century. See Yaakov Sussman, "*Torah she-be'al peh: peshutah ke-mashma'ah - ko'ho shel ko'zo shel yod*," in *Mehkerei Talmud*, 3 (2006): 209-384.

into chapters, and the chapters into verses, called *mishnayot*. The orders contain between seven and 12 tractates. Each tractate addresses the laws of a particular subject matter and the subject matters of tractates in an order generally, but not always, relate to one another. For example, *Zer'aim* contains 11 tractates which cover the laws of prayers and benedictions, laws concerning agriculture, when fieldwork is permitted and prohibited, and what can and cannot be done with the harvests, and what portions of the harvests should be reserved for the poor and the priestly classes.<sup>10</sup>

The dominant scholarly view holds that within each order the tractates are not logically arranged by topic, but rather in descending order of size.<sup>11</sup> The organization of the chapters within each tractate are, however, organized by topic and not length of *mishnayot*. This arrangement made for easier navigation and oral repetition of the texts. Along these lines, scholars have argued that the Mishnah's strict organization by topic was due to writing practices in antiquity: texts were written continuously on scrolls without divisions, so strict organization by subject allowed individuals to know when they reached the end of one segment and the

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<sup>10</sup> *Mo'ed* contains 12 tractates concerning the laws of the Sabbath and festivals. *Nashim* has 7 tractates that cover the laws of marriage and divorce. *Nezikin* has 7/11 tractates that address the laws of damages, torts, real estate, civil and criminal courts, punishments, oaths and testimonies, idolatry, and ethical teachings. *Kodashim* has 11 tractates covering the laws of Temple sacrifices, ritual slaughter, and other Temple related matters. *Taharot* contains 12 tractates covering laws pertaining to vessels, contact with the dead, skin disorders, ritual impurities of food and drink, female ritual purity, and mikvah immersions.

<sup>11</sup> Elman, 56-7. For a useful note on the early scholarship that discussed this theory see: Isadore Twersky, *Introduction to the Code of Maimonides (Mishneh Torah)*, (New Haven: Yale University Press, 1980), 242-3.

beginning of another. The patterns of language and the cognitive units were also instrumental to the comprehension and use of the text.<sup>12</sup>

The significance of the Mishnah's structure and organization was further solidified through its adoption by both the Palestinian and Babylonian Talmuds. Both versions of the Talmud were formulated as commentaries on the Mishnah, so they followed the Mishnah's organizational model while also expanding and building upon it.<sup>13</sup> In the *tannaitic* period (period of the Mishnah, roughly 10-220 C.E.) there were many different sources of oral law, but by the *amoraim* (period of the Talmud, roughly 220-500 C.E.) these works were mostly compiled and consolidated into the framework of the Talmud. The Palestinian rabbis wrote either scholastic commentary and discourse on the Mishnah, which became the Palestinian Talmud, or homiletic exposition of the Bible, known as *aggadic midrash*. The Babylonian scholars primarily funneled their teachings and study in the form of the Babylonian Talmud. They did not

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<sup>12</sup> Jacob Neusner, *The Mishnah: An Introduction* (Northvale: Jason Aronson, 1989), 23. Techniques of ancient book production are consistent with the coexistence of the oral and written nature of the Mishnah. Even when texts were written, finding a particular passage in a large papyrus roll or parchment scroll was cumbersome and time consuming. People relied on their memories more often and did not quote passages verbatim. Notes on texts often included and integrated one's own and others thoughts on the matter. Texts reflected the copier's point of view; there were often errors and few copies were precisely identical. For more on ancient book production see: See Catherine Hezser, "Mishnah and Ancient Book Production," in *The Mishnah in Contemporary Perspective, Vol 1*, eds., Jacob Neusner and Alan Avery-Peck (Leiden: Brill, 2002) 167-192. Hezser's bibliography, including the following works, is a useful starting point for understanding the general reading culture in antiquity: Frederic Kenyon, *Books and Readers in Ancient Greece and Rome* (Oxford: Clarendon Press, 1951); A.F. Norman, "The Book Trade in Fourth-Century Antioch," in *Journal of Hellenistic Studies* 80 (1960): 1-17; C. Roberts, "Books in the Graeco-Roman World and in the New Testament," in *Cambridge History of the Bible*, eds. P.R. Ackroyd and C.T. Evans (Cambridge: Cambridge University Press, 1970), vol 1, 48-66; L.D. Reynolds and N.G. Wilson, *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature* (Oxford: Clarendon Press, 1974); Raymond J. Starr, "The Circulation of Literary Texts in the Roman World," in *The Classical Quarterly* 37 (1987): 213-223; Harry Y. Gamble, *Books and Readers in the Early Church: A History of Early Christian Texts* (New Haven: Yale University Press, 1995); Jocelyn Penny Small, *Wax Tablets of the Mind. Cognitive Studies of Memory and Literacy in Classical Antiquity* (London: Routledge, 1997); H. Gregory Snyder, *Teachers and Texts in the Ancient World: Philosophers, Jews, and Christians* (London: Routledge, 2000).

<sup>13</sup> The Babylonian Talmud follows the order of the Mishnah, with some important topical additions, including *Ḥanukah*, *Mezuzah* and *Tefilin*. As these topics were not part of the original six orders of the Mishnah, their places do not necessarily fit logically within its structure.

compose separate compendia of *aggadic midrash* but rather fit biblical exegesis in their exposition of the Mishnah.<sup>14</sup>

The mishnaic/talmudic structure served as the primary organizational model along which halakhic works were written in subsequent years. By the year 1000, condensed and more accessible guides to the talmudic text or monographs on specific topics organized according to the structure of the Talmud became the most popular legal genres. Many of the significant halakhic texts of the period emerged from the north African context, where Jewish scholars, much like their Muslim counterparts, were known as prodigious copyists.<sup>15</sup> One of the most important of the new works from Qayrawan of the period was Rabbenu Nissim's (RaN) commentary which was organized by subject like the Talmud and paraphrased the practical legal ramifications of talmudic discourse. Rabbi Isaac Alfasi (RIF) similarly wrote a talmudic guide to the law, intended as a manual for judges, covering the whole of the Talmud and remaining faithful to its organizational structure.<sup>16</sup> Though there were a number of shorter and less known works, such as the *al-hawwi* (halakhic works written in Arabic to be more accessible to the public), the Qarywanese rabbinic scholars (of the eleventh century) generally transmitted applied law through talmudic commentary.<sup>17</sup>

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<sup>14</sup> For a discussion of the Talmud as an anthology see: Eliezer Segal, "Anthological Dimensions of the Babylonian Talmud," in *The Anthology in Jewish Literature*, ed. David Stern (New York: Oxford University Press, 2004), 81-107.

<sup>15</sup> Fishman, 67-70. Whereas the *ge'onim* wrote their texts in Judeo-Arabic, the eleventh-century Qayrawan scholars wrote in Aramaic for students of the Talmud.

<sup>16</sup> Isadore Twersky, *Introduction to the Code of Maimonides (Mishneh Torah)*, (New Haven: Yale University Press, 1980), 239. Occasionally Alfasi rearranged isolated sentences and grouped arcane subjects such as *Zer'aim*, *Kodashim*, and *Taharot* into the new rubric *Halakhot Ketanot*, but as a whole Alfasi's work is characterized as a practical legal abridgment of the Talmud along its model. Alfasi's manual was a well-studied text that provoked its own slew of expository works. In Maimonides' later opinion, Alfasi's work superseded previous codes and became known as the "miniature Talmud."

<sup>17</sup> Fishman, 81-3.

## *Mishneh Torah*

Perhaps the best parallel to Lampronti's reinvention of the structure of Jewish law is the work of Moses Maimonides, a physician who also took on the gargantuan task of singularly reorganizing the entire corpus of halakhah.

The first of Maimonides's works with a change in structure was the *Sefer ha-miẓvot*, which contained an original systematic classification of the commandments. Though the work belonged to a genre of rabbinic literature that framed itself around a talmudic reference to 613 commandments, Maimonides's volume set forth guiding principles for enumerating and classifying the laws, including distinguishing between biblical and rabbinic commandments, general exhortations, specific commandments, negative and positive commandments, temporary injunctions, and timeless law.

In his introduction to the *Sefer ha-miẓvot*, Maimonides explained that he deliberated over how to organize the work and ultimately chose to do so by topic (albeit a different topical structure than the Mishnah/Talmud as will be explained) and not commandment, because he believed that the presentation in this manner made the substance easier to learn and memorize.<sup>18</sup>

Maimonides's arrangement of the commandments into discrete subjects in the *Sefer ha-miẓvot* provided the framework for his more comprehensive and ambitious work, the *Mishneh*

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<sup>18</sup> In his introduction to the *Sefer ha-miẓvot*, Maimonides explained his justification for organizing the law according to topic and not commandments: "...I began thinking about how the division of this work, and the arrangement of its parts, were to be done. (I wondered:) should I divide it in accordance with the divisions of the Mishnah and follow in its footsteps, or should I divide it in some other way, arranging the subjects at the beginning or at the end of the work as logic will dictate, since this is the proper and easier way for learning? Then it became clear to me that in place of the tractates of the Mishnah, it would be best to arrange this work in groups of halakhot (laws), so that it would read: "The Laws of the Tabernacle, the Laws of the Palm-Branch, the Laws of the Mezuzah, the Laws of the Fringes"; and that I should divide every group of halakhot into chapters and paragraphs, even as the Mishnah had done, so that, for example, in the Laws of the Tefillin there would be chapters one, two, three, four, and each chapter would be (sub)divided into various laws, so that knowledge of it by heart should render it easy for one who wishes to learn something from it by memory..." This is quoted from Twersky's translation, see: Twersky, *Introduction to the Code of Maimonides* (New Haven: Yale, 1980) 27-28.

*Torah*. In addition to the systematic arrangement of the laws, Maimonides sought to cover and summarize the entire talmudic discourse in easy-to-understand language and form. The language and arrangement fit Maimonides's intended goal: to replace with a single guide the corpus of rabbinic legal literature that had developed up to his time.

An obvious organizational model Maimonides could have adopted was the six orders of the Mishnah -- as noted, the first comprehensive and authoritative systematic presentation of the Oral Law. This was the dominant structure for legal works and Maimonides was eminently familiar with it, as he investigated the motivation behind the structure and listed its merits in his Mishnah commentary. Yet Maimonides chose to depart from that model. He eliminated from his work the cumbersome dialectical pattern of talmudic discourse, and sought a more simple and accessible form.

Maimonides justified the purpose and form of the *Mishneh Torah* as follows:

I have seen fit to arrange this compendium in large divisions of the laws according to their various topics. These divisions are distributed in chapters grouped according to subject matter. Each chapter is subdivided into smaller sections so that they may be systematically memorized. Among the laws on the various topics, some consist of rules in reference to a single Biblical precept. This would be the case when such a precept is rich in traditional matter and forms a single topic. Other sections include rules referring to several precepts when these all belong to one topic. For the work follows the order of topics and is not planned according to the number of precepts, as will be explained to the reader.<sup>19</sup>

Maimonides had two stated goals -- a text that could be both easily understood and memorized -- and he arranged the book's substance to achieve those goals by, for example, dividing broad subject into numerous smaller subtopics. Maimonides was not the first to depart from the mishnaic/talmudic models. Some *ge'onim* (R. Sa'adiah, R. Hai, R. Samuel ben Hofni) before

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<sup>19</sup> This is Twersky's translation: Twersky, *Introduction to the Code of Maimonides*, 29-30.

him and some of his Spanish predecessors (including Isaac ibn Ghiyath and Judah al-Bargeloni) experimented with new organizational structures, but their texts were far more limited in scope, covering only one or a few topics in monographic fashion and not the whole of Jewish law.<sup>20</sup> So Maimonides was aware that he was the first to produce a complete regrouping of all the laws and he accordingly saw himself in line with the compiler of the Mishnah, R. Judah the Patriarch, the last individual to systematically rearrange the Jewish legal system in a comprehensive form.<sup>21</sup> The structure Maimonides chose was 14 books topically covering philosophy and ethics in addition to the legal and ritual elements of Jewish law.<sup>22</sup>

### ***'Arba'ah turim***

The next major transformation in the organization of Jewish legal material was the *'Arba'ah turim* (Four Columns; also known as just the *Tur*) by Jacob b. Asher (c. 1270-1340). Like Maimonides before him, R. Jacob sought to simplify and reorganize the presentation of the law. To accomplish that task, R. Jacob structured his work, which is considered the first

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<sup>20</sup> Twersky, 254.

<sup>21</sup> Twersky, 256.

<sup>22</sup> The structure and content of the books are as follows: The first book, *Mad'a* (Knowledge), contains a summary of the essential beliefs and concepts of Judaism. Book Two, *Ahavah* (Love; Adoration), covers precepts to be observed constantly; daily observance, blessings and prayers. Book Three, *Zemanim* (Seasons), covers laws fixed to certain time periods including laws pertaining to festivals and calendar related matters. Book Four, *Nashim* (Women), covers the laws of marriage and divorce. Book Five, *Kedusha* (holiness), concerns forbidden foods and sexual unions. Book Six, *Hafla'ah* (Asseveration), covers oaths, vows, and valuations. Book Seven, *Zera'im* (Seeds), is concerned with agricultural matters including tithing, first fruits, and Sabbatical and Jubilee years, and gifts to the poor (it carries the same name as the mishnaic order but does not graph precisely onto it). Book Eight, *'Avodah* (Temple Service), addresses matters relating to the building of the Temple and its service. Book Nine, *Korbanot* (offerings), concerns the sacrifices brought to the Temple. Book Ten, *Taharah* (Purity), treats the laws of cleanliness and uncleanness both as they pertain to both Temple and non-Temple related situations. Book Eleven, *Nezikin* (Torts), contains precepts concerning damage to property or person. Book Twelve, *Kinyan* (Acquisition), covers the matters related to the rights and obligations of property acquisition and ownership. Book Thirteen, *Mishpatim* (Civil Laws), concerns laws of transactions between people, such as loans, wages, and deposits. Book Fourteen, *Shofetim* (Judges), covers the dynamics of the judicial process. See Twersky, 261.

Ashkenazic code, into four parts, which he called in the title, rows or columns.<sup>23</sup> The division of the law into four distinct parts allowed R. Jacob to target and reach a variety of audiences.

According to historian Judah Galinsky, the first section, '*Orah hayim*, covering matters of daily relevance (prayers, blessings), was meant for the broadest audience, a guide for the rabbi, preacher, or layman. The second section, *Yoreh de'ah*, was meant to be a code for local rabbis, to help them decide ritual matters. And the last two sections, '*Even ha-ezer* and *Hoshen mishpat*, covering civil and marital law, were intended for judges.<sup>24</sup>

R. Jacob initiated this form against the backdrop of a German and French Jewish legal tradition in which scholars focused their efforts on either close and critical reading of the talmudic text (such as the Tosafists, a group of rabbinic scholars in northern France and Germany from the twelfth to fourteenth centuries, commentaries) or on composing legal summaries organized according to the structure of the Talmud that included a variety of legal opinions (such as the *Sefer miẓvot gadol* written by R. Moses of Coucy (d. 1250), the '*Or zaru'a* by R. Isaac of Vienna (d. 1250), and the *Sefer miẓvot katan* by R. Isaac of Corbel (d. 1270)).<sup>25</sup> In medieval Sephardic culture by contrast, talmudic study itself was less important and the focus was more on

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<sup>23</sup> The first, '*Orah hayim*, covers prayers and blessings. The second, *Yoreh de'ah*, covers Jewish dietary law and family purity. The third, '*Even ha-ezer*, covers marital law. The fourth, *Hoshen mishpat*, covers Jewish civil law.

<sup>24</sup> Judah Galinsky, "The Four Turim and the Halakhic Literature of Fourteenth-Century Spain: Historical, Literary and Halakhic Aspects" (Hebrew), (PhD, diss., Bar-Ilan University, Ramat Gan, 1999).

<sup>25</sup> These legal summaries are discussed by Judah Galinsky and Simha Emanuel among others. See: Judah Galinsky, "The Significance of Form: R. Moses of Coucy's Reading Audience and his *Sefer ha-Mitsvot*," *AJS Review* 35, no. 2 (2011): 293-321; Simcha Emanuel, *Shivrei luhot: sefarim avudim shel ba'alei ha-Tosafot* (Jerusalem: Hebrew University Magnes Press, 2006), 2-10. Tamara Morsel-Eisenberg's forthcoming dissertation on responsa literature in the printed era provides a lucid analysis and summary of the purpose and function of legal summaries in Ashkenaz: Tamara Morsel-Eisenberg, "The Organization of *Halakhic* (Jewish Legal) Knowledge in the Early Modern Period: *Ashkenazic* Responsa as a Case Study" (PhD., diss., University of Pennsylvania, 2017). The tosafists also wrote works of biblical exegesis, piyyut, and mysticism see: Ephraim Kanarfogel, *The Intellectual History and Rabbinic Culture of Medieval Ashkenaz* (Detroit: Wayne State University Press, 2013).

educating the layman than on training the elite in talmudic discourse.<sup>26</sup> Some historians also argue that Spanish rabbis had a more positive attitude towards inscribed law and possessed the tradition that the Talmud was committed to writing early on and was designed to be a source of practical law.<sup>27</sup> Accordingly, the Spanish rabbis did not labor over the Talmud itself but rather produced codes that clarified and made the applied law more easily accessible.

R. Jacob's insight was to combine these traditions by organizing a comprehensive Ashkenazic code, and his efforts achieved success. Though in the first fifty years following its publication the audience of the *Tur* was only scholars who themselves were writing works on those subjects, towards the end of the fourteenth and beginning of the fifteenth centuries, the work began to achieve popularity in reading communities of Spain, North Africa, Germany, and Italy. Over the course of the fifteenth century, it reached increasing popularity in those areas.<sup>29</sup> Native Italian rabbis, such as the Judah and David Messer Leon, adopted the *Tur* as the authoritative halakhic resource.<sup>30</sup>

The *Tur*'s form was further solidified by its use in the next significant codification of the law, the *Shulḥan 'arukh* (The Set Table) by Joseph Karo (1488-1575). Karo had begun his rabbinic legal analysis as a commentary to R. Jacob's *Tur*, and published that work as the *Beit Yosef* (House of Joseph). Karo's more popular and widespread work, however, was the *Shulḥan 'arukh*. While adopting the arrangement of the *Tur*, Karo eschewed commenting on R. Jacob,

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<sup>26</sup> Judah Galinsky, "Ashkenazim in Sefarad: The Rosh and the Tur on the Codification of Jewish Law," *Jewish Law Annual* 16 (2006): 5; Fishman, 89.

<sup>27</sup> This theory was advanced most recently by Fishman in *Becoming the People of the Talmud*, 65-90.

instead presenting his own clear, concise, and systematic interpretation of the law.<sup>28</sup> Karo's decision to structure his work according to the model of the *Tur* rather than the *Mishneh Torah* also had to do with his desire to reach a broader audience. Karo wanted his text to become the primary legal resource to be studied across the Jewish world and the final expression of what the law meant. He aggressively sought to get his text printed, passed by the censors, and accepted by Jewish communities of various origins.<sup>29</sup> The adaptation of the work to eastern European traditions, with the addition of the commentaries of Moses Isserles (1520-1572), solidified the *Shulkhan Arukh's* place as the most authoritative halakhic compendium.

By the sixteenth century, most rabbinic works were organized according to the models of the four columns of the *Tur* and the *Shulhan 'arukh*, the fourteen chapters of the *Mishneh Torah*, or the six orders of the Mishnah/Talmud. New works were typically written as marginal commentaries, monographs on specific topics, or abridged guides to these major legal works.<sup>30</sup> Responsa -- a genre of the *ge'onic* era that continued to be used to a lesser extent throughout the medieval period -- regained popularity and eventually became the dominant type of rabbinic

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<sup>28</sup> The selection of the *Tur's* form was likely because it was the most popular textbook at the time and it was more practically oriented than the *Mishneh Torah*. The *Mishneh Torah* included all the laws, both those relevant in its time and those not, such as the laws of Temple Service and animal sacrifices. For more on Karo's motivations see: Isadore Twersky, "*Shulhan Arukh: Enduring Code of Jewish Law*," *The Jewish Expression*, ed. J. Goldin (New Haven: Yale University Press, 1976), 322-343.

<sup>29</sup> Amnon Raz-Krakotzkin, "From Safed to Venice: The Shulhan Arukh and the Censor," in *Tradition, Heterodoxy and Religious Culture: Judaism and Christianity in the Early Modern Period*, eds. Chanita Goodblatt and Howard Kreisel, (Beer-Sheva: Ben Gurion University of the Negev Press, 2006) 91-115.

<sup>30</sup> For example: Solomon Luria (*Maharshal*, 1510-1574) composed a codificatory work that followed the sequence of the Talmud. Mordekhai b. Abraham Jaffe's (1530-1612) code, the *Levush*, is organized according to the *Tur*. Joshua b. Alexander ha-Kohen Falk (1555-1614) wrote commentaries on the *Tur* and the *Shulhan 'arukh*. David b. Samuel ha-Levi (*Taz*, 1586-1667) and Sabbatai b. Meir ha-Kohen (*Shakh*, 1621-1662) also wrote important commentaries on the *Shulhan 'arukh* during this period.

writing, but these works too were typically printed in author specific volumes and arranged according to the organizational models of the *'Arba'ah turim* or the Talmud.<sup>31</sup>

### ***Pahad Yizhak***

Lampronti was the first to transition Jewish law away from the very few topical and systematic structures that dominated Jewish legal literature in the two millennia prior to his time and instead present the law in new organizational models commonly used by European scholars of the period. By the eighteenth century, the abundance of written material produced due to the technical innovations of the printing press, the accessibility of inexpensive paper, and scholarly developments that prompted an increased number of books, stimulated the production of new European genres with new organizational structures. Dictionaries and encyclopedias in particular emerged as works that could help readers navigate and access information otherwise buried in lengthy tomes.<sup>32</sup>

Dictionaries of arts and sciences are considered to be the immediate predecessor of the modern encyclopedia and a departure from encyclopedic compilations of prior centuries.<sup>33</sup>

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<sup>31</sup> For example: Ezekiel Landau's (1713-1793) responsa collection, *Nodah be-Yehudah*, is organized according to the *Tur*. So too is Samson Morpurgo's (1681-1740) *Shemesh zedakah*. There are also collections with no particular order, just an indexed list of questions and answers, such as Zevi Hirsch Ashkenazi's (1660-1718) responsa collection, *Hakham Zevi*, and Aaron Samuel ben Israel Kaidanover's (1614-1676) collection, *Emunat Shemuel*.

<sup>32</sup> Earlier efforts to contain written material included the implementation of finding aids, such as indexes and tables of contents. These tools became a staple in printed works, whereas the items had been used only occasionally in prior manuscripts. They enabled readers to no longer search from the first page to the last to find what they wanted, an especially burdensome task in lengthy tomes. For a detailed history of the history of these mechanisms see: Ann Blair, *Too Much to Know: Managing Scholarly Information Before the Modern Age* (New Haven: Yale University Press, 2010).

<sup>33</sup> The best work to cover seventeenth- and eighteenth-century scientific dictionaries is: Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001). By "modern encyclopedia" I mean the seventeenth and eighteenth century works that represented a distinct departure from the classical and Renaissance encyclopedias. Many of these works in the eighteenth century began to bear the name "encyclopedia" in their title, such as Ephraim Chambers's *Cyclopaedia* and Diderot and d'Alembert's *Encyclopédie*. The Italian equivalent of the new encyclopedia was called "*dizionario*": for example, Gianfrancesco Pivati's *Nuovo Dizionario*. Chapter 6 will explain at greater length what distinguished these works from their predecessors.

Medieval encyclopedias were scholastic works intended to cover the curriculum of the educated elite.<sup>34</sup> Dictionaries of arts and sciences, however, were not merely anthologies of older texts, they incorporated recent discoveries and communicated knowledge in ways intended for public understanding and use. Consequently, they internalized the values that came to mark the encyclopedias that followed.<sup>35</sup> Modern encyclopedias as we recognize them are thus very closely related to seventeenth-century arts and sciences dictionaries, but can be considered distinct from them in size and aim. The encyclopedias are distinctly multi-volume, multi-author texts, unlike the dictionaries, intended to convey information on as many subjects and to as wide an audience as possible.<sup>36</sup>

Among European scholars, there was a significant change in direction in the late seventeenth and eighteenth centuries to innovate the organization and dissemination of knowledge, rather than rely on the old methods. The period witnessed an overarching shift towards reorganizing ancient and medieval systems of learning. Various alternate systems were proposed, but ultimately none could easily accommodate the compiling of the old knowledge with the fast pace of new discoveries and ideas. Alphabetical order thus took over as a neutral, objective, and non-value-laden method of primary organization.<sup>37</sup> It eliminated the previous subjective hierarchies and allowed for insertion of new information, opinions, and wide variety of subject matter without undermining established systematic orders. Through subject diagrams

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<sup>34</sup> For an introduction to medieval Hebrew encyclopedias of this model see: Steven Harvey, eds., *The Medieval Hebrew Encyclopedias of Science and Philosophy* (Dordrecht: Kluwer Academic Publishers, 2000).

<sup>35</sup> This genre will be explained in greater depth in Chapter 6.

<sup>36</sup> Related to this genre were also specialized reference works covering single subject matters such as commerce, math, and chemistry.

<sup>37</sup> I am referring to the primary organization of the work -- the main organizational structure -- not the secondary organization of an index, which would more commonly be alphabetized.

and elaborate systems of cross-references the old relationships between subjects could be maintained, without regard for anyone's personal judgment as to where new information belonged.<sup>38</sup>

Despite the common rhetorical framing of alphabetical order in the seventeenth century as novel (Conrad Gesner, for example, made no mention of alphabetical antecedents in his bibliographic works<sup>39</sup>), the form was not without precedent. Alphabetical order was first used in antiquity, primarily in *pinakes* registers, but that tradition carried over primarily to Byzantium and was lost in the West.<sup>40</sup> In the medieval period alphabetical order was revived and used especially in non-Jewish biblical concordances.<sup>41</sup> Later, it was cautiously used in compendia such as *exempla* (moral anecdotes used often in sermons) collections, *florilegia* (compilations of

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<sup>38</sup> Richard Yeo's *Encyclopedic Visions*, Peter Burke's *A Social History of Knowledge*, and Mary and Richard Rouse's *Authentic Witness* are the most useful resources for understanding the significance and meaning of alphabetical order: Yeo, *Encyclopedic Visions*, 25-7; Peter Burke, *A Social History of Knowledge: From Gutenberg to Diderot* (Cambridge: Polity, 2000), 109-110; 115; Richard H. and Mary A. Rouse, *Authentic Witnesses: Approaches to Medieval Texts and Manuscripts* (Notre Dame, Indiana: University of Notre Dame Press, 1991), 204; 240-1. Yeo, Burke, Rouse, and Rouse all make the same point: alphabetical order was not an obvious organizational format before the early modern period and was perceived to undermine the logical and harmonious relationships between subjects that were long ago established and very well entrenched. Chapter 6 will explain Lampronti's use of these elements in specific -- diagrams and cross-references -- more fully.

<sup>39</sup> Blair, *Too Much to Know*, 21.

<sup>40</sup> Blair, 20-1.

<sup>41</sup> For a summary of the use of alphabetical tools in medieval manuscripts see: Richard H. and Mary A. Rouse, *Authentic Witnesses: Approaches to Medieval Texts and Manuscripts* (Notre Dame, Indiana: University of Notre Dame Press, 1991), 201-204. Also: Blair, 38-40. According to Rouse and Rouse alphabetization emerged in the medieval period first in biblical distinction collections intended as resources for the preacher, though even in that genre it never became the norm. The adoption of alphabetical order in the medieval period at a slow pace and in relatively limited circumstances was in large part because it went against the seemingly rational relationships between subjects medieval authors so highly valued. Rouse and Rouse also argue that alphabetization was used in the medieval period primarily regarding subjects with no established rational order, such as lapidaries, herbals, medical recipes, and wordlists. Dictionaries and lexicons are also important exceptions to rationally organized works. In genres with a distinct organizational tradition, such as the biblical texts, the preferred mode was to maintain the existing order. In this respect, alphabetization was not simply a useful finding-aid, it actually undermined the previous order and represented a different mode of thinking about written material. The use of alphabetically organized indexes to supplement the rational order of a work, however, became increasingly common in the medieval period.

literary extracts), and to index some legal works.<sup>42</sup> The only significant Jewish precedent for the alphabetical ordering of halakhah was the *'Arukh*, the eleventh-century talmudic lexicon authored by Nathan of Rome.<sup>43</sup>

Most importantly, in the seventeenth century alphabetical order moved from a secondary system of classification to the primary one. According to Peter Burke, alphabetical order was readopted in the early modern period primarily out of a sense of defeat by the increasing tides of knowledge that became too cumbersome to digest or methodize.<sup>44</sup> A less negative version of this theory is that alphabetical order was adopted because it had the capacity to accommodate both the old and the new. For this reason, alphabetical order became particularly important in eighteenth-century encyclopedias.<sup>45</sup>

Lampronti's insight to apply this structure to the vast system of Jewish legal literature was bold and ambitious. As this summary has emphasized, there was not a lot of innovation in

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<sup>42</sup> Rouse and Rouse, 241. Legal works began to be indexed in the eleventh century and more frequently from and after the thirteenth century. See for example the following eleventh-century legal collections: Maria Teresa Maggi Bei, ed., *Il Liber floriger di Gregorio da Catino*, 1, *Testo*, Miscellanea della Società romana di storia patria 26 (Rome, 1984); Ignazio Georgi and Ugo Balzani, eds., *Il regesto di Farfa compilato da Gregorio di Catino*, 5 vols. (Rome, 1879-1914), 1:1-28; Victor Wolf von Glanvell, ed., *Die Kanonessammlung des Kardinals Deusdedit*, 1, *Die Kanonessammlung selbst* (Paderborn, 1905), 6-28.

<sup>43</sup> The *'Arukh* is primarily a lexicon, though contained within the definitional entries are sometimes explanations of legal concepts. Accordingly, some medieval halakhic authorities referred to it in their Talmudic commentaries. For a recent study of the *Arukh* see: Joanna Weinberg, "Midrash in a Lexical Key: Nathan ben Yehiel's *Arukh*," in *Midrash Unbound: Transformations and Innovations* edited by Joanna Weinberg and Michael Fishbane (Oxford: Littman Library of Jewish Civilization, 2013), 213-231. In addition to the *Arukh*, there are some limited examples of small sections of texts, such as the *Shnei luhot ha-brit*, that have alphabetical sections. Judah Galinsky also mentioned an unpublished medieval halakhic manuscript that was organized, at least in part, alphabetically: Galinsky, "On Popular Halakhic Literature and the Jewish Reading Audience in Fourteenth-Century Spain," *The Jewish Quarterly Review*, 98, no. 3 (Summer 2008): 323-4. Tamara Morsel-Eisenberg also turned my attention to a seventeenth-century Polish alphabetical work authored by Aaron ben Elazar Lipman of Zempelburg: Aaron Lipman, *Korban Aharon* (Amsterdam, 1647). Lipman may have spent time on Italy as he is mentioned in Nepi and Ghirondi, *Toledot gedolei Yisra'el*. It seems the *Korban Aharon* was printed only three times: Amsterdam, 1647; Wilhelmsdorf, 1717; Lemberg, 1867.

<sup>44</sup> Burke, *A Social History of Knowledge*, 110.

<sup>45</sup> Again, Chapter 6 explores the contemporary genre more fully.

form throughout the centuries as rabbis employed only a few general topical and systematic models for the halakhic corpus. And each of these models arose from specific writing practices and cultural circumstances of their respective time, place, and author. In particular, these forms were organized systematically in order to aid in memorization. As a few dominant models became more entrenched, the most natural move was not to innovate but to attach one's work to an existing authoritative text either as a gloss on that work or by adopting its fundamental structure but with new content.<sup>46</sup> Accordingly, in this context, Lampronti's major innovation in form, especially after the introduction of print and the widespread acceptance of the *Shulḥan 'arukh*, was revolutionary.

### **Recognition of the Novelty of the *Paḥad Yiṣḥak***

#### **Paratexts**

The novelty of Lampronti's work did not go unrecognized during the time of its production. Printed together with the *Paḥad Yiṣḥak* were pages of approbations written by his contemporaries as well as an introduction written by the proofreaders. These extra-textual passages, called in scholarly literature on books "paratexts," provide specific insight into the intention of a work and how it was received by contemporaries.<sup>47</sup> Three paratexts of the *Paḥad Yiṣḥak* emphasize the newness of alphabetical order to rabbinic legal literature.

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<sup>46</sup> Textual mechanisms such as tables of contents and indexes were implemented in these works to make them more useful in the era of print, but the fundamental structures remained the same. For more on this see Tamara Morsel-Eisenberg's forthcoming dissertation.

<sup>47</sup> According to the theory of Gerard Genette, paratexts—any extra-textual aspect of a book, including the introduction—are "thresholds of interpretation" that help place a work within its cultural setting and provide insight into the intended meaning of a text and its overall purpose. Paratexts are thus not external to a text, but rather an internal part of it that help readers reach greater levels of understanding. See: Gerard Genette, *Paratexts: Thresholds of Interpretation*, trans. Jane E. Lewin (Cambridge: Cambridge University Press, 1997), 221.

First, Jacob Saraval, one of the proofreaders of the *Paḥad Yiẓḥak*, wrote in his introduction to the work: “I saw the purpose of this great composition, the likes of which have not appeared before, and I rejoiced, because a thing like the scholars of the nations take pride in, as they make compositions such as these, is now among our nation.”<sup>48</sup> Saraval both recognized the novelty of Lampronti’s work and drew the connection between it and the popular genre of the dictionaries and encyclopedias. The *Paḥad Yiẓḥak* was completely novel for Jewish culture, yet the form Lampronti adopted was well established in European intellectual circles.

A second recognition of the newness of the organization is also found in the proofreaders’ introduction. There Saraval and Simha Kalimani explained that the text is organized alphabetically not just by single words, but by phrases and concepts, which distinguishes the *Paḥad Yiẓḥak* from the *‘Arukh*, Nathan of Rome’s eleventh-century lexicon. Saraval and Kalimani specifically identified Nathan of Rome’s work as the only precedent for alphabetical structure for Jewish legal literature, while also distinguishing the *Paḥad Yiẓḥak* from it. The *‘Arukh* was primarily a lexicography, which proceeded alphabetically only by single words and not whole phrases. Saraval and Kalimani continued by explaining precisely how the alphabetical order proceeds in the *Paḥad Yiẓḥak*: by each letter regardless of whether the next letter starts a new word. They even provide a few specific examples for the reader’s benefit:

By way of example, when one comes to the section on *’Adam*, one finds that the first passage is *’Adam ’oser*, and afterwards *’Adam ’eino*, one sees that after the letters *aleph dalet mem (ADM)* came the letters of the characters closest to it in *aleph"bet*, and therefore one sees from the start: *’Oser*, which begins with *aleph vav*, and afterwards *’Eino* which begins with *aleph yod*. And so forth in the section of *’Adam ’eino*, it continues to go in this order. For example, after *’Eino ’oser* comes *’Eino bo’et*, and afterwards *’Eino dar*, and so forth until the end of *aleph* following the letters *ADM (aleph dalet mem)*. And after the

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<sup>48</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Volume 1 “*kor’eh na’im*” (Venice, 1750), n.p.

completion of *aleph* begins the passages in the section on 'Adam beginning with the letter *bet*. For example, 'Adam *be-'ama yoshev*, 'adam *b'a 'al kol beheimah*, 'adam *bahul* and on. And after finishing letter *bet* comes the passages that begin with letter *gimmel*...<sup>49</sup>

Saraval and Kalimani thus elucidated the structure by providing examples, showing exactly how the order proceeds alphabetically by each successive letter in a subject heading. This again emphasizes the newness of the structure, because if the audience of the work was familiar with the order, it would not need to be explained in such detail.<sup>50</sup>

The third paratext that highlights the originality of the organization of the *Paḥad Yiẓḥak* is found in the publication permit. The approval for publication by the Venetian Inquisitor was printed together with the first printed volume of the work in 1750. In this permit, the work was introduced with the literal Italian translation of the title *Paḥad Yiẓḥak: Timore d'Isac* (The Fear of Isaac). It was also explained as having the quality of a ritual dictionary, written in the Hebrew language: “*qual è Dizionario Rituale in Lingua Ebraica.*” This is not how a typical halakhic compendium was described. The permit for Samson Morpurgo's (Lampronti's Italian rabbinic contemporary) responsa collection *Shemesh zedakah*, for example, is described merely as a work containing Jewish ritual: “*Il Libro Ebraico, intitolato, Sol Iustitia ubis continentur puessiti circa Rilns Hebreorum.*”<sup>51</sup> Furthermore, an extensive search of similar texts did not turn up any other halakhic text described as a “*dizionario.*” The explanation of the *Paḥad Yiẓḥak* as a ritual

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<sup>49</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Volume 1 “*kor'eh na'im*” (Venice, 1750) n.p.

<sup>50</sup> Lloyd Daly similarly argued that medieval dictionary-makers made the effort to explain alphabetical arrangement to their readers because it was not obvious to them: Lloyd Daly, *Contributions to a History of Alphabetization in Antiquity and the Middle Ages*, Collection Latomus 90 (Brussels: Latomus, 1967).

<sup>51</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Volume 1 (Venice, 1750), n.p. There are some misprints in this version of the license. The correct text should read: *Il Libro Ebraico, intitolato, Sol Iustitia ubis continentur quaesita circa Ritus Hebreorum.*” N and u as well as p and q were sometimes mistakenly interchanged in setting the type. The first version of the license correctly reads “*Ritus Hebreorum*”; the second version was reproduced with the errors. I thank Francesca Bregoli for helping me figure out the correct text here.

dictionary shows the connections contemporaries made between Lampronti's work and the genre of dictionaries, such as Gianfrancesco Pivati's *Nuovo Dizionario*, popular during that time.<sup>52</sup>

## **Manuscripts**

The manner in which Lampronti wrote the *Paḥad Yiṣḥak* also emphasizes both its newness and Lampronti's dedication to his project. As Lampronti's work wholly reordered vast quantities of Jewish legal sources spanning two millennia, a linear drafting was impossible. Lampronti's arrangement required a multi-spatial (plainly, a patchwork) composition. First, Lampronti established the overall layout of the text, and second, Lampronti painstakingly collected, reorganized, and wrote out by hand the content over at least forty years. This process is seen through the following examination of three separate manuscript editions of the venture that remain today in the *Bibliothèque Nationale de France* (the National Library of France), the Hebrew Union College (HUC) and Jewish Theological Seminary (JTS), and the Valmadonna Trust Collection.<sup>53</sup> A detailed analysis of each of these manuscript editions, explaining the nature of the content and composition, illuminates the novelty of Lampronti's project and the intricate work its execution required.

### **First Edition - Bibliothèque Nationale de France**

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<sup>52</sup> More specific parallels will be drawn in Chapter 6.

<sup>53</sup> The first edition is at the *Bibliothèque Nationale de France* (the National Library of France); the second edition is shared by Hebrew Union College (HUC) and the Jewish Theological Seminary (JTS); and the third edition is held in the Valmadonna Trust Collection. The present study is the first to identify and discuss all three editions of the encyclopedia. David Malkiel, the most recent scholar to significantly treat Lampronti's works, for example only mentions only two editions, the first and last. See David Malkiel, "Empiricism in Isaac Lampronti's *Paḥad Yiṣḥak*," *Materia Giudaica* 10 (2005): 341-351.

The first edition of the *Paḥad Yiṣḥak* is today held in the National Library of France.<sup>54</sup>

The edition spans one hundred and twenty manuscript volumes, in which the encyclopedic passages are intermittently entered among blank pages. Lampronti inserted thousands of blank pages in the volumes, some of which were eventually used by him to enter new information in its proper alphabetical place. The number of blank pages separating entries is not uniform -- many between some and few between others -- as it was impossible to anticipate how many pages would be needed for each entry or how many new entries would be included in the work over time.

The text is not continuously written from the first page to the last. Rather, each new entry starts on its own page at the top right and continues horizontally across the page in evenly spaced lines extending from the right margin to the left. Below each entry are the related cross-references in a vertical column down the middle of the page.<sup>55</sup> The cross-references are thus easily discernible from the main content of the entries.<sup>56</sup>

The manuscripts are best characterized as a first draft of the work that Lampronti progressively completed over the course of decades, starting at the beginning of the eighteenth

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<sup>54</sup> Paris, *Bibliothèque Nationale de France*, Mss. Hebrew 458-577.

<sup>55</sup> This structure can be seen by way of example in the first few manuscript pages: The first entry of the encyclopedia, “*aleph aleph de-‘a‘azerkhah*,” begins on the back side of page 6 (6v) of volume 458 of the Paris manuscripts (pages 1-5 are mostly blank with the exception of Lampronti’s short introduction and a few other inscriptions). The entry consists of 3.25 lines starting at the top right of the page. Then, spaced out a few inches below is a single cross-reference. The rest of the page is blank. The next page (7r) is then fully blank and the second entry, “*‘a‘ah be-lashon yavan*,” begins on the top right of the following page (7v). The entry consists of only a single line written entirely in the same color ink. The rest of the page is blank. The third entry, “*‘a‘erah*” begins on page 8r. This entry again is written towards the top of the page and consists of two lines that look like Lampronti wrote at a single point in time. The remainder is then blank; there are no cross-references spaced out in the middle of the page.

<sup>56</sup> Each cross-reference is also flanked by double sets of dots that make them discernible from the main content of the entry. Visual markers such as the dots surrounding citations or colored ink used to separate sections were common manuscript writing techniques.

century and ending around 1743.<sup>57</sup> Though the manuscripts themselves are not dated and Lampronti did not identify the order in which entries were made, many of the contemporary responsa include dates and show the long time span over which Lampronti composed the work.<sup>58</sup>

Often entries are written in different colors of ink, irregular styles (some carefully written, others entered more haphazardly), and with varying spacing. Not only are the colors of ink and writing styles different from one entry to another, but there are instances in which within a single entry these variations are found.<sup>59</sup> This suggests that although the work as a whole is properly attributed to Lampronti, and he wrote the majority of the manuscripts in his own hand, some sections and some editing were obviously made by others who knew him and his penmanship well, such as one of his sons or close students.<sup>60</sup>

We know that Lampronti periodically reviewed his work and made edits, such as an added source or phrase or the cross-through of a single line or two. The editing of some entries is more substantive, reflecting the incorporation of later-in-time subject matter. For instance, in

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<sup>57</sup> It is difficult to determine the exact year Lampronti began the *Paḥad Yiṣḥak* because he did not date his first entry and he copied both old and current material into the work. It is assumed that Lampronti either began the *Paḥad Yiṣḥak* either immediately after or around the same time he completed his first innovative project, the *Bikurei kaṣir*, a journal of rabbinic responsa printed for only three issues in 1715. The latest responsa identified in this edition (meaning, the last year he entered new material into the work) is 1743, which is a text added to both the first edition and the second at the same time. We know, therefore, that the edition was edited up until at least that point.

<sup>58</sup> The dating of the responsa is helpful for showing that the entry could not have been written before that point -- it does not indicate how long after the date Lampronti copied material into the work.

<sup>59</sup> An example of this is seen in the later discussed entry on the kidney's counsel: Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 504, f. 111r-112r.

<sup>60</sup> I thank Judith Olszowy-Schlanger for consulting with me on some of the writing in these manuscripts. Her expertise was essential in helping me determine that the writing was primarily limited to Lampronti and his cohort of students and scholars. The penmanship in most of the text appears so similar that if it was not all written by Lampronti, it was written by someone close to him who learned to write in the same way. The shapes of the letters are very consistent, though differences in writing can be discerned from small variations in the flourishes of letters, the spaces allocated between individual letters, words, and lines, as well as how close to the edge of the page each line ends. At times it is difficult to ascertain whether small differences are the variations of an individual (whose own writing may vary based on time and circumstance) or the product of another's hand altogether.

the entry “*‘aseh doḥeh et lo ta‘aseh*,” the first few lines are written in the same light color ink.<sup>61</sup>

The remaining lines, however, are written in a darker ink and clearly appear as having been entered some time after the first lines. The content also reflects the appearance of new information, as it reads in translation: “The great rabbi Moses Israel emissary of Jerusalem, when he came to visit me in the *beit midrash* in the year 5488, wrote to me the following....”

Lampronti thus added this portion only after Rabbi Moses’s visit. In another instance, Lampronti wrote that Isaacar of Poland came to visit him and testified to a certain custom of his hometown. This addition is written in a clearly different ink than the previous lines of that section.<sup>62</sup>

In most cases, however, it is difficult to discern the time-line of a single entry from its content. Neither the start of each entry nor the addition of a new line, reference, or paragraph is dated. Although many of the responsa include dates, the years reflect when the responsum was written and not when it was entered into the *Paḥad Yiṣḥak*. Much of what appears to be later editing is also either stylistic (crossing off or adding a word here and there) or strictly halakhic (the addition of new halakhic citations) and thus does not in content alone reveal a narrative of the development of the work.

Nonetheless, a detailed texture emerges from these original manuscript pages as being the long, thoughtful work of an individual with the help of a few close to him. For example, in the manuscript entry on killing lice on Sabbath one sees that Lampronti continued to think about and

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<sup>61</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 541, f. 304r. All transliterations are faithful to Lampronti’s original formulation, which in this case included the word “*et*” in the middle of the common halakhic phrase “*‘aseh doḥeh lo ta‘aseh*.”

<sup>62</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 512, f. 109r.

emend his writings.<sup>63</sup> The entry begins as usual on the top right of the page and is written continuously as a single paragraph with evenly spaced out lines all in the same color ink. Three fourths of the way through the page, however, Lampronti crossed off a few lines in a darker colored ink and wrote a symbol, a circle with a single dot in the middle. On the facing page, in that same color ink, he wrote a matching symbol followed by a few additional lines. In the added portion, Lampronti recopied the lines he crossed off but followed them with a more extended explanation of his position on the matter.<sup>64</sup> There he wrote more fully and substantively his belief that this was an instance in which the law should change in line with the research of the non-Jewish scholars.<sup>65</sup> In the printed text one cannot see that Lampronti had continued to think about and update this passage, and though he did not fundamentally change his views, he added a more detailed explanation for why one should be forbidden to kill lice on the Sabbath.

In some instances, the ink colors appear to reveal that Lampronti copied multiple citations from other books into various sections of his manuscript in a single sitting. In the course of just a few pages there are frequent references to Maimonides, for example, written in the same ink, distinct from that used for most of the content written in the surrounding pages. In Volume 481, page 189v, for instance, the subject heading is written in a faded brownish grey ink.<sup>66</sup> Halfway through that line in a dark brown ink (distinctly different from the previous color) begins a copied portion from Maimonides. On the facing page (190r) the subject heading

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<sup>63</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 547, f. 91r-90v. This case will be explored in greater depth in Chapter 4.

<sup>64</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 547, f. 90v.

<sup>65</sup> Again, this specific example will be discussed at length in Chapter 4 of the dissertation.

<sup>66</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 481, f. 189v.

and first line is again written in the same lighter greyish ink followed by a citation to Maimonides in the same darker brown ink as seen on the prior page.<sup>67</sup> This pattern continues again with more Maimonides references all added in the same ink on pages 192r through 198v and on.<sup>68</sup> Another example of consecutive Maimonides references all appearing in the same color, and distinct from the ink used for the surrounding content, can be found in Volume 526.<sup>69</sup>

Lampronti not only copied from printed works, such as those from Maimonides referenced above, but he also copied from unpublished manuscript collections and, in a few unusual cases, the actual manuscripts from which Lampronti copied can be identified and the two analyzed side by side. For instance, located among the volumes of the Valmadonna edition was a small notebook full of miscellaneous hand-written documents (not organized alphabetically in the encyclopedic format) from which Lampronti copied directly into the Paris edition of the *Pahad Yizhak*.<sup>70</sup> Also, in Volume 492 of the Paris manuscripts, under the letter *het* for *halizah*, can be found *seder halizah* documents that match those found in the Valmadonna notebook.<sup>71</sup>

An analysis of both editions establishes that Lampronti copied the documents specifically from the Valmadonna Collection notebook into the Paris manuscripts and not the other way

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<sup>67</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 481, f. 190r.

<sup>68</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 481, f. 192r-198v.

<sup>69</sup> On page 80v, for example, the subject heading and two cross-references appear in a light brown ink while the Maimonides reference appears in a much darker, almost black color. And on 81v and 82r the same holds true: the citations to Maimonides works were added in a distinctly darker color ink and what appears to be the same ink in all three. Again, distinctly darker references to Maimonides appear on pages 94r, 96r, 98r, and on at some length. Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 526, f. 80v; 81v-82r; 94r; 96r; 98r.

<sup>70</sup> New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol 2a.

<sup>71</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 492, f. 374; New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol 2a, f. 33.

around. First, the Paris manuscripts are written in a cleaner fashion than the Valmadonna documents. In the Paris manuscripts the lines are evenly spaced and words do not run together. Also, some words are written in especially carefully drawn calligraphic block letters whereas in the Valmadonna manuscripts these same words are written entirely differently and not as carefully. Second, content identified with editorial marks in the Valmadonna manuscript appear fully integrated in the Paris text, meaning the emendations were first made to the Valmadonna edition and then copied over without the editorial marks into the Paris work. For example, on page 35r of the Valmadonna manuscripts in section 50, a small *dalet* and *kuf* are added with an upper arrow after the words “*sheker me’aher*.” In the Paris manuscript, on page 377r there is no arrow with a correction in the corresponding section and the words “*de-kaim’a lan*” as indicated by the abbreviation *dalet’kuf* appear fully integrated in the text. Furthermore, following the copied *sefer ḥalitzah*, Lampronti wrote notes concerning specific *ḥalitzah* (levirate) cases he presided over in Ferrara. In the Paris manuscript this list is written immediately following the copied text and covers three cases from 1731, all written on the same ink on the bottom of page 380v, and one case from 1745 and another from 1746 on the top of the facing page 381r, which appear in a different ink from the previous three. The dating of these cases -- three in the same year and two a year apart -- as well as the ink colors appear to indicate that each case was inscribed around the time it occurred.<sup>72</sup> Furthermore, these sections do not appear in the Valmadonna manuscript, either in the separate volume or the *ḥet, ḥalitzah* section.

Most of the content of the Paris manuscripts is copied from other sources, either earlier works such as Maimonides or contemporary responsa found in hand-written manuscript

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<sup>72</sup> This is the latest entry I have seen in this manuscript edition.

collections.<sup>73</sup> At times, however, Lampronti did not copy responsa from another notebook, but instead inserted the actual original letters into the manuscript pages, as can be seen in the section on “*tum’at ’ohel*.”<sup>74</sup> There, after a few pages on *tum’at ’ohel* written by Lampronti, there is a page written in a clearly different hand and on slightly larger paper than the surrounding pages.<sup>75</sup> On the back side of the page there are distinct outlines of where the paper was previously folded and the last line of the responsum says: “I wrote and I signed in my name the young Abraham Samson of Torino.”<sup>76</sup> It seems clear that rather than copy the letter into the manuscript Lampronti attached the letter itself.<sup>77</sup> Similarly, the next page 118r is much smaller in size than other manuscript pages and is in a different hand from that of both Lampronti and Abraham Samson. At the end of the page is the signature of Abraham Segre of Casale.<sup>78</sup> The following page is the same size as this note and written in the same hand, but is folded and addressed in letter form to Lampronti. The remains of the wax seal were covered on both sides with thin tissue-like paper, so the pages would not stick together. The presence of the addressed paper with this note confirms that Lampronti did not copy the content of the letter, but inserted the original letter itself.<sup>79</sup> On page 120r it appears as if the question portion of a responsum was

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<sup>73</sup> In most cases it is difficult to identify the exact texts or editions from which Lampronti copied.

<sup>74</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 496, f. 109r-151r. For more on the content of these letters specifically, see: David Malkiel, “Law and Architecture: The Pollution Crisis in the Italian Ghetto,” *European Journal of Jewish Studies* 4, 2 (2010): 255-284.

<sup>75</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 496, f. 117r.

<sup>76</sup> The precise signature is difficult to read because some of the words were cut off in the binding of the manuscript.

<sup>77</sup> I am not familiar enough with this specific rabbi’s writing to know with certainty that it was him. It could have been written on his behalf by a close colleague. I do know, however, from analysis of much of Lampronti’s and his students’ handwriting that it was not written by Lampronti or someone in his close circle.

<sup>78</sup> Paris, Ms. Hebrew 496, f. 118r.

<sup>79</sup> *Ibid.*, f. 119r.

written by Lampronti, followed immediately after by the answer in a distinctly different hand (and also different color ink).<sup>80</sup> The answer continues until page 122v and is signed by Malakhi ha-Kohen and includes a hand-drawn priestly crest. The signatures of two other rabbis from Livorno -- Abraham Rodriguez and Emanuel Hayim Calbo -- then follow. The next manuscript page is fully blank but is the same size as the previous pages, and is faded as if it had once been folded into letter form. The following 30 folio pages continue in similar fashion with pages of varying sizes and writings of different hands, some with addressed papers still containing remains of the wax used to seal the letters. These responsa were written and sent by prominent Italian rabbis, including Aviad Sar Shalom Basilea, Efraim ha-Cohen of Modena, Israel Fontanella, Isaiah Bassan, Samson Morpurgo, and Jacob Belilos, and then later inserted in their appropriate alphabetical place within the *Paḥad Yizḥak*.<sup>81</sup>

Another characteristic feature of the first manuscript edition is that it does not exclusively contain material written in rabbinic Hebrew. Lampronti sometimes copied Italian texts into the work as well. These sections are integrated closely with the Hebrew and often alternate between the two. For example, in the entry on “*Sambation*” Lampronti copied a few pages in Italian into the manuscript.<sup>82</sup> These pages do not appear in a printed edition because the *Mekize Nirdamim*

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<sup>80</sup> The same holds true for pages 138r and 132r where the question appears in a different hand than the response. I compared the writing of these pages to the original writing of the question on page 110v, which I believe was made by Lampronti himself, and the four entries are so similar that if they were not in fact all written by Lampronti, they must have been written by someone else very close to him. What these sections show is that some rabbis would write their answer on the very page on which they received the question, rather than copy the question into their response or send a response without the question. Lampronti sent the same question to a number of Italian rabbis and inserted their responses into the manuscript pages in their appropriate alphabetical place.

<sup>81</sup> In another instance, instead of copying by hand Lampronti inserted 10 printed pages of a sixteenth-century responsum written by Leon Modena. Rather than copying these portions by hand into the manuscript, Lampronti inserted these 10 pages, printed on obviously different paper, into his manuscript work. Paris, Ms. Hebrew 494, f. 151r-159v.

<sup>82</sup> Paris, *Bibliothèque Nationale de France*, Ms. 532, f.329r-332v. For more on the content of this section see: David Malkiel, “The Sambation River and the Ten Tribes in the Paḥad Yizḥak,” (Hebrew) *Pe‘amim* 94-95 (2003): 159-180.

society, which published this volume, printed only the Hebrew and not the Italian sections. Among the original manuscript letters one also finds Italian words and phrases interspersed in the Hebrew responsa in addition to Italian signatures and addresses, as can be seen in the previously discussed letters on “*tum’at ‘ohel*.”<sup>83</sup> Most often, in this manuscript edition, Lampronti transliterated from Italian into Hebrew characters, as can be seen in his passage on “*ketoret*,” where Lampronti copied sections from Nicholas Lemery’s scientific dictionary.<sup>84</sup> In a later manuscript edition this same section is copied in Latin characters.<sup>85</sup>

Analysis of these manuscripts thus reveals a trove of eclectic, at times miscellaneous, documents, which illuminate Lampronti’s process of constructing the work. The unusual form emphasizes again the novelty of the *Paḥad Yiẓḥak*: the complete reordering of halakhic material necessitated the unusual spatial process Lampronti implemented. Equally, a detailed texture emerges from these original manuscript pages as the long work of an individual with the help of a few others close to him.

## **Second Edition - Hebrew Union College and Jewish Theological Seminary**

This study considers the second edition of the *Paḥad Yiẓḥak* to be composed of five volumes: four currently held at Hebrew Union College (HUC) and one at the Jewish Theological Seminary (JTS).<sup>86</sup> This view differs from the typical ordering of the editions which identifies the Valmadonna manuscripts as the second edition, but as more fully discussed below, I believe that

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<sup>83</sup> For example, see specifically: Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 496, f. 124v-125v.

<sup>84</sup> Paris, *Bibliothèque Nationale de France*, Ms. 551, f. 188r-v. This case will be explained at greater length in Chapter 4.

<sup>85</sup> Cincinnati, Hebrew Union College, Ms. 134, f. 227v.

<sup>86</sup> Cincinnati, Hebrew Union College, Mss. 132-5; New York, Jewish Theological Seminary, Ms. R1635.

the Valmadonna manuscripts are more appropriately characterized as a third edition as they were written after the other two sets of documents.<sup>87</sup> The HUC volumes cover letters *tet* through *mem* and *peh* through *tav*; the JTS volume covers the intermediate letters *nun* through *ayin*.

The content of the HUC and JTS manuscripts was copied in its entirety from the Paris manuscripts by Lampronti and those working with him, likely in preparation for having the hand-written manuscripts printed. The one hundred twenty volume first edition was too unwieldy for anything but private use. Lampronti copied, and tasked his sons and students with copying, the manuscripts into more manageable volumes in order to circulate the work among his contemporaries for approbation and publicity. Additionally, it was likely easier to submit a few condensed manuscript volumes to the printer than to submit volumes full of blank pages.

Though the writing is not all in the same hand, it is contemporaneous with the Paris manuscripts as the letters are so similar to Lampronti's that the portions not written by him must have been written by someone who had learned to write in the same script.<sup>88</sup> Due to the length of these texts, it is unlikely that a single individual undertook to make the entire copy.

The first volume of the HUC manuscripts begins with the letters *tet*"*ayin* (with the word *ta'anot*),<sup>89</sup> but as the page begins in the middle of an entry and not at the beginning of the letter *tet* it is obvious that this is not where the volume or edition first began. The HUC volumes also

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<sup>87</sup> Typically only two editions of the *Paḥad Yiẓḥak* are mentioned: the *mehadurah kam'a* (first edition) and *mehadurah batr'a* (last edition). This division into two is correct in that the HUC/JTS manuscripts are a copy of the first Paris edition. For this study, however, all three editions are considered.

<sup>88</sup> As previously noted, the script is consistent throughout the manuscripts, which makes it difficult to discern which portions were written by whom. A careful analysis of many sections of the work shows that most of the text was written by Lampronti and select portions by others close to him. A detailed paleographic analysis of the whole of the work -- a gargantuan task beyond the scope of this dissertation -- however, would likely yield more precise attribution of each word and passage.

<sup>89</sup> Cincinnati, Hebrew Union College, Ms. 132, f. 1/255.

provide evidence of the loss of once existing volumes and entries. For example, there are two separate numberings of the page: 255 and 1, which indicates that this page was originally the 255<sup>th</sup> of a larger volume. A later hand labeled the page number 1 as it is the first page of the HUC manuscripts, acknowledging the prior 254 pages were lost. The volumes containing letters *aleph* through *tet"ayin* of this manuscript edition have not been located and are also presumed lost.

Unlike the Paris manuscripts, the HUC edition is written continuously with no major blank spaces or pages between entries. The only fully blank pages deliberately separate sections. As with the first edition, the entries on a typical page begin at the right hand margin and continue across the page to the left hand margin. In the second edition, however, each successive line of the entry is slightly indented to make the subject heading easily identifiable; the next entry then begins immediately following the previous one.

Cross-references appear a few spaces away from the end of each entry, starting on the same line and continuing on subsequent lines, written again horizontally across the page from the right margin to the left. Unlike in the Paris manuscripts, however, where the cross-references are written one on each horizontal line forming a vertical column, in this edition they appear in continuous horizontal lines, each reference separated by a discernible space. Like the Paris manuscripts, the references are flanked by double sets of dots, one on each side and above every word of the cross-reference. This arrangement made the manuscripts easier to use because subject headings could be readily seen and the cross-references are immediately identifiable as separate from the entries.

The HUC edition was also at times edited simultaneously with the Paris manuscripts. In the entry “*kilayot yo ‘azot*,” the kidneys counsel, for example, the majority of the entry appears in usual form, starting at the right hand margin and continuing linearly in its proper place following “*kilayot ve-din*” and preceding “*kilayot ‘ayein*.”<sup>90</sup> The entry covers almost two full pages of consistent writing. After those two pages, however, is a smaller manuscript page inserted with an addition to the text.<sup>91</sup> This added section on the smaller piece of paper was first written into the Paris manuscript and then inserted into the HUC edition. Afterwards, both were edited. This order is discerned through emendations clearly seen in the Paris manuscript -- single words here and there added above arrows and in a different color ink than the rest of the text -- that are seamlessly integrated into the content of the HUC manuscripts.<sup>92</sup> The writing in both of these added sections also looks to be in a different hand than the main passage in both the Paris and HUC manuscripts, and the same in both emendations.<sup>93</sup> It thus appears as if the same person made the additions to both manuscripts at the same time. Though it does not look to be in

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<sup>90</sup> Cincinnati, Hebrew Union College, Ms. 132, f. 403/158v-404/159v.

<sup>91</sup> The addition is meant to follow the “*rey’ah sho’evet*” section. The corresponding symbols cannot be seen, as they were likely written in the margins of the pages and lost in the bounding. In general in this manuscript, the inside sections are difficult to read and sometimes single words are lost as the binding cut off the innermost writing on the page. The manuscript pages were thus likely written on loose paper and later bound.

<sup>92</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 504, f. 111r-112r. The word “*igrot*” in the first line, for example, was added in the Paris manuscript above an upper arrow symbol in between the words “*sefer*” and “*Francesco*.” Also later in the paragraph in the Paris manuscript the word “*kol*” is added in the same manner above an upper arrow symbol, and in the HUC manuscript it is integrated into the text. Some of the obvious editing, however, appears in both manuscript editions. For instance, an additional page reference to Redi’s text was added to both manuscripts. Both say “see Francesco Redi Part 4, page 156 and 157,” and then there is an upper arrow above which “and page 191” is written. This addition appears in the same way, in the same ink, and same hand in both manuscripts.

<sup>93</sup> The separate page added to the HUC text appears to have been copied later into both manuscript editions, however. In the Paris manuscript that section is found on the page facing the second half of the entry, and corresponds to a symbol on that page. This addition was too long to be written in the space between existing lines. It was thus written on the facing blank page next to a matching symbol entered in the place it was to be added. This later addition accordingly appears in both manuscripts on separate pages from the rest of the entry. The Paris entry, however, was written first, as that text is more heavily edited and the additions are integrated into the text of the HUC manuscript.

Lampronti's hand, it was written on his behalf as the content of the entry is self-reflective. Later in the paragraph appears: "and I the young author explained that the lung...." This pattern is typical of the manuscripts -- the text as a whole is attributed to Lampronti and written on his behalf though the actual task of writing and correcting may have at times been done by others. The revisions and additions also show that Lampronti considered each subject matter as never finished so long as new material came to his attention.

This example also evidences the care with which these manuscripts were copied as each section remained faithful to the original. The unusual features of the Paris manuscripts, such as its charts, diagrams, use of Italian, and actual letters, are all copied into the HUC manuscripts, though the scrapbook-like quality of the Paris manuscripts is lost in the copy.<sup>94</sup>

The JTS manuscript is contained in a single volume, which covers a direct gap in the HUC texts, letters *nun* to *ayin*. This volume is also written in the same way as the HUC texts (continuously with few blank pages) and is a faithful copy of the material that appears in the Paris manuscripts.

The JTS volume begins at the start of the letter *nun* (*nun aleph*), with the entry "*n'a 'eino 'el'a leshon bakashah.*"<sup>95</sup> As with the HUC text, each entry begins at the right hand margin and subsequent lines are slightly indented to distinguish the subject heading from the rest of the entry. The cross-references are written horizontally, each spaced out from the other, and separated by a series of double dots on either side of the reference and on top of each word. The

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<sup>94</sup> For an example of a large diagram in the HUC editions, see: Cincinnati, Hebrew Union College, Ms. 133, f. 74r. See Chapters 2 and 6 for further discussion of the diagrams.

<sup>95</sup> New York, Jewish Theological Seminary, Ms. R1635, f. 1r.

top of each page states the name of the work and the corresponding letters; the first page for example reads, “*Paḥad Yiṣḥak ’ot nun*” *aleph*.”

Like the HUC manuscripts, the JTS manuscript was also edited simultaneously with the Paris manuscripts. An example is found in the entry “*nir’eh ve-nirmah*,” where there are clear indications that the same additions were made in the same ink in both editions.<sup>96</sup> In addition to line editing both the Paris and JTS manuscripts side by side, Lampronti sometimes also added groups of manuscript or printed pages into the work. Examples of this can be seen in his “*safek kiddushin*” and “*sefer Torah*” entries.<sup>97</sup> Under “*safek kiddushin*” in both the Paris and the JTS manuscripts can be found a series of smaller pages filled with responsa inserted into the larger manuscript pages.<sup>98</sup> This section in both volumes appears as a smaller notebook inserted into a larger one. The paper is different, of a slightly darker hue and more worn, and is distinctly smaller in size than the surrounding pages. The appearance indicates a later addition from the surrounding content. Though both were added later, the Paris text was written first. This order is apparent again in that the editing that appears in the Paris manuscript has clearly been added after the main text had been written, while in the JTS manuscript the corresponding language is

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<sup>96</sup> New York, Jewish Theological Seminary, Ms. R1635, f. 82r-v; Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 530, f. 3r. The entry “*nir’eh ve-nirmah*” begins in the JTS manuscript at the bottom of page 82r, immediately following the preceding entries. In the Paris manuscript it begins in Volume 530 on the top of page 3r, following a few blank pages. In both manuscripts, the paragraph is written consecutively from beginning to end. In the JTS manuscript the entry ends halfway down the following page (82v) and is followed immediately by the next entry. At the very end of the entry in a clearly much lighter ink is a citation to Maimonides: “*Rambam perek vav me-hilkhot ’isurei mizbeah din vav*.” In the Paris manuscript as well this last citation appears to have been written at a different time from the rest of the paragraph and is not only also in a different color ink from the rest of the text, but appears to be the same color of ink used in the JTS addition. Furthermore, words added to the Paris text, such as “*ha-sefer*” on line 16 of the Paris manuscript, are integrated into the content of the JTS manuscript without editorial notations.

<sup>97</sup> New York, Jewish Theological Seminary, Ms. R1635, f. 175r-196v; 222r-224v.

<sup>98</sup> New York, Jewish Theological Seminary, Ms. R1635, f. 175r-196v; Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 533, f. 364r-423v.

integrated into the main content having been written at the same time. Similarly, in the “*sefer Torah*” entry found in both the Paris and JTS manuscript editions, Lampronti inserted pages of a printed text between other pages of hand-written responsa. He did not hand copy one version of this printed text and insert the printed pages in another; the exact same printed responsum is inserted in printed textual form in both.<sup>99</sup> The responsum is a decision of the rabbis of Venice covering 7-1/2 pages of text in Hebrew followed by one page in Italian interspersed with Hebrew. The date of the printed text is 1743, showing the relatively late editorial stage of this manuscript edition.

The HUC/JTS manuscripts thus represent a copy of the Paris manuscripts (less the lost volumes) in a more user-friendly format. The one hundred twenty volumes of the Paris manuscripts, full of mostly blank pages, was cumbersome and not very portable. The HUC/JTS texts, however, condensed the content into a more manageable number of continuously written volumes in which the entries and cross-references were laid out in a way that made specific subjects easy to identify. Although the content of the HUC/JTS texts was copied from the first edition, the volumes were produced in such a way as to make them the first portable edition of the work.

### **Third Edition - Valmadonna Trust Collection**

As previously noted, the Valmadonna manuscripts are typically considered the second edition because they contain all new material meant to be added to the Paris manuscripts. This study refers to them, however, as the third edition, because of the intermediate second HUC/JTS

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<sup>99</sup> New York, Jewish Theological Seminary, Ms. R1635, f. 222r-224v; Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 534, f. 72r-75v.

manuscripts. There is distinct evidence that the Valmadonna edition came after the Paris manuscripts as Lampronti often refers in the Valmadonna texts to the previous edition. In many of the cross-references in the Valmadonna manuscripts Lampronti specifically noted that the passages to which he was referring could be found in the “*mehadurah kam 'a*,” the first edition.<sup>100</sup> Such reference also shows that the Valmadonna manuscripts were intended to be used in conjunction with the first draft of the work.

The organization and format of the Valmadonna manuscripts are very similar to the Paris edition. The Valmadonna texts consist of thirty-five manuscript volumes, many of the pages fully or partially blank, which Lampronti completed over ten to fifteen years, as is indicated by the dates of contemporary responsa copied into the work. Lampronti likely decided to start again with another set of blank notebooks, as he did with the one hundred twenty volumes in the Paris edition, because after the copy was made of the work, new additions to the original manuscripts would interfere with the integrity of the copy.<sup>101</sup> When Lampronti decided to add more to the project, he had to start again with another set of blank notebooks. This form gave him the space to continue to enter new material into the existing alphabetical format, and indeed he did so until his death.

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<sup>100</sup> An example of this can be seen in the first few pages of the Valmadonna edition: New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol. 1, f. 10r.

<sup>101</sup> To incorporate the Valmadonna emendations into the HUC/JTS copy Lampronti would have had to add thousands of new manuscript pages to the second edition. This addition would have interfered with the consistent writing characteristic of that work. Thus in order to keep the content of the Paris and HUC/JTS copies the same and both editions readable, it made sense for Lampronti to start again with another set of blank notebooks.

As with the first edition, the entries typically start at the top right of a page and the cross-references are spaced evenly throughout the middle vertical column of a page.<sup>102</sup> The only consistent writing appears when Lampronti copied responsa; in those cases one finds series of consecutive, fully-filled pages of writing.<sup>103</sup> The method of copying the responsa is the same as the Paris manuscript, though the responsa themselves are new. They sometimes cover the same broad subjects as those included in the Paris manuscript, but the specifics are consistently different.

Furthermore, as with the Paris edition, Lampronti also sometimes included actual letters in the Valmadonna manuscript pages. An example of this can be found under “*safek kiddushin*,” where there is a series of letters exchanged between Lampronti and Isaiah Romanin, in which the folds, remains of the wax seal, and addresses still appear on the hand-written pages.<sup>104</sup> These letters are dated to 1750, which shows both the late addition to Lampronti’s works (he died in 1756), and confirms that the Valmadonna manuscripts were in fact the final edition of the encyclopedia. In addition to the inclusion of original letters in both Italian and Hebrew in the Valmadonna manuscripts, Lampronti also added some pedagogical charts similar to those found in the first edition. One interesting case is found under “*shemot kol ha-tana’im ve-ha-ḥakhamim she-nimnu be-mishnah*,” where Lampronti listed the names of the rabbis in the Mishnah.<sup>105</sup> In

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<sup>102</sup> Some volumes, such as the first, look very similar to the Paris manuscripts. Other volumes however appear more condensed: new entries do not only start at the top right of the front side of each folio page, but sometimes on the back, and sometimes in the middle. Additionally, the cross-references are often not aligned in a single column in the middle of the page but in two or three, side-by-side columns equally spaced out across the middle of the page. This edition appears at times to be less cleanly and precisely written as compared to the first one.

<sup>103</sup> See for example the section covering “*’ishah ro’ah dam*”: New York, Sotheby’s, Valmadonna Collection, Ms. 18, Vol. 4, f. 170r-183v.

<sup>104</sup> New York, Sotheby’s, Valmadonna Collection, Ms. 18, Vol. 24, f. 266r-274r.

<sup>105</sup> New York, Sotheby’s, Valmadonna Collection, Ms. 18, Vol. 34, f. 170r-172v.

another case, under “*shekel*,” there is a conversion chart of various weights and measures from the Talmud.<sup>106</sup> This list does not include any new material but rather clearly presents the conversions in a visually straightforward fashion.

With a few exceptions, the Valmadonna manuscripts thus contain nearly all new material written in a manner similar to the Paris manuscripts. There are some overlapping cross-references as previously discussed and in at least one instance an entire entry, “*Yehoshafat melek Yehudah*,” appears in all three editions and in each case it is clear that the entry was added to the manuscripts at a different point in time from the surrounding content.<sup>107</sup> In the Paris manuscripts it appears in a different hand and darker color ink than the entry that follows it.<sup>108</sup> In the HUC manuscripts, it is added on a separate smaller piece of paper corresponding to a symbol in the main text.<sup>109</sup> In the Valmadonna manuscripts, it appears in its proper alphabetical place on its own page, and looks as if it was written by the same person as the other two editions.<sup>110</sup> This example establishes that all three editions were present in the same location on at least one occasion.

The three manuscript editions were written over at least forty and probably closer to fifty years of Lampronti’s life. The timeline appears to be as follows: the Paris manuscripts occupied Lampronti for the first few decades of the eighteenth century, the HUC/JTS texts up until around 1743, and the Valmadonna edition was composed in the last ten to fifteen years of his life. The

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<sup>106</sup> New York, Sotheby’s, Valmadonna Collection, Ms. 18, Vol. 34, f. 287r-v. The significance of such diagrams is explained in Chapter 6.

<sup>107</sup> There may be other instances of overlap. For the present study many but not all of these documents were reviewed.

<sup>108</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 498, f. 317v.

<sup>109</sup> Cincinnati, Hebrew Union College, Ms. 132, f. 28r.

<sup>110</sup> New York, Sotheby’s, Valmadonna Collection, Ms. 18, Vol. 16, f. 46r.

1740's were an intermediate period in which it seems Lampronti simultaneously edited and added to both the Paris and HUC/JTS texts -- all of the sections dated to those years appear to have been written later than other portions of the text. The latest responsum identified in the manuscripts is from 1750 and is present only in the Valmadonna edition. Lampronti was only able to print the first two editions of his work based on these manuscripts during his lifetime. The remaining volumes were printed in fits and starts over the course of a century and a half.<sup>111</sup>

## Conclusions

This chapter has shown that Lampronti fundamentally departed from the primary organizational models of Jewish legal literature and the novelty of his form was recognized both by Lampronti and his contemporaries. Described as a "Ritual Dictionary" in the censor's permit and explained as a work like that of European scholars, the *Paḥad Yizḥak* was identified by both non-Jewish and Jewish contemporaries as part of the genre of encyclopedias or dictionaries popular during the period. The process by which Lampronti composed the work as seen in the analysis of the three existing manuscript editions establishes that the work was not a treatise within a contained period of time, but rather a long endeavor of copying and inserting information into many manuscript pages and editions as the information came to Lampronti's attention over the course of his life. The reordering of old bodies of knowledge while adding new information required a non-linear, patchwork-like process. The thousands of blank manuscript pages into which Lampronti intermittently copied from other books, added original letters written by his contemporaries, and wrote his own rabbinic interpretations highlights the

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<sup>111</sup> See the concluding chapter for a more complete explanation of the printing history.

novelty of the form and the tenacious dedication of the author who sought to upend the existing, well entrenched models and replace them with a new one. The next chapter will turn to the content of the work, explaining the variety of material included, the judicial methods used, and the original approaches employed.

## CHAPTER 2: Content, Methods, and Novelty

Lampronti's innovations encompassed more than the adoption of the alphabetical structure alone. In order to understand the full significance of the work, this chapter explains its fundamental contents and nature. The analysis covers how Lampronti classified and organized information within the *Paḥad Yiṯḥak*, the scope of material included in the work, his halakhic method, and the rabbinic network upon which he drew. It also identifies three aspects of Lampronti's methodology that were both unusual for halakhic literature and similar to scholarly practices of contemporary scientific communities. These matters are explained in greater depth in later chapters.

### Organization and Scope

#### Organization

This chapter's analysis begins with a more detailed explanation of the arrangement of subjects within the *Paḥad Yiṯḥak*. As previously discussed, the *Paḥad Yiṯḥak* is an encyclopedia strictly organized alphabetically and mostly written in rabbinic Hebrew.<sup>1</sup> Accordingly, it begins with the first letter of the Hebrew alphabet, *aleph*, and proceeds through the alphabet.<sup>2</sup> Thus, the first subject is: אא דאזרך *aleph aleph de- 'a'azerkhah*;<sup>3</sup> the next is: אאה בלשון יון *'a'ah be-lashon*

<sup>1</sup> There are some sections written in Italian, which are addressed later in this chapter.

<sup>2</sup> I use Hebrew characters in this first section only to provide an extra level of clarity regarding the alphabetical organization.

<sup>3</sup> Isaac Lampronti, *Paḥad Yiṯḥak*, vol. 1a, p. 1r, s.v. "*aleph aleph de- 'a'azerkhah*" (Venice, 1750). This entry presents a short discussion of the halakhic concept of whether one who writes the same letter twice, as in *aleph, aleph*, violates the prohibition to write on the Sabbath. All references in this chapter to the *Paḥad Yiṯḥak* will be made to the printed edition, as it is more accessible than the manuscripts.

*yavan*;<sup>4</sup> and the third entry is אַארה 'a'erah.<sup>5</sup> These first three entries move from *aleph, aleph, dalet*, to *aleph, aleph, heh*, to *aleph, aleph, resh*, which is what is to be expected in a strict alphabetic order. For instance, the next few entries in the text all begin with the word אבא 'ab'a, *aleph bet aleph*, and proceed alphabetically according to the first letter of the next word in the subject heading.<sup>6</sup> After those few, however, the entries move on to the first word אב *av*, as in אב אינו הייב 'av'eino hayav, before returning again to first word אבא 'ab'a, as in אבא לקבל 'ab'a le-kabel. The entries thus alternate between אבא 'ab'a and אב 'av as necessary according to the first letter in the next word in a phrase. This strict alphabetical organization according to each successive letter means that sometimes all the entries beginning with the same word are separated by other words. It also means that Lampronti did not group grammatical variants of the same word together. He listed them in the alphabetical order appropriate to the way the word or phrase appeared in the source from which it came. For example, the Hebrew root word for eating is אכל 'akhl, but the eating related entries are not listed together, as they would be if the *Pahad Yizhak* was organized by topic, but spread throughout the encyclopedia according to the first letter of the first word in the subject heading, under entries such as אוכל 'okhel, אכיל 'akhil,

<sup>4</sup> *Pahad Yizhak*, vol. 1a, p. 1r, s.v. “'a'ah be-lashon yavan” (Venice, 1750). This is a succinct definitional entry in which Lampronti simply explains that the word means the flowing and multiplying of water in one place -- a flood.

<sup>5</sup> *Pahad Yizhak*, vol. 1a, p. 1r, s.v. “'a'erah” (Venice, 1750). This is a straightforward bibliographic/referential entry in which Lampronti provided the appropriate rabbinic references to the topic at hand.

<sup>6</sup> For example, these entries proceed as follows:

אבא אומנא  
אבא אליהו קפרן הוה  
אבא את זיל  
אבא בר אבא אבות דשמואל  
אבא גבה עינים  
אבא דאבא  
אבא היינו רב ושמואל קרי ליה הכי  
אבא חלפתא יש תנא  
אבא חלקיה ודבריו

אכילה 'akhilah, אכול 'akhul, האוכל ha-'okhel, and so on.<sup>7</sup> In between each different grammatical combination are entries unrelated to eating but taking their proper alphabetical place.

As noted, Lampronti copied words and phrases verbatim from the sources where he found them, often the Talmud and rabbinic commentaries. This practice accounts for some of the oddly placed entries in the *Pahad Yizhak* because Lampronti would not substitute his own word for the one found in a source or reword a phrase. For example, the common phrase in the writings of the Tosafists, a group of scholars in Germany and France in the twelfth through fourteenth centuries who revolutionized the study of the Talmud through close, critical reading of the text and source comparison, *ve-'im tomar yeish lomar*, is not found in the *Pahad Yizhak* under *aleph* for *'im* but rather under *vav* for *ve-'im*, the common phrasing with the conjunction.<sup>8</sup> Similarly, an entry about the fourteenth-century rabbi, the *Rosh* (acronym for Rabbi Asher ben Yehiel), is not found under *resh* for *Rosh*, but *heh* for *ha-Rosh*, *the Rosh*.<sup>9</sup> Lampronti's organization is thus sometimes difficult to intuit.

As the *Pahad Yizhak* is organized strictly in alphabetical order based on the words and phrases Lampronti found in his sources, a user of the *Pahad Yizhak* needs to be familiar with the halakhic corpus and also have some knowledge of how Lampronti thought about and categorized his material.<sup>10</sup>

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<sup>7</sup> *Pahad Yizhak*, vol. 1a, p. 66; 152-3, (Venice, 1750).

<sup>8</sup> For a few additional examples of Lampronti's oddly placed entries see: Boaz Cohen, "A List of Authors of Responsa Printed in the *Pahad Yitzhak*," in *Festschrift für Aron Freimann zum 60. Geburtstag*, ed. Alexander Marx and Hermann Meyer (Berlin, 1935), 141-43.

<sup>9</sup> *Pahad Yizhak*, vol. 3, p.44r s.v. "ha-Rosh" (Venice, 1796).

<sup>10</sup> The problems of Lampronti's non-standard method of categorizing subjects are for the most part corrected through the elaborate system of cross-references. For example, at the entry for the word *shinui*, spelled *shin yod nun vav yod*, there is a cross-reference to the word spelled *shin nun vav yod* -- where one finds more on the subject.

Extended halakhic discussions are also not always located where one's logic and experience would place them. For instance, the answer to what is the ideal time to light Ḥanukah candles is not found under ה *het* for הנוכה “*Ḥanukah*,” but under נ *nun* for נר הנוכה “*ner Ḥanukah*,” and then the entry is nothing more than a citation to the appropriate section in the *Shulḥan ‘arukh* where the Ḥanukah laws are discussed.<sup>11</sup> In fact, many of the laws of Ḥanukah are found under *nun* in the *ner Ḥanukah* entries, including where exactly one should light and how guests in one's home should ideally participate in the lighting.<sup>12</sup>

Other halakhic concepts are similarly found scattered throughout the *Paḥad Yiẓḥak* as Lampronti adhered to his alphabetic listing. The laws of ritual slaughter, *sheḥitah*, for example, are not collected topically as in the Talmud tractate *Hulin*, or under *Sheḥitah* as in Maimonides' *Mishneh Torah*, or as in *Yoreh de'ah* of the 'Arba'ah turim or *Shulḥan ‘arukh*. In the *Paḥad Yiẓḥak*, instead, all of the words and phrases related to *sheḥitah* are not found together but are placed in their alphabetical order.<sup>13</sup> Most of the *sheḥitah* entries are relatively short summaries of the halakhic discourses on the subjects, but there is one set of long responsa concerning whether it is permissible for *sheḥitah* to be performed by women, servants, non-Jews, and ritually impure individuals. Among these various focused *sheḥitah* entries is also a long entry of cross-references, listed alphabetically, covering all *sheḥitah* related entries found in other sections of the *Paḥad Yiẓḥak*. The references include discrete topics such as “’*ever min ha-ḥai*

<sup>11</sup> *Paḥad Yiẓḥak*, vol 7, p.87v s.v. “*ner Hanukah u-zman hadlakatan*” (Lyck, 1864).

<sup>12</sup> *Paḥad Yiẓḥak*, vol 7, p. 87r-88v (Lyck, 1864).

<sup>13</sup> The entries thus proceed from: “*sheḥitah ‘einaḥ z̄erikha kavanah*” (*sheḥitah* does not need intention), to “*sheḥitah ‘eizeh zman u-be-‘eizeh makom*” (the time and place for proper slaughter), to “*sheḥitah be-beheimah davka*” (*sheḥitah* specifically with cattle), to “*sheḥitah be-yom tov*” (performing *sheḥitah* on a holiday), and so forth throughout the alphabet. *Paḥad Yiẓḥak*, vol 13, p.140v-151v, s.v. “*sheḥitah...*” (Berlin, 1886).

*asur*” (eating the limb of a live animal is forbidden) and “*bedikat ha-sakin*” (checking the knife) as well as separate entries on each part of the *shehitah* process: *shehiyah*, *derasah*, *haladah*, *hagramah*, and ‘*ikur*.<sup>14</sup> One accordingly finds discussions of each of these topics in their respective alphabetical place within the *Paḥad Yiẓḥak*.<sup>15</sup>

Thus, a *Paḥad Yiẓḥak* user does not find instructions for how to preform *shehitah* collected under a single “*shehitah*” entry, instead there are numerous entries spanning the scope of rabbinic discourse on the subject spread throughout the work.<sup>16</sup> This discussion illustrates that Lampronti did not intend the *Paḥad Yiẓḥak* to be primarily a practical manual of the law, but rather a source of references for finding relevant halakhic material and, as addressed in the next section, some non-halakhic subjects as well.

## Scope

In addition to the halakhic entries that are discussed more fully below, the *Paḥad Yiẓḥak* also addresses a broad range of other material, including biographical, historical, definitional, referential, and methodological.<sup>17</sup> To illuminate the full scope of Lampronti’s work, this next section will explain and provide examples of these other areas of inquiry.

Lampronti’s biographical entries in the *Paḥad Yiẓḥak* are relatively slim, in many instances constituting nothing more than the names of various biblical figures and talmudic and

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<sup>14</sup> *Paḥad Yiẓḥak*, vol 13, p. 151r-v, s.v. “*shehitah ‘ayein*” (Berlin, 1886).

<sup>15</sup> As previously mentioned, the shortcomings of Lampronti’s sometimes strange phrasing and categorization are somewhat resolved by the extensive cross-references included in the work.

<sup>16</sup> Again, the cross-references are thus essential to finding information within the *Paḥad Yiẓḥak*.

<sup>17</sup> The diversity of entries extends beyond this to documentary, ethical, theological, and exegetical matters as discussed later in the section, and even a few polemical and geographical matters not discussed in this chapter.

post-talmudic rabbis without any illuminating information about them. For example, one entry is titled 'Avraham 'Avinu,<sup>18</sup> another 'Aḥashveirosh,<sup>19</sup> another 'Eli'ezer,<sup>20</sup> another *Maharitaḥ*,<sup>21</sup> and yet another *the Rosh*.<sup>22</sup> Usually Lampronti did not even explain who these individuals were much less their relevance in Jewish law or literature, but instead quoted from a third-party source that refers to one or more of the named persons or cross-referenced another entry in the *Paḥad Yiḥyah* about the individual. In a few cases, Lampronti provided some historical information, such as for the *Rosh*, where Lampronti states that the *Rosh's* book was written in 1313.<sup>23</sup>

For Lampronti, history and biography were intrinsically linked. He was interested in the historical place of rabbis because it helped him determine how much weight to give their opinions in difficult situations and subjects of halakhic debate.<sup>24</sup> Accordingly, Lampronti devoted a number of the entries in the *Paḥad Yiḥyah* to summaries of historical matters, especially the historical context and background of talmudic and biblical figures. Examples of these kinds of commentaries include the following: An entry titled, "*Abba hayynu Rav*," where Lampronti discussed the relationship between Rav and Abba in the Talmud -- whether or not Abba always refers to Rav.<sup>25</sup> In another instance, Lampronti addressed a question sent to him by

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<sup>18</sup> *Paḥad Yiḥyah*, Vol 1a, p. 16r, s.v. "'Avraham 'Avinu" (Venice, 1750).

<sup>19</sup> Vol 1a, p. 50r, s.v. "'Aḥashveirosh" (Venice, 1750).

<sup>20</sup> Vol 1a, p. 71v, s.v. "'Eli'ezer" (Venice, 1750).

<sup>21</sup> Vol 6, p. 25r, s.v. "*Maharitaḥ*," (Leghorn, 1840).

<sup>22</sup> Vol 3, p. 44r, s.v. "*ha-Rosh*" (Venice, 1796).

<sup>23</sup> In the next entry, Lampronti commented that the *Rosh* was a student of Maharam.

<sup>24</sup> It may have also been about more than just a simple historiographic/biographic interest, because many of these cases do not actually have halakhic implications.

<sup>25</sup> Vol 1a, p 1r, s.v. "*Abba hayynu Rav*" (Venice, 1750).

his Italian contemporary Aviad Sar Shalom Basilea about when exactly Rabban Gamliel lived, which Lampronti answered with reference to the writings of David Gans (1541-1613).<sup>26</sup> And in another case, Lampronti addressed the question of the authorship of the Mishnah, whether it was actually written by Rabbi Judah the Patriarch, referred to as “Rabi,” or Rabi merely redacted a text that continued to remain orally transmitted.<sup>27</sup>

Lampronti’s historical interest extends to biblical texts as well, as for example, his entry on “*Yehoshafat Melekh Yehudah*” (Jehoshafat King of Judah), in which Lampronti discussed a reference in 2 Chron. 21:2 to Jehoshafat as King of Israel, instead of King of Judah.<sup>28</sup> Lampronti commented that he saw “King of Judah” written in both the manuscripts owned by the Talmud Torah of Ferrara and in the Latin Bible “called the Vulgate.”<sup>29</sup> But all other sources he examined, both print and manuscript, said “King of Israel.” In this case, Lampronti not only engaged in historical inquiry but also source comparison. He examined different versions of the biblical text, including the Latin Vulgate.

In addition to the halakhic, biographic, and historical material in the *Paḥad Yiẓḥak*, there are dictionary-like definitions of the subject headings. For example, Lampronti’s second entry in

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<sup>26</sup> Vol 1b, p.37r-v, s.v. “*bi’ur terumot u-ma’asrot*” (Venice, 1750). In this entry, Lampronti copied a letter he received from Aviad Sar Shalom Basilea in 1733, in which Basilea questioned when Rabban Gamliel lived based on sources (specifically *Ma’aser Sheni* 5:9) which indicated that Yohanan Ben Zakkai was the Patriarch during the destruction of the Temple. Basilea assumed that, therefore, Rabban Gamliel must have lived after the destruction. Lampronti answered that according to David Gans, the destruction took place in 828, and Rabbi Akiva became the head of the Academy in 860, after the death of Rabban Gamliel. For a recent analysis of David Gans and the reception of his work see: David Sclar, “History for Religious Purposes: The Writing, Publication and Renewal of *Tzemah David*,” *Zutot* 12 (2015): 1-15.

<sup>27</sup> Vol 6, p. 219r, s.v. “*Mishnah ’im katva Rabi*” (Leghorn, 1840). “Rabi” refers to Rabbi Judah the Patriarch.

<sup>28</sup> Vol 5, p. 9v, s.v. “*Yehoshafat Melekh Yehudah*” (Reggio, 1813).

<sup>29</sup> Lampronti transliterated the word Vulgate into Hebrew but wrote in Latin the actual words he saw in the text: “*Rex Iudae.*” He did not mention where he saw the Vulgate Bible.

the encyclopedia is “*a’ah bi-leshon yavan*” (*a’ah* in Greek).<sup>30</sup> In this entry, Lampronti explained that the word “*a’ah*” in Greek means the flowing and multiplying of water in one place -- a flood. Lampronti also included an entry titled “*organo*” in which he explained what this word, “organ,” meant according to Maimonides (1135-1204) and Abraham Portaleone (1542-1612) -- an instrument used in the time of the Temple.<sup>31</sup> Similarly there is an entry titled “*orologio*” (the Italian word for clock) that Lampronti defined as a vessel used to tell time, which a Jew is forbidden to carry on the Sabbath.<sup>32</sup> Lampronti sometimes translated Hebrew titles into Italian or explained them with reference to Latin. For example, in an entry titled “*shanui*,” Lampronti wrote “*replica*” and under the following entry “*shinui*” he wrote “*mutazione*” to clarify the different meanings of the two similar Hebrew words.<sup>33</sup> In an entry titled “*unklai*,” Lampronti explained that it is the stomach of the heart, in Latin “*mucronata cartilagine*.”<sup>34</sup>

In some instances, entries contain nothing more than references to other subject headings. For example, the laws concerning *sha’atnez* (the biblical word for the forbidden mixing of fibers in garments) are not found at the entry for *sha’atnez*. The entire substance of the entry is a cross-reference to yet another entry, *kil’ei begadim* (the word *kil’ayim* in rabbinic literature refers to

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<sup>30</sup> Vol 1a, p. 1r, s.v. “*a’ah bi-leshon yavan*” (Venice, 1750).

<sup>31</sup> Vol 1a, p. 39r, s.v. “*organo*” (Venice, 1750).

<sup>32</sup> Vol 1a, p. 39r, s.v. “*orologio*” (Venice, 1750).

<sup>33</sup> Vol 13, p. 280r, s.v. “*shanui*” and “*shinui*” (Berlin, 1886).

<sup>34</sup> Vol 1a, p. 38r, s.v. “*unklai*” (Venice, 1750).

the whole set of laws on forbidden mixtures).<sup>35</sup> Under that heading is an extended and thorough discussion of the halakhic aspects and implications of the subject.

All of the main halakhic topics include lengthy lists of cross-references, as we saw, for instance, with the *sheḥitah* entries. Also, Lampronti did not always insert his own interpretation or opinion of the law, but just referred the reader to another source, as in the previously discussed example of “*ner Hanukah zeman*,” where he cited the relevant sections of *Shulḥan ‘arukh* and *Mishneh Torah*.

A subcategory of the referential entries are those pertaining to *Aggadic Midrash*. These entries list *aggadic*/homiletic statements, such as “‘*Even tovah...*,”<sup>36</sup> where the entirety of the entry is a copy of a sentence from the Talmud that a precious stone hung from Abraham’s neck. Lampronti neither explained nor commented on this statement. All he did was provide a citation to where in the Talmud the sentence could be found.<sup>37</sup> Other parables and ethical statements from the Talmud are similarly spread throughout the *Paḥad Yiḏḥak*, as subject headings with no commentary, together forming something of an anthology of such statements.<sup>38</sup>

Lampronti devoted sections of the *Paḥad Yiḏḥak* to discussion of different halakhic methodologies and literary styles of rabbinic discourse. For example, there is a series of entries on the Tosafists in which Lampronti discussed their dialectical style of asking and answering questions. In an entry titled “*teim’a*” (difficulty), a common word in Tosafist commentary that is

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<sup>35</sup> Vol 13, p. 294v, s.v. “*sha’atnez*” (Berlin, 1886); Vol 5, p. 59r-60r, s.v. “*kil’ei begadim*” (Reggio, 1813).

<sup>36</sup> Vol 1a, p. 15r, s.v. “‘*even tovah*” (Venice, 1750).

<sup>37</sup> Vol 1a, p. 15r, s.v. “‘*even tovah*” (Venice, 1750).

<sup>38</sup> Lampronti cited many of these from the original sources or secondary collections such as *‘Ein Yisra’el*, and at most explains the phrases according to Rashi.

generally used to introduce a question, Lampronti provided a cross-reference to “*ve-im tomar yeish lomar*,” another common Tosafist phrase.<sup>39</sup> Rather than clearly spelling out the Tosafist methodology, Lampronti commented on a rabbinic debate about how to treat cases where the word *teim’a* is not followed with an answer.

Lastly, the *Paḥad Yiẓḥak* contains entries that cover documentary, ethical, theological, and exegetical matters. There are documentary entries, for example, that discuss specific decrees and contracts pertaining to the Jewish community of Ferrara. In the entry “*takanot she-tiknu be-Ferrara*” (the decrees enacted in Ferrara) Lampronti copied verbatim from an authenticated copy of a set of decrees.<sup>40</sup> And in his entry titled “*shtar ḥalīzah*” (ḥalīzah document) Lampronti copied the full text of a contemporary document concerning a *ḥalīzah* case.<sup>41</sup> The ethical entries in the *Paḥad Yiẓḥak* cover subjects such as cheating non-Jews (“*ta’ut goi ha-muteret*”<sup>42</sup>) where Lampronti cautioned that he had seen many who became rich from leading non-Jews into error,

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<sup>39</sup> Vol 14, p. 32r, s.v. “*teim’a*” (Berlin, 1887). The *Tosafot*, as previously explained, are a group of rabbis in France and Germany in the twelfth through fourteenth centuries who focused their efforts on careful dialectical readings of the Talmud.

<sup>40</sup> Vol 14, p. 156v-159r, s.v. “*takkanot shetiknu be-Ferrara*” (Berlin, 1887).

<sup>41</sup> Vol 13, p. 165v-166v, s.v. “*shtar ḥalīzah*” (Berlin, 1886). Here one finds a copy of a *ḥalīzah* (the ceremony that releases a childless widow from a levirate marriage) document from 1738, testifying that Phineas and Israel b. Abraham Veneziani jointly agreed to guarantee the *ḥalīzah* of the wife of their brother Nehemiah, Consola b. Samuel Hai Levi, should he die and she require *yibum/ḥalīzah*. There is also a second document from 1739 in which Moses Hayyim b. Eliezer of Norzi released, in advance, Zipporah, the betrothed of his brother Samuel Yedidya.

<sup>42</sup> Vol 4, p. 85r, s.v. “*ta’ut goi ha-muteret*,” (Venice, 1798).

but who ultimately were brought down by their folly.<sup>43</sup> Lampronti also included theological entries, such as the two on faith, “*emunah*,”<sup>44</sup> and, finally, exegetical entries in which he engaged in exegesis of either biblical or talmudic texts.<sup>45</sup>

The *Paḥad Yizḥak*, in short, is rather eclectic. Lampronti covered a very large range of material, and, as we have seen, Lampronti’s entries are neither uniform nor succinct overviews or explanations of subjects in his own words. Rather, the nature of the entries vary significantly. Some are conceptual, some quote rabbinic debates without Lampronti’s own intervention,

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<sup>43</sup> Lampronti commented on an excerpt from the *Shulḥan ‘arukh* that says one who returns a lost object to a non-Jew or corrects a non-Jew’s error should be praised. Lampronti cited *Sefer hasidim* and Psalms as confirmation of this message. In another case, Lampronti discussed a talmudic passage that states that when a person is brought to divine judgment he is first asked whether he dealt honestly with others and only then whether he set fixed times for religious study. Tosafot commented that this dictum holds as well for one whose profession is Torah study, but that this particular passage in B.T. *Shabbat* 31r refers specifically to a non-rabbinic professional. Lampronti then commented that it seems to him that for those whose main pursuit is business they are first asked about honest dealings and then Torah study, while scholars are first asked about Torah study and later about their honesty. Lampronti thus disagreed with Tosafot’s precise interpretation of the talmudic texts, though he agreed that the scholar and non-scholar are not judged alike. Vol 2, p. 94v-95r, s.v. “*dino shel ‘adam teḥilah ‘eino ‘el’a ‘al divrei Torah*” (Venice, 1753). In another entry, titled, “*‘ahavah*” love, Lampronti simply stated that one is obligated to love all upright Jews: Vol 1a, p. 22r, s.v. “*‘ahavah*” (Venice, 1750). Lampronti also included another entry a few lines later on on man loving his brother: Vol 1a, p. 22v, s.v. “*‘ahavat ‘ish ‘et ‘aḥiv*” (Venice, 1750).

<sup>44</sup> Interestingly, both these entries appear only in the Valmadonna manuscripts and the second printed edition based upon them. The “*‘emunah*” entry in the first edition has only a number of cross-references to different entries. Vol 1a, p. 77r, s.v. “*‘emunah*” (Venice, 1750). In the first entry of the second edition, Lampronti wrote that one’s faith in the rabbis should be like one’s faith in Moses’s Torah (he cited the *Menorah ha-me’or* and this might be a direct quote from there). In the second entry, Lampronti wrote that in order to not be considered a heretic, one must have faith and he cited Joseph Albo’s “*‘Ikarei u-midrashai*.” This is a strange, seemingly circular definition. *Mehadurah batra*, p. 32, s.v. “*‘emunah*.” In another entry in the second edition on “*‘emet*” truth, Lampronti again referenced Albo’s *Shorashim*. *Mehadura Batra* p. 35, s.v. “*‘emet*.” In still another entry, Lampronti discussed the world to come and transmigration of souls, and even mentioned the opinions of the “*‘spiritualizati*” non-Jewish scholars. Vol 14, p. 28r-v, s.v. “*teḥiat ha-meitim*” (Berlin, 1887).

<sup>45</sup> For example, in his entry, “*ve-ha-nefesh ‘asher ta’aseh*” about a discussion in B.T. *Sanhedrin* 99v concerning the story of Reuben and the *duda’im*, the Talmud teaches that the righteous do not steal, and Rashi explained that after the harvest anyone can take from the field. So because of the timing, Reuben did not steal. Lampronti then commented contrary to Rashi that the proof that Reuben did not steal is not when he took the *duda’im*, it is that he took *duda’im* and not something more significant that owners would care about. Vol 3, p. 52v, s.v. “*ve-ha-nefesh ‘asher ta’aseh*” (Venice, 1796). In another entry, Lampronti elaborated on specific words explaining their meaning and significance: Vol 3, p. 71v, s.v. “*zakhar b’a*” (Venice, 1796).

sometimes he interjected his own opinion, some are just definitional or biographical, and some referential.

### Halakhic Methodology

To better illuminate the nature of the entries and Lampronti's methodological approach to halakhah it is useful to discuss his treatment of a single subject. A good point of examination for this purpose are Lampronti's entries on the holiday of Hanukah, as a relatively short and self-contained chapter of Jewish law. The following analysis explains the content of these entries.

The first Hanukah related entry found under *het* is "*Hanukah be-moza'ei Shabbat*" (Hanukah following the Sabbath),<sup>46</sup> in which Lampronti discussed a rabbinic debate about the order in which one should light Hanukah candles and perform *havdalah* (ceremony concluding the Sabbath) after the Sabbath.<sup>47</sup> Lampronti's position was the same as the *Shulhan 'arukh*: one should first light the Hanukah candles and then perform the *havdalah* ceremony and this is the rule regardless of whether one is in the synagogue or at home. Lampronti then quoted his Italian colleague, R. Del Bene, who wrote that it is the Italian custom to first perform *havdalah* and then light the Hanukah candles as there is more publicity of the miracle that way. Lampronti then cited one additional opinion and provided a cross-reference. This entry is typical of Lampronti's overall approach, as he relied heavily on both the *Shulhan 'arukh* and fellow Italian rabbis, even if it meant offering two opinions that contradicted one another.

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<sup>46</sup> Vol 4, p. 43v, s.v. "*Hanukah be-moza'ei Shabbat*" (Venice, 1798).

<sup>47</sup> *Havdalah* is the ritual ceremony performed over a flame that is meant to mark the separation between the Sabbath and the week.

The next Ḥanukah entry is “*Ḥanukah gomrim ha-Hallel kol shmonat yamim*” (one should say Hallel all eight days). In this case, Lampronti first stated that the rule is one should say the Hallel prayer all eight days, even during the afternoon prayer service; then he cited the *Shulḥan ‘arukh*.<sup>48</sup> Here Lampronti quoted from the *Shulḥan ‘arukh* without adding his own personal commentary. He merely stated a concept and provided a citation.

The next few entries -- “*Ḥanukah dinav be-kizur*” (Ḥanukah: its law in brief), “*Ḥanukah din kria’at ha-Torah*” (the law of Torah reading on Ḥanukah), and “*Ḥanukah u-Purim ve-dineiheim le-‘inyan hesped*” (Ḥanukah and Purim and their laws regarding mourning) -- are also mostly referential.<sup>49</sup> In these, Lampronti merely offered citations to other sources, sometimes a single one, sometimes a chain of sources starting from the Mishnah, and in some instances cross-references to other portions of the *Paḥad Yizḥak*. In “*Ḥanukah ve-dineiha*,” for example, Lampronti referred only to the *Mateh Moshe* and listed the rules and where they could be found within the text.<sup>50</sup> In “*Ḥanukah u-Purim ve-dineiheim le-‘inyan hesped*,” by contrast, Lampronti’s discussion starts with the Mishnah and then immediately proceeds to the *Shulḥan ‘arukh*; afterwards he discusses the *Mayim amukim* and *Smak*, and comments that in Ferrara they fast on the night before Ḥanukah.<sup>51</sup>

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<sup>48</sup> Vol 4, p. 43v, s.v. “*Ḥanukah gomrim ha-Hallel kol shmonat yamim*” (Venice, 1798).

<sup>49</sup> Vol 4, p. 43v-44r (Venice, 1798).

<sup>50</sup> The *Mateh Moshe* is a highly cited halakhic work written by Rabbi Moses ben Abraham of Przemysl of Cracow (1540-1606) and first published in 1591.

<sup>51</sup> The *Mayim amukim* is a collection of responsa and novellae written by R. Elijah Mizrahi (c. 1450-1526) and R. Elijah ben Hayim (c. 1530-1610) of Constantinople and first published in Venice in 1647. The *Smak* (*Sefer miṣvot katan*) is an abridged compendium of halakhah written by R. Isaac of Corbeil (d. 1280).

This case presents a good example of Lampronti's entries that include discussions of rabbinic material starting with the Mishnah and continuing with subsequent works in the order they appeared, although in this instance Lampronti first discussed the *Mishnah*, then the *Shulḥan 'arukh*, and then drew from additional sources in their chronological order between the first two cited works. In other cases, Lampronti started at the *Shulḥan 'arukh* and then discussed preceding halakhic sources, such as in the entry "*Hanukah u-Purim mutar le-hit'anot lifneihem u-le-'ahareim*" (is it permissible to fast before and after Ḥanukah and Purim). There he cited his sources in the following order: *Shulḥan 'arukh*, *Tosefot*, *Rid*, *Ran*, *Shiltei ha-gibborim*.<sup>52</sup>

Under the heading "*Hanukah ḥanu b'khaf heh*" (Ḥanukah rested on the 25th) Lampronti explained the holiday itself.<sup>53</sup> He succinctly wrote that Ḥanukah was established on the 25<sup>th</sup> of *Kislev* when the Hasmoneans defeated the Greeks and could find only enough pure oil for one day yet miraculously lasted for eight days. Lampronti cited as references for the subject the *Rif* and *Ran* on the Talmud, the *Shulḥan 'arukh*, *Megilat Antiocus*, and Maimonides.<sup>54</sup> Lampronti said that according to the sages in every generation beginning on the 25<sup>th</sup> of *Kislev* there will be days of rejoicing and the candles will be lit during the nighttime and so forth. He cited the relevant chapter of the Talmud for the establishment of the holiday and rabbinic authorities who ruled that it is a positive commandment to rejoice and celebrate on these days. Lampronti then

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<sup>52</sup> The *Shulḥan 'arukh* and *Tosefot* have been previously explained. The *Rid* (Isaiah di Trani; c. 1180-1250) was a prominent Italian talmudist. The *Ran* (Nissim of Gerona; c. 1320-1376) wrote an influential talmudic commentary. The *Shiltei ha-gibborim* is a talmudic commentary written by Joshua Boaz ben Simon Barukh (d. 1557) of Spanish origin who lived in Italy. Abbreviations and names of texts often refer to both rabbis and the works for which they are most known.

<sup>53</sup> Vol 4, p. 44r, s.v. "*Hanukah ḥanu be-khaf heh*" (Venice, 1798).

<sup>54</sup> The *Rif* is Rabbi Isaac Alfassi (c. 1013-1103), a North African scholar best known for his talmudic abridgment. *Megilat Antiocus* is a popular account of the wars with the Hasmoneans and the story of *Hanukah*. It was probably composed in the late talmudic period (approximately fifth century C.E.) and circulated in different Aramaic manuscript editions before being printed in the early modern period. The other sources were previously explained.

juxtaposed and contrasted the requirement to rejoice on Ḥanukah with the commandment to drink and be merry on Purim. Lampronti's last citation in this entry is to the *Yad Eliyahu*.<sup>55</sup>

In the next entry, “*Ḥanukah mutar be-‘assiyat mel’akhah*” (on Ḥanukah it is permissible to do work), Lampronti cited the Talmud passage that women should not do work by the light of the candles (because of the prohibition against using/benefitting from the light of the candles).<sup>56</sup> Lampronti commented that there are authorities who say that one cannot be lenient about this prohibition. His primary source was the *Shulḥan ‘arukh*. Another source was the corresponding section of the *Tur*, but he made it clear he considered the *Tur* a secondary source by placing its statement within parentheses. Lampronti also cited a source that for some it is the custom to forbid women to do any work during the eight days, unless work for pay is necessary to support the family. Lampronti ended the entry with cross-references to “*minhagei ’asur*” and “*yeish minhag be-nashim*.”

In the next entry, “*ḥinukh ha-menorah*” (preparation of the menorah), Lampronti did not add any personal commentary or relevant halakhic discussion, and included only a single citation to the relevant Mishnah that explains the concept. The final entry consists entirely of cross-references in alphabetical order.<sup>57</sup> (After the conclusion of the Ḥanukah entries, the *Paḥad Yiṣḥak* proceeds to “*ḥinukh ha-tinokot be-‘inyanei Yom Kippur*” (educating children on the matter of Yom Kippur).)<sup>58</sup>

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<sup>55</sup> The *Yad Eliyahu* is a collection of responsa written by the Polish Rabbi Elijah ben Samuel. It was first published in Amsterdam in 1712.

<sup>56</sup> Vol 4, p. 44r, s.v. “*Ḥanukah mutar be-‘assiyat mel’akhah*” (Venice, 1798).

<sup>57</sup> Vol 4, p. 44r, s.v. “*ḥinukh ha-menorah*” (Venice, 1798). The references start: “*‘aveilot be-Purim ’eino noheg*”; “*‘akhsan’ei*” ...and so forth. Vol 4, p. 44r.

<sup>58</sup> Vol 4, p. 44r, s.v. “*ḥinukh ha-tinokot be-‘inyanei Yom Kippur*” (Venice, 1798).

This survey illustrates the scope of issues covered under *het* while evidencing one of the limitations resulting from Lampronti's manner of strictly alphabetizing subjects. The *Ḥanukah* entries cover the history of the holiday and some pertinent legal issues, including in what order to light candles, how many days to say the Hallel prayer, and whether one is permitted to do work, but the section is far from a comprehensive survey of the laws of *Ḥanukah*, because, as noted above, a number of important halakhic issues are found under *nun* for "*ner Ḥanukah*" and under other letters throughout the *Paḥad Yiẓḥak*. By contrast to the codes of Maimonides, Jacob b. Asher, and Karo, (recognizing their respective differences), which are largely organized by subject so that the related laws are collected in one place, Lampronti sacrificed that organizing benefit for one he thought more beneficial – an alphabetical order.

These examples also illuminate the four general ways in which Lampronti's entries proceed: 1) Quotes from different halakhic sources juxtaposed next to one another to give a sense of the range of rabbinic discourse on a given subject. These entries are summaries of a variety of rabbinic opinions. 2) Sections of the *Shulḥan 'arukh* or other sources quoted in their entirety.<sup>59</sup> In one instance, Lampronti copied an entire book and argued against its contents.<sup>60</sup> 3) A synopsis of the topic at hand in Lampronti's own words, sometimes with his own commentaries.<sup>61</sup> 4) Lampronti's own opinions as well as the opinions and writings of his contemporaries.<sup>62</sup>

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<sup>59</sup> Another example: "'avel 'asur be-kevisat begadav." There Lampronti quoted *Shulḥan 'arukh, Yoreh de'ah* 389:1-8. Also in the previously discussed case of "*Ḥanukah gomrim ha-Hallel kol shmonat yamim*," Lampronti quoted straight from the *Shulḥan 'arukh*.

<sup>60</sup> Vol 11 p. 33v-58r, s.v. "ẓarkhav 'el Yisra'el 'adam be-lashon 'arami" (Lyck, 1874).

<sup>61</sup> For example: Isaac Lampronti, *Paḥad Yiẓḥak*, vol. 1b, p. 38, s.v. "*ben shivah*" (Venice, 1750); Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 471, f. 121v-122r.

<sup>62</sup> I will discuss this at greater length later in the chapter.

The *Paḥad Yizḥak*, as a whole, covers a huge amount of rabbinic material, though Lampronti generally only mentioned a few sources in each entry. In the Ḥanukah entries alone, Lampronti cited fifteen major sources.<sup>63</sup> The sources Lampronti drew upon are the best evidence of the broad chronological and geographic scope of his research, spanning as they do ancient to early modern and North African, Spanish, French, German, Polish, and Italian rabbinic authorities. In all, Lampronti made use of more than 300 different post-talmudic rabbinic sources in compiling the *Paḥad Yizḥak*.<sup>64</sup>

Lampronti almost always referenced relevant Mishnah and Talmud passages and rarely contradicted or questioned them.<sup>65</sup> He often quoted various medieval commentators, including the towering figures of Rashi and Tosafot.<sup>66</sup> Maimonides appears frequently regarding halakhic subjects if he contributed something unusual to the discourse, such as theological, philosophical, and ethical matters, and a discussion of the laws no longer relevant in the post-talmudic period.<sup>67</sup> Maimonides is not often invoked as the final law with regards to other halakhic matters of rabbinic discussion. Lampronti also did not much draw upon the most significant medieval Ashkenazi code, Jacob b. Asher's *'Arba'ah turim*, which had replaced the *Mishneh Torah* as the primary authoritative halakhic guide in Italy during the Italian Renaissance. By contrast, the *Tur*,

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<sup>63</sup> *Mishnah, Talmud, Megilat Antiokhus, Rif, Ran, Rid, Maimonides, Tosefot, Tur* (via *Shulḥan 'arukh*), *Shulḥan 'arukh, Shiltei ha-gibborim, Ma'aseh melek, Mateh Moshe, and Yad Eliyahu*.

<sup>64</sup> The introduction to the Mossad Ha-Rav Kook critical printed edition of the text lists many of these sources. There are at least 300 cited there. Isaac Lampronti, *Paḥad Yizḥak*, (Jerusalem: Mossad ha-Rav Kook, 1970) p. 7-14.

<sup>65</sup> David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Paḥad Yitzhak," *Jewish Law Annual* 16 (2006): 99-100.

<sup>66</sup> Both highly influential authorities, as previously explained. See David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Paḥad Yitzhak," *Jewish Law Annual* 16 (2006): 101-102. Lampronti is however at times dismissive of Rashi and Tosafot. Some of these examples are discussed at greater length in Chapter 4.

<sup>67</sup> Lampronti also cited Maimonides in some scientific related entries.

by way of the *Shulḥan 'arukh*, is often cited, which accords with the acceptance and ascendancy of the *Shulḥan 'arukh* in the sixteenth century.<sup>68</sup>

Lampronti's most extended discussions usually involved the rulings of his contemporaries. Though Lampronti cited a range of authorities who preceded him, his in-depth discussions of them pertained to contemporary controversies, with the most thorough discussions usually reserved for contemporary rabbis and matters of current relevance.<sup>69</sup> Thus, the *Pahad Yitzhak* largely functions as an anthology of rabbinic sources, especially those that had accumulated in the period since the acceptance of the *Shulḥan 'arukh*, including even unconventional sources such as *Me'or einayim*<sup>70</sup> and *Sha'agat Aryeh*.<sup>71</sup>

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<sup>68</sup> After initial opposition, the *Shulḥan 'arukh* and Isserles's glosses gained widespread acceptance throughout the Jewish world, so that by the eighteenth century, the primary reference point for halakhic discussions was the *Shulḥan 'arukh* and not the *Tur*. The effect of this acceptance was the elimination of the strict division of halakhah into the distinct and geographically split traditions -- Italian, French, German, and Spanish -- that had dominated for centuries. Each tradition had come with its own authorities, customs, and rules of decision making and struggled to preserve its unique identity especially with increased geographical migration during the medieval and early modern periods. The *Shulḥan 'arukh* and Isserles's *Mapa* essentially eliminated that split by replacing the four with two primary traditions. One sees this shift and Karo's prominence in Lampronti's frequent reference to the *Shulḥan 'arukh*, and the opposition Lampronti faced when, at times, he ruled against the hallowed work. In one case, Lampronti raised the ire of his close rabbinic colleague Samson Morpurgo for ruling in favor of Maimonides over the *Shulḥan 'arukh* regarding a circumcision originally postponed due to the child's illness and rescheduled to take place on the festival of *Shmini 'Azeret*. Since the circumcision had already been delayed, Lampronti argued that it should be pushed off one additional day to avoid desecration of the holiday. The next day was *Simhat Torah*, a holiday with the status of *Yom Tov* only in the diaspora. Maimonides had ruled leniently in favor of such a desecration whereas Asher b. Yehiel and Joseph Karo had ruled stringently. Morpurgo angrily replied to Lampronti saying the *Shulḥan 'arukh* is the definitive and decisive source from which one should determine the law. For more on this case see: David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the *Pahad Yitzhak*," *Jewish Law Annual* 16 (2006): 104.

<sup>69</sup> Lampronti's contemporary network will be discussed in greater detail in Chapter 6.

<sup>70</sup> For example: Vol 8, p. 124v, s.v. "*sefarim hiẓonim*" (Lyck, 1866). The *Me'or Einayim* (the Light of the Eyes) is a skeptical treatise composed by Azariah de' Rossi in the sixteenth century. It was a controversial work, widely rejected by many rabbinic authorities. Comparisons between de' Rossi and Lampronti will be made in the concluding chapter of this work.

<sup>71</sup> For example: Vol 11, p. 64r, s.v. "*kabalah 'im yeish le-karev 'o li-rhok*" (Lyck, 1874). *Sha'agat Aryeh* (*The Lion's Roar*), written by Leone Modena (1571-1648), is a response to an anonymously written treatise critiquing rabbinic culture, *Kol sakhal* (Voice of a Fool).

Lampronti did not directly explain his own methodological approach to the law, relying as we have seen on material copied from or referenced to other sources.<sup>72</sup> The lack of uniformity of the entries, their diverse nature, and the breadth of material included in the *Paḥad Yiẓḥak* similarly makes it difficult to succinctly summarize and explain how Lampronti weighed various authorities and rendered his own judgments. The best and most definitive way to determine Lampronti's legal method would be a systematic examination of all the halakhic authorities Lampronti cited, where in the *Paḥad Yiẓḥak* he cited them, in what order, and to what end. This investigation also requires an analysis of the authorities to which he gave the most weight and considered the most authoritative, and whose judgment he was willing to reject. The immense size of the *Paḥad Yiẓḥak*, especially taking into account all the various manuscript editions and unpublished portions, makes such a comprehensive survey not only beyond the confines of this dissertation, but it would be a project requiring untold years for the most skilled and knowledgeable scholar to complete and reach informed and supportable conclusions. To determine Lampronti's halakhic approach, therefore, the following analysis covers a few key entries and engages the work of other scholars who have attempted to address this question, especially David Malkiel.

According to Malkiel, Lampronti's halakhic approach deftly balances both conservatism and liberalism, by which Malkiel means, respectively, strict adherence to established rabbinic authority and willingness to depart from that authority based on new circumstances and needs. This fundamental tension between the significance of ancient authorities to which adherence is

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<sup>72</sup> Lampronti's methodology is thus best discerned both through close analysis of the sources he cited and the order in which he cited them as well as cases in which his own voice clearly comes through.

supposed to be owed and the need to adapt to changing circumstances is at the heart of the halakhic system.<sup>73</sup>

The problem is as old as the system itself and has been dealt with in different ways at different times. Some medieval rabbis lamented the decline of strict adherence while others insisted they had an obligation to contradict their predecessors, when necessary. The weight of tradition and the need for innovation were often at odds, and over time the problem became more pronounced as the weight of previous authorities increased and the challenges of new circumstances more acute. Especially after the introduction of print in Europe in the fifteenth century and the widespread acceptance of a few important halakhic works throughout various Jewish communities, the individual rabbi's ability to innovate and contradict established authority was met with resistance. It is important to understand Lampronti against this atmosphere. Both the challenges he faced and the solutions he offered were not without precedent, but they should be examined specifically in the rabbinic context of his period and in comparison to the activities of contemporary rabbis in other Jewish centers.

How Lampronti weighed various authorities in the instances in which he adjudicated the law rather than aggregating sources as he did in most of the *Pahad Yitzhak* entries, is elucidated through analysis of his entry “*ishah 'einah mitkadesheth 'el'a 'ad 'aḥar zeman yenikah*,” (a woman is not permitted to marry until after the end of the weaning period) which covers a series of responsa addressing a controversial case that occurred in Ferrara in 1700.<sup>74</sup> The case

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<sup>73</sup> David Malkiel, “The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Pahad Yitzhak,” *Jewish Law Annual* 16 (2006): 93.

<sup>74</sup> Vol 1a, p. 102r-107r, s.v. “*ishah 'einah mitkadesheth be-l'o 'ad 'aḥar zeman yenikah*” (Venice, 1750). The printed text here contains a misprint -- it says “*be-l'o*” instead of “*el'a*.” This is a printing error as the manuscript clearly readings “*el'a*.” Paris, *Bibliothèque Nationale de France*, Ms. 467, f. 29r.

concerned a young couple who had completed *kidushin* (betrothal), but not the *nisu'in* (nuptials) ceremony, when it came to light that the woman had become pregnant out of wedlock. Her betrothed had received a substantial dowry and had been spending it freely. The family warned that if the couple were forced to wait the required 24 months before the *nisu'in* ceremony that Reuven (the betrothed) would deplete the entire dowry. The family also warned that Reuven had threatened to marry via other channels (not Jewish ones); in other words, he threatened to apostatize. The family cautioned that the young woman would be easily swayed to follow him and that an exception to the two year rule should be made on these grounds.

Whether the threat of apostasy should factor into halakhic discussions had been addressed centuries prior by the German rabbi Israel Isserlein (d. 1460), who ruled that such a threat was not a halakhic consideration. The Polish rabbi Moses Isserles (d. 1572) agreed with Isserlein's ruling and codified it in his glosses on the *Shulḥan 'arukh*.<sup>75</sup> Lampronti's contemporaries, Judah Briel (d. 1722) and Joseph Barukh Cases (both Mantuan rabbis), however, ruled otherwise. They argued that according to Moses Provencale, the woman should be allowed to marry after giving birth, so long as she does not nurse the child herself. But Rabbi Sabbatai Elhanan Sanguinetti of Ferrara angrily replied to Briel and Cases that the rabbinic consensus was clearly against such a thing and he had never heard of Provencale's ruling.

According to Sanguinetti, Provencale was a Mantuan rabbi and his rule may have been accepted in Mantua, but it was not accepted in Ferrara. Briel and Cases responded that their ruling was not limited to Provencale alone; in fact, the *Taz* (David HaLevi d. 1667) had also ruled contrary to Isserles. Briel and Cases additionally cited a responsum of Judah Mintz (d.

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<sup>75</sup> For more on this see Tamar Salmon-Mack, *Tan du: 'al nisu'in u-mashberehem be-Yahadut Polin-Liṭa, 1650-1800*, (Bene Berak: Hotsa'at ha-Ḳibuts ha-me'uḥad, 2012).

1508), an additional Italian rabbi, as well as Provencale again, and emphasized that though Sanguinetti was not familiar with these individuals, they were, in fact, reliable authorities. The Mantuan rabbis thus adhered to their lenient ruling and Lampronti commented in support. Lampronti provided numerous citations in favor of Briel and Cases, including a responsum of the Polish-Lithuanian rabbi Aaron Samuel ben Israel Kaidanover (d. 1676), in which Kaidanover discussed the related responsa of Simone Luzzatto (d. 1663) and Provencale.<sup>76</sup> Lampronti additionally cited the writings of his Ferrara predecessor, R. Del Bene.

Sanguinetti then replied again to Lampronti, arguing that the Mantuan rabbis erred by following the position of a recent rabbi (Provencale) against the more stringent rulings of earlier authorities. Sanguinetti quoted the principle of *halakhah ke-vatra'ei* (the halakhah follows the ruling of later scholars as opposed to earlier ones) and commented that he believed this principle does not apply indefinitely; meaning, later rabbis at some point have less authority than earlier ones.<sup>77</sup> Lampronti dismissed Sanguinetti's comments on the principle of *halakhah ke-vatra'ei* by emphasizing the greatness of the *Turei zahav*, David HaLevi.<sup>78</sup> Lampronti argued that HaLevi was "a great rabbi in his generation and that all the scholars of Israel deferred to his words; as such he should be considered like a *Tanah* or *Amorah* [scholars of the Mishnah and Talmud] and the word of God rests in his mouth."<sup>79</sup> Lampronti thus forcefully stated that there is no decline of

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<sup>76</sup> Aaron Samuel ben Israel Kaidanover, *Emumat Shemuel* #2-4.

<sup>77</sup> Sanguinetti specifically cited Moses Alshkar, responsa #53. For more on this see: David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Pahad Yitzhak," *Jewish Law Annual* 16 (2006): 107-8.

<sup>78</sup> The principle of *halakhah ke-vatra'ei* is sometimes formulated as *hilkheta ke-vatra'ei*. Since Lampronti phrases it as *halakhah k'batrai* that formulation is used here.

<sup>79</sup> This is quoted from Lampronti's response to Sanguinetti: Vol 1a, p. 103v, s.v. "*ishah 'einah mitkadesheth be-l'o 'ad 'ahar zeman yenikah*" (Venice, 1750). See above note.

the generations and a rabbi of a later generation of sufficient knowledge and stature should be treated with the same authority and weight as the rabbis of the Mishnah and Talmud.<sup>80</sup>

Lampronti also responded to Sanguinetti by breaking down the issues at hand in a logical, and almost philosophical fashion. He laid out a series of premises at the heart of the issue under discussion and concluded that the woman could marry without waiting the two year period, even if she does nurse the child because the matter is a rabbinic (*derabanan*) issue and he cited the *Mahari Mintz* (Judah Minz; c. 1405-1508) and *Ibn Hayyim* (Aaron ibn Hayyim; 1545-1632) in support of his ruling.<sup>81</sup> This discussion covers 15 folio pages in the manuscript edition and 6 folio pages in print and concludes with Lampronti's copying of the related responsa on the subject written by Hananiah Cases, Yohanan Ghiron, and Moses Provencale.<sup>82</sup>

This case is evidence that, contrary to Sanguinetti, Lampronti's opinion was that later generations of scholars do not have less authority than previous ones; the *vatra'ei* (of *halakhah ke-vatra'ei*) moves forward. Lampronti confidently rejected the rulings of Isserlein and Isserles, relying on the similar contradictory conclusions of David ha-Levi and Provencale, who also rejected the earlier rabbis, arguing they are of sufficient intelligence and scholarly stature to override previous rabbinic opinions. In fact, Lampronti consistently emphasized this point, as if it was important for him to show that the halakhic tradition should continuously evolve.

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<sup>80</sup> Lampronti has an entry specifically on *halakhah ke-vatra'ei* in which he reviewed the gamut of rabbinic sources that discuss the principle and the circumstances under which it applies. *Paḥad Yiṣḥak*, vol 3, p. 22v-23v, s.v. "*halakhah ke-vatra'ei*" (Venice, 1796). The cross-references to *halakhah ke-vatra'ei* interestingly do not include this specific entry: "*ishah 'einah mitkadesheth*." For more historical background on the principle see: Israel Ta-Shma, "The Law in Accordance with the Later Authority Hilkheta ke-vatr'ei: Historical Observations on a Legal Rule" in *Creativity and Tradition Studies in Medieval Rabbinic Scholarship, Literature and Thought* (Cambridge: Harvard University Press, 2006) 142-165.

<sup>81</sup> *Mahari Mintz* refers to the work of Judah Minz (c. 1405-1508), a prominent Italian rabbinic authority of his time. *Ibn Hayyim* refers to Aaron ibn Hayyim (1545-1632) a halakhist of North African origin who made his way to Venice.

<sup>82</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 467, f. 29r-43r.

Lampronti also did his own research and applied rules of logic to the issues in rendering his own judgment. His ruling against one of his own first rabbinic teachers in Ferrara, Sanguinetti, further shows his judicial independence.<sup>83</sup>

In addition to his belief in the evolutionary nature of the halakhic system, Lampronti was also committed to its pluralism. Lampronti's position on the related issue of *sivlonot*, whether engagement gifts served to actually marry a man and woman, similarly illuminates his appreciation for the variety of religious practice.<sup>84</sup> *Sivlonot* was a subject of considerable halakhic debate in the early modern period.<sup>85</sup> The German and French rabbinic traditions held that the gifts functioned as the marriage itself, and should a couple decide to separate even before the *nissuin* ceremony, their separation required a bill of divorce. The Italian tradition held otherwise. Italian rabbinic authorities generally believed that *sivlonot* did not affect legal standing; the gifts functioned much as the engagement ring does today, a symbolic gesture, but not a binding agreement. Lampronti devoted 3 manuscript folio pages and 5 folio pages in the printed edition of the *Pahad Yizhak* to this subject, citing the halakhic history, and ultimately embracing a pluralist view.<sup>86</sup> In accordance with the Italian tradition, Lampronti personally held that the gifts have no legal status, but he advocated for each community to act according to its custom. In fact, much of the *Pahad Yizhak* implicitly endorses the pluralism of the halakhic

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<sup>83</sup> Lampronti also straightforwardly discussed the authority of later day rabbis versus earlier authorities in an entry on the halakhic principle of the rule of the majority. *Pahad Yizhak*, vol 5, p. 21v-22v, s.v. “*yaḥid ve-rabim halakhah ke-rabim*” (Reggio, 1813). David Malkiel, “The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Pahad Yitzhak,” *Jewish Law Annual* 16 (2006): 115-6.

<sup>84</sup> *Pahad Yizhak*, vol 8, p. 2r-6v, s.v. “*sivlonot*” (Lyck, 1866). Jeffrey Woolf spoke specifically about this issue at the Lampronti conference in Italy in 2014. A citation to his paper will be included when the conference proceedings are published.

<sup>85</sup> For more on the sixteenth-century debates over *sivlonot* see: Roni Weinstein, *Marriage Rituals Italian Style: A Historical Anthropological Perspective on Early Modern Italian Jews*,” (Leiden: Brill, 2004), 302-310.

<sup>86</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 531, f. 40r-42v.

system. For example, Lampronti published a number of different divorce writs to emphasize the validity of each.<sup>87</sup> And the nature of the encyclopedia itself -- the variety of sources, customs, and traditions cited -- further emphasizes that Lampronti expected each scholar to use the *Paḥad Yiẓḥak* as a resource that would help him to reach his own decisions and rule according to the tradition appropriate for his community.

Lampronti thus balanced his fidelity to the tradition and previous authorities with his belief in the ability of contemporary scholars to issue new judgements based on new information and for multiple traditions to coexist.<sup>88</sup>

To fully grasp the scope of his halakhic methodology, two additional elements of Lampronti's work will be explained in the remainder of this section. First, Lampronti frequently identified halakhic concepts in contemporary terms. Second, he at times cited and relied upon mystical and kabbalistic texts, and even occasionally indicated belief in elements of the occult.

Lampronti often explained the contemporary meaning or ramification of halakhic concepts.<sup>89</sup> One way in which this methodology is manifest is his explanation of Italian regional equivalents to talmudic weights and measures. For example, in his entries on "*se'ah*

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<sup>87</sup> Pluralism also seen in Lampronti's citation of the talmudic phrase, "*nahar'a nahar'a u-feshatei*" in "*teki'ot 'al seder ha-brakhot*" after he describes the customs of the Sephardic, Italian, and Ashkenazic congregations in Ferrara: vol 14, p.152v, s.v. "*teki'ot 'al seder ha-brakhot*" (Berlin, 1887). David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the Pahad Yitzhak," *Jewish Law Annual* 16 (2006): 131.

<sup>88</sup> Lampronti constantly assessed halakhah according to contemporary terms and applied contemporary methodologies, such as empiricism, in order to render a legal judgement. In David Malkiel's assessment and words, Lampronti "makes a number of programmatic statements of a traditionalist flavor, and portrays himself as conservative, yet his own decisions and actions often reflect an independent spirit. He is critical of medieval authorities, overtly or through his choice of sources, and can frequently be observed to break the bonds of traditionalism for the sake of truth. Nonetheless, to dismiss Lampronti's traditionalist sentiments as mere lip service or false modesty would be an oversimplification, and, I believe, unjust." (Malkiel, "The Burden of the Past in the Eighteenth Century" 117.) Though conservatism and liberalism may not be the best words to categorize the tension Lampronti faced, I believe Malkiel is correct in arguing that Lampronti toed the line between deference to tradition and unyielding commitment to evidence, logic, and empiricism.

<sup>89</sup> This is not particularly unusual in halakhic literature, but his constant effort to explain concepts in contemporary terms is noteworthy nonetheless.

*hitim*” (talmudic measure of wheat) and “*se’ah kemah*” (talmudic measure of flour) Lampronti explained: “*se’ah hitim* equals 14 *litrin* in weight, also in Venice; *se’ah kemah* equals 12 *litrin* in weight, also in Venice.”<sup>90</sup> Similarly, in another case, “*halah ve-shiur bazek*” (allah and a measure of dough), Lampronti compared the contemporary conversion weights and measures in Mantua and Ferrara: “But you should know, dear reader, that the weight of 110 ounces in Mantua is equal to 100 ounces in Ferrara, and according to this, you must calculate that the measure of dough with which one is obligated in Ferrara is flour in the weight of 60 ounces, meaning 5 *litrin* of 12 ounces a *litre*.”<sup>91</sup> In another instance, Lampronti explained the specific amount he gave for the redemption of his first born son in current currencies: “And I, the youth, gave four ‘*felopes*’ for the redemption of my son, which are worth, both here in Ferrara and in Venice, ten ‘*favoli*’ each, and in Mantua they are worth 80 *litrin* of Mantuan currency.”<sup>92</sup>

Lampronti also sometimes explained concepts in Italian and on occasion wrote out whole sections in Italian. As previously mentioned, in an entry titled “*shanui*,” Lampronti wrote “*replica*” and under the following entry “*shinui*” he wrote “*mutazione*” to clarify the different meanings of the two similar words.<sup>93</sup> And under “*unklai*,” Lampronti explained that it is the stomach of the heart, in Latin “*mucronata cartilagine*.”<sup>94</sup> Finally, in an entry on “*bat kol*” (heavenly voice), Lampronti wrote that a possible meaning is “*eco*” (echo), in the

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<sup>90</sup> Vol 8, p. 2r, s.v. “*se’ah hitim*” “*se’ah kemah*” (Lyck, 1866).

<sup>91</sup> Vol 4, p. 10r, s.v. “*halah ve-shiur bazek*” (Venice, 1798). In this case, Lampronti is responding to a commentary of the Gur Aryeh Levi Finzi, in which Finzi wrote that the measure of dough in Mantua is equal to 5.5 *litrin*, at 12 ounces a *litre*.

<sup>92</sup> Vol 10, p. 4r-4v, s.v. “*pidyon bekhor*” (Lyck, 1871). I thank David Malkiel for turning my attention to these entries specifically.

<sup>93</sup> Vol 13, p. 280r, s.v. “*shanui*” and “*shinui*” (Berlin, 1886).

<sup>94</sup> Vol 1a, p. 38r, s.v. “*unklai*” (Venice, 1750).

vernacular (Italian).<sup>95</sup> In some instances Lampronti copied into the *Paḥad Yiẓḥak* long Italian correspondences written by his contemporaries. These larger Italian sections, such as the pages on *Sambation*, remain mostly unpublished.<sup>96</sup> There is a note in the Hebrew printed edition of the volume covering the letter *samekh* that there are pages in Italian in the manuscript original that the printers chose to omit.<sup>97</sup> The earlier printed editions do contain some of this Italian writing, such as the entries on “*ḥaliẓah*” and “*get*,” in which Lampronti copied into the *Paḥad Yiẓḥak* contemporary documents written in Italian.<sup>98</sup> Lampronti also at times transliterated Italian into Hebrew, such as the passages he copied from Nicholas Lemery’s scientific dictionary.<sup>99</sup>

The importance of contemporary matters to Lampronti is also seen in his citing of current situations and controversies. As discussed previously in this chapter, Lampronti referenced the conditions of his personal family, his friends, and the Ferrara Jewish community in the course of many of his rabbinic discussions.<sup>100</sup> Sometimes he even copied contemporary documents into

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<sup>95</sup> Vol 1b, p. 76r, s.v. “*bat kol*” (Venice, 1750). Lampronti cited both David Nieto’s *Mateh Dan* and William Derham’s *Demonstrazione (Physico-theology)* in this entry. See the last section of this Chapter for a discussion of William Derham and the significance of Lampronti’s citation of this work.

<sup>96</sup> These pages exist in both the Paris and the JTS manuscript editions. See: Paris, *Bibliothèque Nationale de France*, Ms. 532, f.329r-332v; Jewish Theological Seminary, Ms. R1635, f. 138r-140r. The Italian responsa remained unpublished in the later volumes of the *Paḥad Yiẓḥak*, which were printed by the *Mekize Nirdamim* society in Germany in the middle of the nineteenth century. The society chose to include only the Hebrew portions of Lampronti’s work. The printing history of the *Paḥad Yiẓḥak* will be explained in the concluding chapter of the dissertation. I did not comment on the contemporary concern with “*Sambation*” at length as David Malkiel treated the subject in an article length study: David Malkiel, “The *Sambation* River and the Ten Tribes in the *Paḥad Yiẓḥak*,” [Hebrew] *Pe’amim* 94-95 (2003): 159-180.

<sup>97</sup> Vol 8, p. 49v (Lyck, 1866) . According to Boaz Cohen the Italian *Sambation* entry was printed by Neubauer in *Koveẓ ‘al Yad IV*, Berlin 1888, pp. 69-74.

<sup>98</sup> Vol 2, p. 44r-45r, s.v. “*get*” (Venice, 1753); Vol 3, p. 35r-36r, s.v. “*ḥaliẓah*” (Venice, 1753).

<sup>99</sup> These passages are discussed at greater length in Chapter 4.

<sup>100</sup> For example: Vol 9, p. 153r-156r, s.v. “*eiruv*” (Lyck, 1868); Vol 1a, p. 41v, s.v. “*’oznaim le-kotel*” (Venice, 1750), Vol 10, p. 4r-4v, s.v. “*pidyon bekhor*” (Lyck, 1871).

the *Paḥad Yiẓḥak*, such as the *ḥalīẓah* repudiations from Ferrara.<sup>101</sup> He also discussed broader controversies of the era, such as Shabbtai Zvi and Uriel da Costa.<sup>102</sup>

Lampronti's numerous accounts of his contemporary circumstances means a large amount of social history can be gleaned from the pages of the *Paḥad Yiẓḥak*. In the course of his halakhic discussions one learns, for example, about the food and drink of Jews in northern Italy. In one case, Lampronti wrote that his non-Jewish neighbors made different salamis than the Jews.<sup>103</sup> In another, he mentioned a certain type of round bread of the non-Jews.<sup>104</sup> Lampronti also wrote about what blessing to make over chocolate: to figure out the answer he discussed the difference between the raw crushed form eaten in the Americas and the Italian way of drinking it with sugar and water.<sup>105</sup> The halakhic implications of coffee prepared by non-Jews and the parameters of kosher liquor also come up as subjects of discussion. Lampronti additionally wrote about shaving customs, which depilating substances were commonly used and permitted, the difference between the shoes customarily worn in Ferrara and Mantua for the *ḥalīẓah*

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<sup>101</sup> Vol 4, p. 15v-16r, s.v. "*ḥalīẓah ve-sidrah*" (Venice, 1798). This entry takes the form of a case-log -- there is a list of *ḥalīẓah* repudiations in Ferrara from 1708-1740.

<sup>102</sup> Under the entry, "*Shabbatai Zvi*" (Vol 12, p. 73v) there is a cross-reference to "*ta'anit shishah yamim*" (Vol 13, 84v-85r) in which Lampronti discussed instances in which people fasted for extended periods of time, "such as the time of the messianic pretender Shabbatai Zvi." Lampronti also narrated the Uriel da Costa incident in Amsterdam, writing how da Costa became a heretic in the entry, "*rofeh rasha*" (Vol 11, p. 130r-v). There is no attribution or evidence as to whether this passage was written by Lampronti or copied from somewhere else.

<sup>103</sup> Vol 1b, p. 70v-71r, s.v. "*basar ha-nishlah be-yad goi*" (Venice, 1753). This responsum from 1711 discusses the halakhic problem of meat left out of the sight of a Jew. After his halakhic discussion, Lampronti added a note saying that the second reason he allowed it is because "the gentiles don't make salamis like us," and thus it will be easy to discern whether the meat is kosher.

<sup>104</sup> Vol 9, p. 15r, s.v. "*avar 'aveirah*" (Lyck, 1868). Entry discusses whether Jews could eat this specific type of bread baked by non-Jews.

<sup>105</sup> Vol 12, p. 5r-21v, s.v. "*kikol'ata*" (chocolate) (Berlin, 1885). This is a long series of responsa that covers many pages. In Lampronti's responsum, he also cited Nicholas Lemery's (who will be discussed later in the dissertations) discussion of the physical properties of vanilla and chocolate.

ceremony, whether one could sit in synagogue bareheaded, and what blessing to make on tobacco.<sup>106</sup>

Lampronti's deep interest in current matters is also seen in his frequent solicitation and copying of the opinions of his contemporaries. Within the entries of the *Paḥad Yiṣḥak*, Lampronti sometimes specifically asked students to respond to questions he received; he treated star pupils almost as judicial clerks, tasked with researching and writing briefs for their mentor.<sup>107</sup> Lampronti also drew upon both his immediate community, Ferrara, and cited and engaged in discourse with other Jews and communities in Italy and beyond, including various emissaries from the land of Israel as well some central and eastern European rabbis.<sup>108</sup>

The last halakhic methodology of note is Lampronti's use of kabbalistic texts and reference to mystical or magical beliefs.<sup>109</sup> Lampronti was not a leader in the kabbalistic circles

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<sup>106</sup> Regarding shaving, in Vol 10, p. 1v, s.v. "*pe'ot ha-zakan*" (Lyck, 1871) Lampronti wrote: "I heard that in Rome and also I saw every day here in Ferrara, men commonly shaving their beards with *mordokko* and *skvardo*, a combination of lime and silver and other things that removed the hair." In Vol 1b, p. 59v-60r, s.v. "*birkat ha-reiah*" (Venice, 1753). Lampronti discussed different types of tobacco and different methods of consumption in the effort to figure out whether a blessing should be made over the smell of smoke.

<sup>107</sup> In "*kikol'ata*" (chocolate) entry Lampronti specifically wrote that his student Abraham b. Moses Ha-Kohen prepared and studied this reply for him. Another example of Lampronti instructing a student to write a response for him is found in Vol 6, p. 52r-54v, "*netilah*" (Lyck, 1864).

<sup>108</sup> Chapter 6 will explain these networks more fully.

<sup>109</sup> There is a long tradition of integrating kabbalah and halakhah, and some authorities held that mystical teachings could especially be relied upon when they did not contradict talmudic ruling. For more on the historical treatment of this issue see the classic work by Jacob Katz: Jacob Katz, *Halakhah and Kabbalah: Studies in the History of Jewish Religion, its Various Faces and Social Relevance* [Hebrew] (Jerusalem: Magnes Press, 1984). For more see also: Jacob Katz, "Post-Zoharic Relations Between Halakhah and Kabbalah," in *Divine Law in Human Hands: Case Studies in Halakhic Flexibility* [Hebrew] (Jerusalem: Magnes Press, 1998); Israel Ta-Shma, "Jacob Katz on Halakhah and Kabbalah" in *The Pride of Jacob: Essays on Jacob Katz and his Work*, ed. Jay Harris (Cambridge: Harvard University Press, 2002).

of his time and his primary occupation certainly was not with kabbalistic texts.<sup>110</sup> Nonetheless, he had an association with Moses Hayim Luzzatto, Lampronti may have studied an elementary kabbalistic text with him, and, at times, though in a relatively minor fashion, he cited kabbalistic references and made note of certain mystical and supernatural beliefs in his halakhic work.<sup>111</sup> In a few instances Lampronti noted that he heard something from a kabbalist or discussed what he saw kabbalists do.<sup>112</sup> He also explicitly cited the Zohar among his many other references.<sup>113</sup> In a few interesting cases he additionally discussed elements of the occult. For example, in an entry titled “*ben timlayon*” (a reference to a talmudic verse that Rashi explained referred to a ghost or spirit) Lampronti first cited the relevant talmudic passages referring to “*ben timlayon*” as a spirit and then concluded the short passage by saying, “And this is the spirit that we call ‘*maẓ’a*”

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<sup>110</sup> Isaiah Sonne specifically advanced the thesis that some of Lampronti’s rabbinic contemporaries viewed him as a kabbalah sympathizer. I think Sonne’s approach is overstated (Lampronti never actively participated in kabbalistic circles), though there are definitely kabbalistic references of various sorts throughout his written works. See Isaiah Sonne, “Foundation Stones for the History of Italian Jewry: Texts and Studies about the circle of Ramhal and R. I. Lampronti,” (Hebrew) *Horev* 5-6 (1939-1940): 76-114. Elisheva Carlebach mentioned that Lampronti eventually signed a ban against Nehemiah Hayon (a kabbalist accused of Sabbatian and heretical sympathies), upon the encouragement of others in the rabbinic establishment, Judah Briel in particular. See Elisheva Carlebach, *The Pursuit of Heresy: Rabbi Moses Hagiz and the Sabbatian Controversies* (New York: Columbia University Press, 1990), 131. David Sclar’s recent work on Luzzatto also explicitly mentioned that Lampronti was not heavily invested in kabbalistic thought but he also did not seek to suppress Luzzatto’s activities: David Sclar, “‘Like Iron to a Magnet’: Moses Hayim Luzzatto’s Quest for Providence” (PhD diss., The City University of New York, 2014), 173; 260-1.

<sup>111</sup> Reference to a Sabbath Lampronti spent in the Luzzatto home can be found in Mordechai Chirqui, *Igerot Ramhal u-vene doro* (Jerusalem: Mekhon Ramhal, 2001) no. 68, p. 215. Chirqui’s edition is a copy of Simon Ginzburg’s original work: Simon Ginzburg, *Ramhal u-vene doro* (Tel Aviv: 1937). Other references to Lampronti in Luzzatto’s letters can be found in, including one in which Luzzatto mentions that he studied the *kelalim*, a basic kabbalistic work, with Lampronti: Natascia Danieli, *L’epistolario di Moseh Hayyim Luzzatto* (Florence, 2006), 88; 100-101. For an overview of Lampronti’s involvement in mystical circles and use of kabbalistic texts see also: Luciano Caro, “*Fermenti Kabbalistici nella Ferrara di Isaaco Lampronti*,” in *Ebrei a Ferrara, Ebrei di Ferrara: Aspetti Culturali* (Conference Proceedings) (Ferrara, 2013), 213-218.

<sup>112</sup> See for example: Vol 9, p. 6v, s.v. “*poh she-hepik*” (Lyck, 1868); Vol 9, p. 16v, s.v. “*patur ’aval ’asur*” (Lyck, 1868); Vol 5, p. 35v, s.v. “*mohel yehiyeh ’ish kasher*” (Reggio, 1813).

<sup>113</sup> The *Zohar* is a foundational work of Jewish mysticism that first appeared in Spain in the thirteenth century. For Lampronti’s citation of the work (usually as one citation among many) see: Vol 10, p. 33v, s.v. “*ẓarkhav ’el Yisra’el ’adam be-lashon ’arami*” (Lyck, 1871); Vol 10, p. 63r, s.v. “*kevurah hakham*” (Lyck, 1871); Vol 5, p. 213r, s.v. “*moshiah*” (Reggio, 1813).

*morilo*.”<sup>114</sup> It is not clear from this passage whether Lampronti himself believed in this spirit or he merely wrote, observationally, on behalf of those around him who did ascribe to the belief that the spirit is called *maz’a morilo*. In another instance, Lampronti commented about a candelabrum used in Mantua to ward off spirits and ghosts. And in yet another Lampronti wrote: “I found in a very old book that if you say the name of David's mother 17 times in prayer it will be accepted.”<sup>115</sup> He also commented on the magical qualities of the garment of a menstruating woman.<sup>116</sup> Again, none of these passages explicitly indicate Lampronti endorsed magical views, but nonetheless their inclusion shows he read and was familiar with the material, and at the very least, he did not denigrate or deride such popular beliefs. Overall, Lampronti’s incorporation of kabbalistic citations is minimal and he seems ambivalent towards mystical beliefs -- he neither explicitly rejected nor accepted them. It is possible he considered kabbalistic study a valid tradition to be recorded in his comprehensive compilation, but not his primary occupation.<sup>117</sup>

The halakhic methodology Lampronti employed was not fundamentally unusual for rabbinic authorities of this time. He, like many others, respected tradition and sought to adhere to ancient and medieval authority, while also believing that the rabbinic system should respond to changing needs and halakhic sources should include information of contemporary relevance. Similarly, he and others supported the plurality of the system, so that there should be a broad

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<sup>114</sup> Vol 1b, p. 36v, s.v. “*ben timlayon*” (Venice, 1750).

<sup>115</sup> Vol 2a, p. 87v, s.v. “*David shem ’imo*” (Venice, 1753).

<sup>116</sup> Vol 2a, p. 97v, s.v. “*de-leikah*” (Venice, 1753).

<sup>117</sup> It is also important to note that many prominent men of science of the time ascribed to mystical beliefs, so Lampronti’s belief in such matters would not have been at odds with his other commitments explained in this work, but part and parcel of a complex system that was still intertwined with certain magical and supernatural elements. For Isaac Newton’s views on kabbalah in particular see: Matt Goldish, “Newton on Kabbalah,” in Force and Popkin, ed., *The Books of Nature and Scripture*, 89-104.

explication of opinions and interpretations available to the rabbinic community thereby allowing each rabbi to come to his own conclusions.

There are, however, three primary ways in which Lampronti's methodology was fundamentally different from other halakhic works of his time. He regularly cited and relied upon non-Jewish authority, he frequently employed empirical methods in his legal scholarship, and he appropriated both the form and underlying significance of contemporary genres for his rabbinic works. The next section will briefly explain each of these and they are explored more thoroughly in Chapters 4, 5, and 6.

## **Novel Approaches**

### **Non-Jewish Authority**

Perhaps the most surprising and unusual aspect of Lampronti's halakhic methodology is his common use of non-Jewish sources to inform and support his halakhic opinions and interpretations. Examination of significant portions of the printed text of the *Paḥad Yiṣḥak* yields identification of more than 20 different non-Jewish authorities cited by Lampronti, including Pliny, Hippocrates, Gabriel Fallopius, Nicholas Lemery, Francesco Redi, Daniel

Sennert, and William Derham.<sup>118</sup> Though Lampronti discussed ancient authorities, such as Hippocrates, he more often engaged contemporary scientific authorities, such as Sennert, Lemery, and Derham, each of whom Lampronti cited at least twice.<sup>119</sup> Sometimes Lampronti referred the reader to non-Jewish authorities for confirmatory evidence or further information. For example, in the case of the kidney's counsel (which is discussed at greater length in Chapter 4), Lampronti commented on the talmudic passage, "the lung pumps all types"<sup>120</sup>: "So said some of the natural scientists and the scholars of medicine. How it pumps is known only to the scholars of surgery. See the book entitled *The Letters of Francesco Redi*, Pt. IV ff. 156, 157, and 191, which cites almost all of those who think that liquid enters through the tube of the lung."<sup>121</sup> In other instances Lampronti cited a non-Jewish authority seemingly extraneously without comment: "See a book called *Dimostrazione delle essenze et attributi di Dio dalle opere della sua creazione* by Guglielmo de Ram (William Derham), printed in Florence in 1719 (Book 4,

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<sup>118</sup> Many of these individuals and their significance will be explained more fully in Chapter 4. This list is not exhaustive; as explained previously, the large number of volumes of texts comprising the *Pahad Yizhak* makes it extremely difficult to conclusively identify all of Lampronti's citations. We also know Lampronti's library and knowledge of non-Jewish authors extended beyond the works he explicitly referenced. For example, I identified a seventeenth-century medical work, *Elementa medicinae physico-mathematica* written by the Scottish physician Archibald Pitcairne (1652-1713), in the Beinecke Rare Book Library at Yale University with an inscription written by Lampronti. Interestingly, Pitcairne at the time was considered "a professed Deist, and by many alledged to be ane Atheist...a great mocker at religion, and ridiculer of it." For this reference and a brief discussion of Pitcairne see Michael Hunter, *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain* (Woodbridge: Boydell Press, 2005), 322. I have not yet been able to examine Lampronti's inscription in Pitcairne's work or fully consider the intellectual connections between Lampronti and Pitcairne. My extensive examination of *Pahad Yizhak*, however, did not turn up any direct references to Pitcairne. Thus, the existence of a copy of Pitcairne's work viewed by Lampronti emphasizes that Lampronti's citations alone should not be considered the extent of his knowledge or influences.

<sup>119</sup> For Hippocrates citation, see: Vol 6, p. 165v, s.v. "me'uberet hozeret u-mit'aberet" (Leghorn, 1840). Sennert, Derham, and Lemery citations are discussed later in the dissertation.

<sup>120</sup> B.T., *Berahot* 61a-b. A longer discussion of this passage is found in Chapter 4.

<sup>121</sup> Vol. 5, p. 72v-73r, s.v. "kelayot yo'azot" (Reggio, 1813).

Chapter 3, page 106 note 9),”<sup>122</sup> which followed a typically detailed rabbinic discourse. Though on the surface without purpose, this citation is highly significant. It refers to Derham’s most famous work, titled in English, *Physico-theology: Or, a Demonstration of the Being and Attributes of God from his Works of Creation*, based upon a Boyle lecture given by Derham in which he tried to reconcile Christian theology and natural philosophy.<sup>123</sup> Lampronti was not only aware of the attempts of contemporary Christian scholars to make sense of their religious and scientific commitments, he explicitly connected his work with theirs.

There are also instances in which Lampronti drew upon foreign sources first when rendering a Jewish legal judgment, before he turned to halakhic authorities. For example, in a responsum concerning a woman with a prolapsed uterus (previously mentioned and discussed more fully in Chapter 4), Lampronti’s first line of halakhic argumentation relies on the authority of non-Jews Daniel Sennert, Johann George Schenck von Grafenberg, Theophile Bonet, and Caspar Bauhin. Relying on non-Jewish authorities, much less before halakhic precedent, is as momentous as it is unusual.

In another interesting case, Lampronti wrote with reference to a responsum of Yair Hayim Bacharach on astronomy that “most of his [Bacharach’s] questions stemmed from the lack of access in that region to as many books by non-Jewish scholars who explain matters of the

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<sup>122</sup> Vol 1a, p. 41v, s.v. “*’oznaim le-kotel*” (Venice, 1750). Lampronti also cited William Derham and his book in Vol 1b, p. 76r s.v. “*bat kol*” (Venice, 1750). William Derham was an English member of the Royal Society who wrote some important scientific and natural theological works.

<sup>123</sup> William Derham, *Physico-theology: Or, a Demonstration of the Being and Attributes of God from his Works of Creation* (1713). The term “physico-theology” became an important category for attempts made by other scholars to reconcile Christian theology with natural philosophy in the seventeenth and eighteenth centuries. Lampronti’s familiarity with this work and his citation of it in a halakhic context is highly significant. For more on Derham and his role in natural philosophical and theological conversations see: Rhoda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997). For more on Derham and the influence of his translated works in Italy see: Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenment: Newtonian Science, Religion, and Politics in the Early Eighteenth Century*, trans. Sue Brotherton (Atlantic Highlands, NJ: Humanity Books, 1995).

pole and equator.”<sup>124</sup> Here Lampronti drew an unusual contrast between his academic circumstances and those of central European rabbis.

## **Empiricism**

Lampronti also meaningfully departed from his predecessors and contemporaries by his frequent employment of empirical methods and evidence in his halakhic scholarship.

Throughout the *Paḥad Yiṣḥak* Lampronti commonly used the phrases, “I saw with my own eyes” or “one can see with one’s own eyes” as supporting evidence underlying a judicial ruling.<sup>125</sup> Lampronti’s opinions were often grounded on his observations of and experimentations with real world circumstances and not just on his review of rabbinic material. Empiricism appears in both his scientific related sections and also in his emphasis on *minhag* (custom) and its documentation.

Lampronti regularly relied on empirical methods to evaluate scientific and medical matters. As this is explored more fully later in this study, this section will briefly mention only one example, the important case of the woman with the prolapsed uterus.

In his responsum on the subject, Lampronti argued in favor of his judgment by asserting that wise individuals and scholars well versed in the “science of dissection” have seen the evidence with their own eyes and would render a judgement similar to his. Lampronti trusted the “science of dissection” as he and other scholars observed it. In this and in another anatomical

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<sup>124</sup> Vol 5b, p. 19r-v, s.v. “*limud ve-ḥazarto*” (Reggio, 1813). This comment may not have been entirely sincere, as Jews in central Europe did have access to non-Jewish books, but it is interesting nonetheless that this was Lampronti’s explanation for his superior knowledge. It was, perhaps, a self-justification for his own use of such books; in Lampronti’s mind, other rabbis would have used these sources in rabbinic discourse, if only they had access.

<sup>125</sup> Cases where this phrase appears include: Vol 1a, p. 111v, s.v. “*ishah ro’ah dam*” (Venice, 1750); Vol 1b, p. 60v-61r, s.v. “*birkat ḥatanim be-birkat ha-mazon*” (Venice, 1750); Vol 14, p. 12r-v, s.v. “*tol’aim be-yerakot*” (Berlin, 1887).

case discussed at greater length later in Chapter 4 (the case of the three tubes), Lampronti similarly used the phrase “seeing with one’s own eyes.” In both instances, Lampronti argued that the empirical evidence as he and others of similar knowledge had observed should be an important factor in determining the law.<sup>126</sup>

Lampronti also frequently tested empirical premises before rendering a judgment. For example, in his entry on “*tol’aim be-yerakot*” (checking vegetables for worms), he wrote that he inspected vegetables in his garden before they were removed from the ground and that way learned which plants needed to be checked before being served.<sup>127</sup> He commented that his first hand observation taught him how worms moved and where on a plant they are most often found. Lampronti even mentioned a specific species of truffle, called “*spongignoli*,” that he had studied and saw that it was porous like a sponge, and often full of worms. Similarly, in his entry “*’oznaim le-kotel*” (the walls have ears), Lampronti explained the homiletic phrase as possibly referring to an architectural phenomenon in which sound travels from one area of a structure to another.<sup>128</sup> Lampronti wrote that he went to Mantua and tested this theory many times: “If you stand in one area of the *Palazzo di Te* and whisper, someone standing diagonally opposite will be able to hear you clearly.”<sup>129</sup> He then commented: “And maybe this is what our Sages had in mind when they said ‘*’oznaim le-kotel*’; sometimes a person speaks and thinks that no one hears,

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<sup>126</sup> Lampronti also drew on the writings of contemporary medical scholars, as discussed more fully below. In one instance, in his entry titled, “*mei peirot ‘einam maḥmiẓim*” (fruit juice does not ferment), Lampronti responded the following to rabbinic commentators who argued that fruit juice ferments: “And their words do not hold up, as it is known to physicians (*ba’alei ha-refu’ah*) that there are some acids that neutralize acidity; and the decisors who ruled that wine does not ferment did not distinguish between sweet wine and sour wine or other flavors and the same holds for fruit juice.” *Pahad Yiẓhak*, vol 6, p. 102v, s.v. “*mei peirot ‘einam maḥmiẓim*” (Leghorn, 1840). In this entry, thus, Lampronti contradicted a rabbinic opinion on the basis of scientific knowledge of the properties of acids.

<sup>127</sup> Vol 14, p. 12r-v, s.v. “*tol’aim be-yerakot*” (Berlin, 1887). The “*yerakot*” in this case are specifically endives.

<sup>128</sup> Vol 1a, p. 41v, s.v. “*’oznaim le-kotel*” (Venice, 1750).

<sup>129</sup> Vol 1a, p. 41v, s.v. “*’oznaim le-kotel*” (Venice, 1750).

and is wrong, for his words are heard at a distance when the ear is brought to the wall, and it is as if the wall has ears that hear.”<sup>130</sup> Thus, in this instance, Lampronti repeatedly tested a natural phenomenon and explained a rabbinic homiletic statement according to his real world findings. Lastly, in his entry “*eish min ha-‘eiẓim*” (fire from trees) he wrote about testing whether a specific Indian reed, whose properties he carefully described, would produce a flame, which it did.<sup>131</sup> Conclusions and judgments concerning the natural world proceeded from Lampronti’s belief in the efficacy of experimentation and personal observation.

Lampronti’s empirical focus is not, however, confined to the testing of medical and natural phenomena. Lampronti was also strongly interested in, and often determined the law, on the basis of halakhah as he observed it practiced.<sup>132</sup> In his entry “*kevi‘ot makom le-ḥalīẓah*” (establishing a place for the *ḥalīẓah* ceremony) for instance, Lampronti issued a ruling about when a place for a *ḥalīẓah* ceremony should be fixed based on: “The custom of Ferrara, as

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<sup>130</sup> Vol 1a, p. 41v, s.v. “*oznaim le-kotel*” (Venice, 1750).

<sup>131</sup> In “*eish min ha-‘eiẓim*” Lampronti discussed the law that prohibits one from making fire from wood on festivals. Lampronti commented: “It is easy to get fire from wood by means of a reed from India called ‘*canna* [reed] *di Hindia*,’ if you strike two of them against each other with great force. But during the day, in daylight, you will not see the fire emerge, for the big light darkens the small one, as is known to researchers/scholars and to the eye of every person.” Lampronti then explained that it is possible to make fire out of wood with the help of an artisan called a “*torlidore*” (this is misspelled in both the print and manuscript texts - it should read “*tornidore*”). He explained how it worked and that it was known to scholars that the friction caused the heat. Lampronti then wrote that his disciple (Yoav Barukh Lampronti) showed him how to get fire from the Indian reed and he explained the characteristics of the reed to him, specifically identifying how one can tell that it is the correct reed. Vol 1a, p.115r, s.v. “*eish min ha-‘eiẓim*” (Venice, 1750).

<sup>132</sup> The importance Lampronti attributed to custom is not unusual in halakhic literature, in fact there is a rich tradition of customary law. For medieval rabbis, however, the emphasis on custom was not based in empirical methods. Historians have argued that custom was held in high regard by medieval scholars, who assumed that practiced norms either reflected lost ancient traditions or at least genuine communal efforts to fulfill the commandments. The authority rabbis attributed to custom was thus not in the authority of observable practice, but the authority of the norms of the people and their genuine devotion to the law. Israel Ta-Shma discussed the comparison between custom and folk practice and drew an analogy between custom and oral law: Israel Ta-Shma, *Minhag Ashkenaz ha-Kadmon* (Jerusalem: Hebrew University Magnes Press, 1992), 35-42. For more on the role of custom in halakhah see: Elon, *Jewish Law: History, Sources, Principles*, Vol 2., 880-994; Haim Tchernowitz, *History of Hebrew Law* (Hebrew), (New York: 1945), Vol. 1, 144-150; David Malkiel makes a similar argument that Lampronti’s focus on custom was connected to his empiricism. For more on this see: David Malkiel, “The Burden of the Past in the Eighteenth century: Authority, Custom and Innovation in the Pahad Yitzhak,” *Jewish Law Annual* 16 (2006): 118-132.

I've seen with my own eyes..."<sup>133</sup> That he had "seen with my own eyes" how a religious ceremony was actually practiced emphasizes the importance Lampronti attached to *minhag* (custom) as observed by him, as opposed to a custom related to him by a third party orally or in writing.

Throughout the *Paḥad Yiẓḥak*, Lampronti recorded and compared the customs of various communities. This documentation was not, however, merely ethnographic. Lampronti often determined the law on the basis of his personal experience with local practice -- what he saw Jews do.<sup>134</sup> For example, in his entry on "*nefilat 'apaim*" (falling on the face)<sup>135</sup> -- about whether one can do *nefilat 'apaim* without a Torah scroll in the room -- Lampronti commented that he saw Paduan Jews practice this custom in a room without a Torah scroll and he saw an emissary from Jerusalem practice this custom in Ferrara without a Torah scroll present.<sup>136</sup>

Lampronti also sometimes decided the law on the basis of anecdotal evidence of Jewish practice, as in the entry "*sfinah she-higi'ah le-naḥal* (a ship that reaches a stream).<sup>137</sup> In this entry, Lampronti discussed a question sent to him by Michael Zalman of Lugo who asked whether one may disembark from a boat that arrived from outside a city to a river inside one on the Sabbath. Lampronti answered that in Mantua, "a big city of scholars and scribes," those who entered the city by way of the river on the Sabbath disembarked and walked across the city.<sup>138</sup>

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<sup>133</sup> Vol 11, p.63v, s.v. "*kevi'ot makom le-ḥaliẓah*" (Lyck, 1874).

<sup>134</sup> Again, I am arguing that unlike many of his rabbinic predecessors, the importance Lampronti attributed to custom was connected with his commitment to the empirical method.

<sup>135</sup> Ritual during prayer services.

<sup>136</sup> *Paḥad Yiẓḥak*, Vol 7, p. 77v-78v, s.v. "*nefilat 'apaim*" (Lyck, 1864).

<sup>137</sup> Vol 8, p. 58v, s.v. "*sfinah she-higi'ah le-naḥal*" (Lyck, 1866).

<sup>138</sup> Vol 8, p. 58v, s.v. "*sfinah she-higi'ah le-naḥal*" (Lyck, 1866).

Lampronti thus determined that one must be able to disembark from a boat in such a situation, according to the law, or the great scholars of Mantua would not have done so or permitted other Jews to do so.

At times, Lampronti invoked observed custom to support another rabbinical opinion. For instance, in the entry titled “*safsalim*” (benches), Lampronti discussed a responsum written by Nethaniel Segre (d. 1691) about whether one can sit on benches with compartments underneath them in which *tefilin* (phylacteries) had been placed.<sup>139</sup> Segre ruled that it is not permissible to sit on top of the *tefilin* even if they are placed in a compartment underneath the bench.

Lampronti quoted Segre’s responsum as well as a number of other rabbinical opinions on the subject and then added a personal observation of how Ferrara Jews accommodated Segre’s ruling: In Ferrara the benches were constructed with a small compartment on the top back side of the benches instead of underneath them thereby creating a place for congregants to store their *tefilin* and *sidurim/maḥzorim* (prayer books) without sitting on them.

Lampronti’s empirical approach is also closely related to his textual analysis, as he often compared texts and engaged in a type of source criticism. For example, in the entry titled “*birkat ḥatanim be-birkat ha-mazon*” (marriage blessings in the grace after meals), Lampronti discussed a textual discrepancy between a ruling in the *Tur* based on Tosafot and Lampronti’s own reading of the Tosafist text.<sup>140</sup> Here Lampronti wrote that he went to Padua and Venice in 1723/4 (5484) to look at a different printed editions of the Talmud to see if perhaps there was a

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<sup>139</sup> Vol 8, p, 62r-63v, s.v. “*safsalim*” (Lyck, 1866).

<sup>140</sup> Vol 1b, p. 60v-61r, s.v. “*birkat ḥatanim be-birkat ha-mazon*” (Venice, 1750).

textual error in his version.<sup>141</sup> This example shows Lampronti questioned textual accuracy and compared different editions to confirm his judgments and interpretations.<sup>142</sup>

Lampronti's empirical observations are thus woven in different ways into many of his personal halakhic judgments and commentaries. He often confirmed established halakhah on the basis of what he saw and observed. Sometimes his observations were rooted in practice, *minhag*, while other times his observations were of medical or scientific procedures, as discussed more fully in Chapters 4 and 5.

### **Genre and Scholarly Collaboration**

Another method employed by Lampronti that was not regularly used by his contemporaries was his presentation of rabbinic material in genres and with tools that were used in non-Jewish scholarly communities in his time, and which were intended to foster intellectual collaboration among scholars. Chapter 6 of this study addresses in detail the genres of the periodical and encyclopedia, exploring especially the epistemological values underlying them. Accordingly, this section will only provide a broad overview of the rabbinic network Lampronti included in his work and note the tools he used to transition halakhah to the new intellectual frameworks of his period.

Unlike medieval *responsa*, which were typically formulated around a single questioner and respondent, Lampronti would include the opinions of multiple rabbis on a given issue. Close examination of both the manuscript and print editions of the *Paḥad Yiẓḥak* yielded identification of more than 100 Italian rabbinic contemporaries whose letters Lampronti included in the text,

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<sup>141</sup> Lampronti also wrote he found in Padua in the study house of Netanal Ha-Levi a manuscript responsum of Israel Finzi on the subject. This again shows that Lampronti examined different texts in different locations.

<sup>142</sup> Similarly, in Vol. 9, p. 161r, s.v. “*asarah kavim*” (Lyck, 1868). Lampronti wrote that he looked at an edition of the *‘Ein Yisra’el* printed in Venice in 1628 and another printed in Verona.

and were accordingly part of his epistolary network. Lampronti copied as little as one letter written by some of these individuals and as many as 20 or more by others. The presentation of these opinions in a collective format in both his periodical and encyclopedia was unusual for rabbinic literature and reflects the same values historians have argued the periodical and encyclopedia sought to accomplish.<sup>143</sup>

Furthermore, Lampronti not only adopted the alphabetical structure of contemporary encyclopedic works, he also appropriated other hallmarks of the genre, including subject charts and cross-references. Like his contemporary non-Jewish encyclopedic counterparts, Lampronti sought to initiate a new form that would also work in tandem with existing systematic structures. Subject charts and cross-references were two key ways to maintain elements of order employed by previous works. Subject charts typically explained the relationship between subjects according to the organizational structure of earlier authoritative works. Lampronti drew and included such charts in the *Paḥad Yiẓḥak*. Cross-references illustrated specific connections to other subjects, on a case by case basis. Systematic or topical order naturally showed the relationships between subjects and one familiar with the body of literature would know where to look for specific topics. Once topical order was replaced with alphabetical order, tools such as cross-references were necessary to continue to draw those connections. Lampronti's work makes use of a vast system of cross-references, which along with the diagrams are explained at length in Chapter 6.

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<sup>143</sup> Again, this concept will be explained in more detail in Chapter 6.

Each of these three novel elements of Lampronti's work has parallels in and a significant relationship to the practices of contemporary scientific communities. Thus, before analyzing the innovations in greater depth, we must first understand and place Lampronti as closely as possible in his immediate intellectual circumstance at the University of Padua.

### CHAPTER 3: Padua: The City of Science

The University of Padua, one of the oldest universities in Europe and at its most influential probably the most important institution of higher learning on the continent, was also the first university to allow Jews to matriculate in significant numbers. Its scientific and medical programs attracted the finest minds from across Europe and it was home to some of the most important scientific discoveries of the early modern period.<sup>1</sup> It is neither happenstance nor coincidence that Isaac Lampronti found his way to Padua.

This chapter examines the influence the university had on Lampronti and his fellow Jewish students in the late seventeenth and early eighteenth centuries. In order to best understand their experience, the chapter begins with both a brief history of the university and the training of Jewish doctors. The chapter then delves into new archival resources in order to show the place of Jews in the university during Lampronti's time and the networks they formed there. The second part of the chapter analyzes the intellectual and educational culture and philosophy of the university in the period, as they are articulated in the official curricula and the unofficial notes of professors. The chapter concludes with specific focus on Lampronti and his relationship with leading university figures. This examination is fundamental for understanding the formative years of Lampronti's intellectual development, especially his exposure to scientific communities at a time when they were faced with striking a balance between old and new bodies

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<sup>1</sup> The university took great pride in its intellectual legacy. As early as the seventeenth century books were published and courses taught on the history of the university itself. The first book about the university was written by Tomasini and published in 1645: Jacobi Philippi Tomasini, *Gymnasium patavinum* (Udina, 1645). More than 80 years later, in 1726, Nicolo Comneno Papadopoli's history of the university was issued: *Historia Gymnasii Patavini* (Venice, 1726). And in 1739 the university itself established an official professorship to teach its own history.

of knowledge and methods of study. Indeed as we will see more fully, the influence of his university experience shaped his life's work.

To best understand the importance of the University of Padua for Jews in the early modern period broadly and Lampronti in particular, we will begin with a brief overview of its history.

### **History of the University and its Jews**

The traditional origins story of the University of Padua tells of a group of students and professors from the University of Bologna — the first university in Italy and one of the first in all of Europe — who made their way north to establish a new institution in the prosperous city-state of Padua.<sup>2</sup> The oldest surviving records concerning the university date to 1222, but the codification of the university statutes in 1260 and papal approval in 1264<sup>3</sup> established the university as a self-governing corporation, protected and supported by the government of Padua and the Carrara ruling family.<sup>4</sup> By the end of the fourteenth century, the university had developed into a wide-ranging teaching institution that covered the fields of law, philosophy, medicine, and theology.

Early in the fifteenth century the university's political and economic powers, and thus its influence, were substantially enhanced when, in 1405, the Republic of Venice conquered Padua

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<sup>2</sup> As previously mentioned, there are a number of older works on the history of the university, but the most recent and useful are: Piero Del Negro, ed., *L'Università di Padova: Otto Secoli di Storia*, (Padua: Signum Padova Editrice, 2002); Paul Grendler, *The Universities of the Italian Renaissance* (Baltimore: John Hopkins University Press, 2002).

<sup>3</sup> Italian universities had papal or imperial charters that authorized them to confer doctoral degrees. In 1264, Pope Urban IV granted the colleges of Padua this right.

<sup>4</sup> The Carrara family was a wealthy and significant landholding family whose political influence and patronage made them the de facto rulers of the region. For more on the Carrara family and the political circumstances of Padua, see: Benjamin Kohl, *Padua Under the Carrara: 1318-1405* (Baltimore: John Hopkins University Press, 1998).

and incorporated the city into the Venetian state. The Venetian Senate declared its full support of the university and promised to pay its expenses. In addition to financial assistance, the senate promulgated decrees that allowed for increased matriculation, especially for residents of Venice, and supported the establishment of an illustrious faculty that would attract students throughout Europe. By the sixteenth century, the university boasted a distinguished group of Italian and non-Italian students.<sup>5</sup>

Throughout the late medieval and early modern periods, Italian universities were centers of medical scholarship.<sup>6</sup> Padua, in particular, was considered to be a leading medical institution that attracted some of the most promising European scholars; and for Jews, Padua's College of Arts and Sciences was one of the few formal entry points to a university education permitted to them. Historians have long recognized the importance of Padua for Jews in the early modern period. As early as 1876, scholars considered the role of the university in the intellectual development of specific graduates, noting especially its large number of Jewish students.<sup>7</sup> Most

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<sup>5</sup> For this summary, I relied primarily on the works of Piero del Negro and Grendler.

<sup>6</sup> Paul Grendler, *The Universities of the Italian Renaissance* (Baltimore: John Hopkins University Press, 2002), 4-5; 172-3. For more on universities in Europe in the early modern period, see: Walter Rugg, ed., *A History of the University in Europe: Volume II Universities in Early Modern Europe (1500-1800)* (Cambridge: Cambridge University Press, 1996). In contrast to northern European universities whose curricula focused primarily on theological study, Italian universities offered only doctorates (very few to no bachelor's degrees were awarded) in law and medicine. At Italian universities, arts subjects were seen as preparation for the study of law and medicine and not deserving of a degree in their own right, and theology was taught very little. And at Padua, most professors were not members of the clergy. Grendler, 174.

<sup>7</sup> M. Soave, "Medici ebrei laureati nell'Università di Padova nel 1600 e 1700," *Il Vessillo israelitico* 24 (1876): 189-92; Antonio Ciscato, *Gli Ebrei in Padova (1300-1800)* (Padua, 1901); Harry Friedenwald, *The Jews and Medicine*, 2 vols. (Baltimore, 1944), 1:221-40, 253-58; Guido Kisch, "Cervo Conegliano: A Jewish Graduate of Padua in 1743," *Journal of the History of Medicine* 4 (1949): 450-59; Jacob Shatzky, "On Jewish Medical Students of Padua," *Journal of the History of Medicine* 5 (1950): 444-47; Vittore Colorni, "Sull'ammissibilità degli ebrei alla laurea anteriormente al secolo IX," in *Scritti in onore di Riccardo Bachi, Rassegna mensile di Israel* 16 (1950): 202-16; Abdelkader Modena and Edgardo Morpurgo, *Medici e Chirurghi Ebrei Dottorati e Licenziati nell'Università di Padova dal 1617 al 1816* (Bologna, 1967); Meir Benayahu, "R. Abraham ha-Cohen of Zante and the Group of Doctor-Poets in Padua" (in Hebrew), *Ha-Sifrut* 26 (1978): 108-40; Emilia Veronese Ceseracciu, "Ebrei laureati a Padova nel Cinquecento," *Quaderni per la storia dell'Università di Padova* 13 (1980): 151-68; Daniel Carpi, "Jews Holding the Degree of Doctor of Medicine from the University of Padua in the Sixteenth and Beginning of the Seventeenth Centuries" (in Hebrew), in *Scritti in memoir di Nathan Cassuto* (Jerusalem, 1986), 62-91.

recently, David Ruderman synthesized the previous scholarship and highlighted the importance of the university for the formation of a Jewish medical community in Italy.<sup>8</sup>

The analysis below of both new archival records pertaining to Jewish students at the university and new primary and secondary sources on the nature of medical education at Padua in the late seventeenth and early eighteenth centuries uncovered in the archives at the University of Padua reveals fresh insights into Lampronti's experience there.<sup>9</sup> Before turning to the historical records, a short discussion of the history of Jewish medical training and the circumstances that allowed Jews to be admitted to the university is necessary.

Prior to the early modern period, Jews became doctors by studying the relevant medical literature and by apprenticing with physicians. Both Jews and non-Jews acquired medical knowledge in this way until the eleventh century when medical education began to be centralized in universities, which were then clerical institutions to which Jews were forbidden entrance. Instead, Jews became doctors primarily through private instruction by a family member or tutor and the successful completion of licensing exams.<sup>10</sup>

In late medieval and early modern Italy, Jewish exposure to university studies increased with the establishment of Counts Palatine,<sup>11</sup> who were individuals granted the right by the state

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<sup>8</sup> David Ruderman, "Padua and the Formation of a Jewish Medical Community in Italy," in *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995), 100-117.

<sup>9</sup> I combed the archives for all the matriculation and graduation records concerning Jewish students in the late seventeenth and early eighteenth centuries. This chapter cites only the documents found most relevant to the discussion.

<sup>10</sup> Despite their exclusion from universities, Jews continued to study and practice medicine and were often sought out for their medical expertise.

<sup>11</sup> Of course, university training was still only one of many means of learning the practice of medicine in late medieval and early modern Europe. The medical marketplace in early modern Italy was diverse and included a range of physicians and healers. University training was the most expensive and elite means of becoming a physician.

to confer university degrees outside the official channels of the established colleges.<sup>12</sup> The private auspices of the Counts Palatine were not restricted by the religious or financial obligations of the colleges, and thus provided a path by which students could obtain university degrees who were otherwise unwilling to swear the Catholic oath, such as Protestants and Jews, or unable to pay standard university fees.<sup>13</sup> Jewish students could thus matriculate and take courses in Italian universities while circumventing the formal degree requirements of the colleges.

By the seventeenth century, increasing numbers of non-Catholics came to Padua to study at a university famous among contemporaries for fostering some of the most important and pioneering scientific developments of the period. Padua attracted students from across the Mediterranean and Europe, including Greece and some of its islands such as Corfu, and Zante (Zakynthos), where the Venetian Republic had built a significant trading empire, as well as regions of non-Venetian dominion such as the German lands.<sup>14</sup> In order to profit from the growing non-Catholic population seeking university admission while accommodating their religions, the Venetian Senate stripped the Counts Palatine of the privilege of conferring degrees

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<sup>12</sup> In rare cases the right was even conferred upon Jews, such as Judah Messer Leon, who was granted the title of Count Palatine by Emperor Frederick III in 1469. Grendler, 182-3.

<sup>13</sup> Grendler, *The Universities of the Italian Renaissance*, 191. According to Richard Palmer, the Counts Palatine degrees were not afforded the same recognition as official university degrees and Counts Palatine graduates sometimes were not admitted to local Colleges of Physicians in Italy: Richard Palmer, *The Studio of Venice and its Graduates in the Sixteenth Century* (Padua: LINT, 1983), 20. Nonetheless, prior to the establishment of Padua's *Collegio*, Counts Palatine were the only means for Jews to obtain a university degree, albeit an unofficial one.

<sup>14</sup> The best documented foreign community to attend Padua is the Germans, who were the most numerous and influential foreign group at Padua. The non-Italians at Padua organized themselves into self-governing corporations within the larger university structure. Their internal records and statutes have all been published in various volumes: Antonio Favaro ed., *Atti della nazione germanica artista nello Studio di Padova (1552-1615)* (Venice 1911-1912); Biagio Brugi ed., *Atti della nazione germanica dei legisti nello Studio di Padova (1545-1609)* (Venice 1912); Lucia Rossetti ed., *Acta nationis Germanicae artistarum (1616-1636)* (Padua, 1967); Lucia Rossetti and Antonio Gamba, *Acta nationis Germanicae aristarum (1637-1662)* (Padua, 1995); Lucia Rossetti and Antonio Gamba eds., *Acta nationis Germanicae artistarum (1663-1694)* (Padua, 1999); Giuseppe Mantovanti ed., *Acta nationis Germanicae iuristarum (1650-1709)* (Padua 1983); Lucia Rossetti ed., *Matricula nationis Germanicae artistarum in Gymnasio patavino (1553-1721)* (Padua 1986).

and established in their place a separate college for non-Catholic students, called the *Collegio Veneto Artista* or College of Artists. The *Collegio* functioned in the same way as the Sacred College (*Sacro Collegio dei Filosofi e Medici*), with the exception of the requirement of swearing the Catholic oath. The establishment of the *Collegio* and the Venetian Republic's tolerant policies towards non-Catholics thus formally opened the university to significant Jewish enrollment and provided favorable circumstances for the establishment of a Jewish medical community in Padua.<sup>15</sup>

From 1617, when the *Collegio* opened, to 1816, when it closed, the university's records show that more than 300 Jewish students were awarded medical degrees.<sup>16</sup> The university's archives contain two types of documents pertaining to Jewish students, the degree certificates and matriculation records. Examination of these documents shows not only Lampronti's specific place at the university but also allows for a more substantial understanding of the place of other Jewish students in the university and the intellectual and social networks they formed there.<sup>17</sup>

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<sup>15</sup> It is important to note here that the opening of Padua to a significant number of Jewish students was not a result of policies specifically favorable towards Jews, but rather the accommodation of the university to all non-Catholics, especially Protestants. Protestant students were tolerated and allowed to live in Padua, if they did not proselytize. The relative tolerance of the university towards Jewish students in specific is attested in the wording of the medical degrees. For the Jewish students the degrees say, "*In Dei eterni nomini*"; for the Protestant and Catholic students, "*In Christi nomini*."

<sup>16</sup> For a history of the archives and explanation of their holdings, see: Giuseppe Giomo, *L'Archivio Antico Della Università di Padova* (Venice, 1893). The university archives are very well maintained and I extensively examined the records of the *Collegio* in search of Jewish students. Both the graduation and matriculation records for all Jews who officially enrolled in the university and paid university fees were located.

<sup>17</sup> Jewish students are specifically identified as *hebreo/hebraeum* in all the university records.

The matriculation records, in particular, provide new insight into the length of time Jewish students spent at the university.<sup>18</sup> A careful analysis shows that many Jews did not attend the university only to obtain a license to practice medicine.<sup>19</sup> They immersed themselves in the university culture for long periods of time, officially matriculating sometimes for years after they had received their degree.<sup>20</sup> Rabbinic scholars such as Sabbatai Marini, for example, enrolled for six years and Samson Morpurgo for eight.<sup>21</sup> Of the 40 students who graduated between 1690 and 1703, 13 were enrolled in the university for four or more years. (Table 1 in the appendix details this distribution.) Although Lampronti matriculated for a total of only three years, he last enrolled after he received his degree.<sup>22</sup>

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<sup>18</sup> ASUPd UN.AR 230, 231 and 232, *Matricolazione degli Studenti Artisti dall'anno 1680-1712*. The matriculation records alphabetically indexed the names of all enrolled students first by first name and then last name, listed where they lived, the years they were enrolled, and the identification numbers assigned to them. Lampronti's matriculation record for example is found under the letter I in ASUPd UN.AR 230, p. 241, and reads as follows:

1694 - 28 - Ottobre

M. Isac Raffael Lampronti hebreo Ferrarese

Suo primo anno di studio in Pad. nel Ghetto, 217

1695 - 25 - Ottobre - Mat. No. 203-

1697 - 25 - Ottobre - Mat. No. 163-

<sup>19</sup> Before being permitted to sit for exams that were prerequisites to a degree, university statutes required all students to be officially enrolled for at least four years. Many students, however, matriculated for one or two years only, and sometimes paid tutors to teach them the material covered in the exams instead of completing the required course work. Some of these students left the university with a degree despite their circumvention of official university policy. I could not locate other formal legal requirements that would have made longer matriculation -- beyond the degree conferral -- beneficial for Jewish students.

<sup>20</sup> For example: Simon Conian was enrolled for ten consecutive years between 1675 and 1684 (ASUPd UN.AR 230); Raffael Rabeni was enrolled for thirteen of the fourteen years from 1691 to 1704 (ASUPd UN.AR 231, p. 372); Simon Lustrò was enrolled for 14 years over the period 1684 to 1701 (ASUPd UN.AR 231, p. 387); and Samuel Lionzin was enrolled for 13 years between 1686 and 1704 (ASUPd UN.AR 231, p. 387). See Appendix A, Table 1 for a detailed chart of the matriculation years of Jewish students.

<sup>21</sup> ASUPd UN.AR 232 *Matricolazione degli Studenti Artisti dall'anno 1695-1712* III; Samson Morpurgo, p. 51; Sabbatai Marini, p. 68.

<sup>22</sup> Lampronti matriculated for three years: 1694, 1695, and 1697 (see fn. 18). He was not enrolled in the year he received his degree, 1696, but he reenrolled the next year, so it is likely he was engaged in the university environment even in 1696 when he does not appear on the official rolls. ASUPd UN.AR 231, p.241.

The tenure of many Jewish students beyond the requirements for the degree shows that they did not view the university as merely a trade school or simply a practical means of obtaining a useful degree. It offered an unusual, for the time, academic environment and community -- a tolerant place to study medical subjects with some of the most renowned scholars in Europe and the support network of similarly educated Jews. It was, for a period of time, the only university where Jewish students in meaningful numbers studied, and therefore, an international center where these individuals could meet and establish relationships with other practitioners and scholars of medicine.<sup>23</sup> The connections established at the university proved significant for many individuals who developed lasting relationships and correspondences with other Paduan Jews and non-Jews, fellow students, and teachers.<sup>24</sup>

Although the Jewish population consisted of individuals of diverse geographic origins, most already lived in the Venice/Padua region prior to attending the university. Especially in the last decades of the seventeenth and first decades of the eighteenth centuries, which were also the years that saw the greatest number of Jewish students, the majority of them came from Italy: specifically, the northeastern region of Venice.<sup>25</sup> During these years, the average annual number of university Jewish graduates receiving medical degrees more than doubled. During the *Collegio's* first 60 years (1617 to 1677), the number of Jewish students graduating averaged

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<sup>23</sup> Jews were admitted to and awarded degrees from other Italian universities in the early modern period, such as the University of Ferrara, University of Pavia, and the University of Bologna, but the Jewish population at these universities never reached close to the level at Padua.

<sup>24</sup> Some of these specific connections are discussed below.

<sup>25</sup> ASUPd, CO.V. 274-288. Appendix A, Table 3, based on an analysis of the records of Jewish students who graduated from Padua over the period 1617 to 1717, details their geographical distribution. The catastrophic series of bubonic plague in northern Italy in the years 1629 to 1631 were likely responsible for the lower numbers of students in these years. In fact, no Jewish students graduated between 1629 and 1633.

approximately 1.2 per year, while over the next 40 year period the annual average rose to 2.7 students per year.

There were more Jewish graduates largely because more Italian Jews matriculated at Padua than in previous years.<sup>26</sup> The number of Jewish students from central and eastern Europe remained steady throughout the seventeenth century because non-Italian Jews could choose from among other institutions. For example, at the end of the seventeenth century, the University of Leiden, a closer and more affordable choice for Jews living in northern or eastern Europe, began to implement more favorable policies and circumstances for Jewish students. Northern Europe thus witnessed its own flourishing of Jewish medical education and practice in this period, but the University of Padua continued to have the most numerous cohort of Jewish students.<sup>27</sup>

The Jewish contingent at Padua, however, constituted only a small portion of the total university population. From 1689 to 1703, less than 16 percent of the 260 individuals who received medical degrees from the *Collegio*<sup>28</sup> were Jews (a total of 41, of which 24 were from Italy; 6 from Greece; and 11 from Poland/Germany/Prague).<sup>29</sup> By contrast, while nearly 60

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<sup>26</sup> For more on foreign Jewish students connected to Padua, see: Simon Dubnov, "Jewish Students at the University of Padua in the Seventeenth and Eighteenth Centuries" (in Hebrew), *Sefer ha-shana le-yehudei amerika*, eds. Menachem Ribolow and Zevi Scharfstein (New York, 1931), 216-291; Nathan Michael Gelber, "On the History of Jewish Doctors in Poland in the Eighteenth Century" (in Hebrew), *Shai le-Yishayahu* (Tel Aviv, 1956), 347-71; Guido Kisch, *Die Prager Universitat und die Juden, 1348-1848* (Mahrisc-Ostrau, 1935); J. Leibowitz, "On the History of Jewish Doctors in Salonika: (in Hebrew), *Sefer yavan* 1 (Sefunot 11) (1971-77): 341-51.

<sup>27</sup> Jewish students did not matriculate in Catholic Universities in the German lands in the early modern period, but by the late seventeenth century they matriculated in a number of different Protestant institutions, especially the University of Leiden. For more on this, see: Monika Richarz, *Der Eintritt der Juden in die akademischen Berufe. Jüdische Studenten und Akademiker in Deutschland 1678-1848* (Tübingen: Mohr, 1974); Joseph Kaplan, "Jewish Students from Amsterdam at the University of Leiden in the Seventeenth Century" (in Hebrew), in *Mehkarim al Toledot Yahadut Holland* (Jerusalem, 1979), 65-75; Hindle S. Hes, *Jewish Physicians in the Netherlands (1600-1940)* (Assen, 1980).

<sup>28</sup> These numbers are drawn from: ASUPd CO.V. 285.

<sup>29</sup> Following is a more detailed geographical distribution of the Jewish graduates: Italy: 10 Padua; 4 Venice; 3 Mantua; 2 Ferrara; 1 Gorizia; 1 Rovigo; 1 Urbino; 1 Ancona; 1 Gradisca. Greece: 5 Corfu; 1 Zante (Zakinthos). Central/Eastern Europe: 4 Poland; 2 Frankfurt; 1 Prague; 1 Bingen; 1 Mainz; 1 Mannheim; 1 Worms.

percent of the Jewish graduates came from Italy, a majority of the non-Jewish students came from German lands,<sup>30</sup> who, like non-Italian Jews, could elect to attend other universities that were geographically closer and more affordable.

Although the number of Jewish students was small, it contained an illustrious group, including Isaac Cantarini, Tobias Coen, Sabbato Marini, David Nieto, and Samson Morpurgo, many of whom figure in Lampronti's later work.<sup>31</sup> Isaac Cantarini headed the talmudic Academy in Padua and authored several books, poems, and consultations on rabbinic, kabbalistic, and medical subjects.<sup>32</sup> Tobias Coen wrote the popular Hebrew encyclopedia of medicine, *Ma'aseh Tuvia*.<sup>33</sup> Sabbato Marini published a Hebrew translation of Ovid's *Metamorphoses*.<sup>34</sup> David Nieto used scientific concepts to defend rabbinic Judaism to his congregation of cosmopolitan

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<sup>30</sup> For more on German students at the university, see previous footnote. Resources on other communities include: Pearl Kibre, *The Nations in the Medieval Universities* (Cambridge, Ma.: Medieval Academy of America, 1948); Henryk Barycz, "Metryka nacji polskiej w Uniwersytecie Padewskim (1592-1745)", in *Archiwum nacji polskiej w Uniwersytecie Padewskim, I*, (Krakow, 1971); Lucia Rossetti, "Dottorati polacchi dal 1600 al 1744 nel Sacro Collegio dei filosofi e medici di Padova (dall'Archivio antico dell'Università)," in *Relazioni tra Padova e la Polonia. Studi in onore dell'Università di Cracovia nel VI centenario della sua fondazione* (Padova, :Antenore, 1964) (*Centro per la storia dell'Università di Padova, Contributi*, 1), p.131-174; Horatio Brown, "Inglese e Scozzesi all'Università di Padova dall'anno 1618 sino al 1765," in *Monografie storiche sullo Studio di Padova. Contributo del r. Istituto Veneto di scienze, lettere ed arti alla celebrazione del VII centenario dell'Università* (Venice, 1922), 137-213.

<sup>31</sup> Tobias Coen, ASUPd CO.V. 284, c.36 - June 25, 1683; Sabbato Marini, ASUPd CO.V. 284, c. 77r - October 10, 1685; David Nieto, ASUPd CO.V. 284, c.119-20 r., October 14, 1687; Samson Morpurgo, ASUPd CO.V. 285, c.161, August 24, 1700. Modena and Morpurgo list Isaac Cantarini's graduation record under ASUPd CO.V. 280, but I extensively checked that volume as well as others and could not find a record of Cantarini's graduation. I did, however, find a record of Cantarini's matriculation: ASUPd *Matriculat Artisti* 698, 179.

<sup>32</sup> See: Harry Savitz, "Dr. Isaac Hayyim ha-Cohen Cantarini," *The Jewish Forum* 43 (1960): 80-82; Marco Osimo, *Narrazione della strage compiuta nel 1547 contro gli ebrei d'Asolo e cenni biografici della famiglia Koen-Cantarini* (Casale Monferrato, 1875), 67-93.

<sup>33</sup> See: David Ruderman, "On the Diffusion of Scientific Knowledge within the Jewish Community: The Medical Textbook of Tobias Cohen" in *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995), 229-255.

<sup>34</sup> See: Meir Benayahu, "R. Abraham ha-Cohen of Zante and the Group of Doctor-Poets in Padua" (Hebrew), *Ha-Sifrut* 26 (1978):108-140.

Jewish merchants in London.<sup>35</sup> Samson Morpurgo, like Lampronti, authored and compiled numerous rabbinic responsa.<sup>36</sup>

These Jewish graduates who connected at Padua continued to correspond with one another through a large written network, or Republic of Letters. The epistolary exchanges among many of them are found in the rabbinic responsa Lampronti incorporated into the *Paḥad Yiẓḥak*. The Paduan physicians in Lampronti's rabbinic network also include Jacob Israel Benporat, Immanuel Calvo, Vidal Moise Cantarini, Yaacov Polacco, and Raffael Treves.<sup>37</sup>

An examination of the records of the other Jewish students who were enrolled at the same time as Lampronti (1694 to 1697, see footnote 18 above) reveals documentation of at least 23 other rabbis/physicians (see Appendix A, Table 3<sup>38</sup>) who formed a distinct cohort from which Lampronti could draw upon. Although many of these individuals escape other historical mention, at least a few were closely connected to both contemporary rabbinic and Italian intellectual circles. For example, Raffael Rabbeni had contact with one of the most renowned professors of the university, Antonio Vallisneri (1661-1730).<sup>39</sup> After Rabbeni's untimely death in 1716, Vallisneri received a letter written to Rabbeni by the Protestant Hebraist Christian Gottlieb

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<sup>35</sup> See: David Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995), 310-331.

<sup>36</sup> See: Ruderman, *Jewish Thought*, 213-228.

<sup>37</sup> Lampronti included their responsa in the *Paḥad Yiẓḥak*. The graduation records in Padua's university archives show: Jacob Israel Benporat, ASUPd CO.V. 285, c. 173, June 17, 1701; Emmanuele Calvo, ASUPd CO.V. 290, 31, October 23, 1704; Vidal Moise Cantarini, ASUPd CO.V. 284, c.79r., February 2, 1686; Jacob Polacco, ASUPd CO.V. 288, c.148, March 15, 1710; Raffael Treves, ASUPd CO.V. 288, c. 114 r., November 12, 1708.

<sup>38</sup> This analysis was drawn from the matriculation records in the *archivio studio* of Padua: ASUPd CO.V. 231 *Matricolazione degli Studenti Artisti dall'anno 1680 al 1694* II; ASUPd UN.AR 232 *Matricolazione degli Studenti Artisti dall'anno 1695-1712* III.

<sup>39</sup> Rabbeni matriculated at the university for 13 years in total, including 7 years beyond his degree conferral: ASUPd UN.AR 231, p. 372.

(Theophil) Unger on Rabbeni's behalf.<sup>40</sup> Vallisneri shared the letter with Isaac Cantarini, with whom he was working at the time on a joint medical consultation. Cantarini subsequently continued the correspondence with Unger.<sup>41</sup> Also, Rabbeni was one of the few members of the rabbinic Republic of Letters whose work was publicized in broader Italian intellectual circles. Rabbeni wrote a polemical work against Biagio Garofalo, a Catholic abbe and Greek and Hebrew scholar, who moved in the same Neapolitan intellectual circles as the renowned author of the *New Science*, Giambattista Vico (1668-1744).<sup>42</sup> Rabbeni and Garofalo's exchange was reviewed in the foremost Italian literary journal of their time, *Giornale de' Letterati d'Italia*.<sup>43</sup>

Another significant individual who matriculated during the same years as Lampronti was Angelo Cantarini, the nephew of Isaac Cantarini, who authored a pamphlet on practical anatomy dedicated to Vallisneri. Angelo Cantarini also wrote talmudic glosses and rabbinic responsa.<sup>44</sup>

The network of rabbi/physicians was supported by the social circumstances Jews experienced in Padua. The matriculation records document that all of the Jewish students lived in Padua's Jewish ghetto, an area covering just a few streets of the medieval city.<sup>45</sup> Confined to such a small geographical area while also sharing ethnic and religious backgrounds and engaged in similar studies at the same institution, the university's Jews naturally knew one another and

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<sup>40</sup> For more on Rabbeni, see: Francesca Bregoli, "Biblical Poetry, Spinozist Hermeneutics, and Critical Scholarship," *Journal of Modern Jewish Studies*, 8:2 (2009): 173-198.

<sup>41</sup> These letters are printed in Ignaz Blumenfeld ed., *'Ozar Nehmad* (Wein, 1860), 128-149.

<sup>42</sup> Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenment: Newtonian Science, Religion, and Politics in the Early Eighteenth Century*, trans. Sue Brotherton (Atlantic Highlands, NJ: Humanity Books, 1995), 323.

<sup>43</sup> For more on this exchange and its implications see Bregoli, "Biblical Poetry." The significance of the *Giornale* is explored in greater depth in Chapter 6.

<sup>44</sup> Abdelkader Modena and Edgardo Morpurgo, *Medici e Chirurghi Ebrei Dottorati e Licenziati nell'Universita di Padova dal 1617 al 1816* (Bologna, 1967), 69-70.

<sup>45</sup> See: ASUPd UN.AR 231-2.

established friendships and other relationships.<sup>46</sup> Although lacking documentation to establish precisely the friendships and social circles that were formed, the matriculation records allow for a sketch of the broad contours of a distinct group.<sup>47</sup>

Equally important, the intellectual milieu of the university reached beyond the exceptional few whose names are known either because their written works are still available or who appear on Padua's enrollment records because they could afford the fees to officially matriculate.<sup>48</sup> Jews not enrolled at the university could nevertheless walk the few blocks from the ghetto to the *Palazzo Bo*, the central building of the university, where they might attend lectures and scientific demonstrations, access the well-equipped university library, and hire private tutors. Also, while lacking official student status they might nevertheless engage in conversations with students or faculty about their courses of study or instruction.<sup>49</sup>

Further, Jews, whether or not enrolled at Padua, also had access to Jewish communal educational and social services, such as Solomon Conegliano's school, that helped in preparing them for university studies.<sup>50</sup> After Conegliano graduated from Padua in 1660 and practiced

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<sup>46</sup> For a seventeenth-century description of the ghetto and its inhabitants see: Daniel Carpi, *Pinkas Va'ad Kehilah Kedosha Padova*, vol 2 (Jerusalem: Alpha Press, 1979) 436-7.

<sup>47</sup> More specific relationships between the Jewish students can be drawn from the graduation records. Lampronti, for example, completed his exam on the same days as Joseph Fua, a Paduan Jew: ASUPd CO.V. 285, 103b-104b. And just days before, on May 10, 1696, David Vita Loria and Raffael Rabeni both completed their exams: ASUPd CO.V. 102a-103a.

<sup>48</sup> Padua was among the most expensive degree-granting institutions in Italy. In 1571, for example, a Padua law student, Georgius Wagner of Augsburg, wrote that a degree from Padua cost 50 scudi (1 scudi = 1.29 ducats), while at Siena it cost 34 scudi, and at Ferrara 28 scudi. Richard Palmer, *The Studio of Venice and its Graduates in the Sixteenth Century* (Padua: LINT, 1983), 16. For more on the cost of degrees in the fifteenth and sixteenth centuries, see: Grendler, 178-180.

<sup>49</sup> For additional insight into the Jewish community of Padua during this time, based on archival research, see David Sclar, "'Like Iron to a Magnet': Moses Hayim Luzzatto's Quest for Providence" (PhD diss., the City University of New York, 2014), 100-60.

<sup>50</sup> For more on Conegliano and his preparatory school see: Ruderman, *Jewish Thought and Scientific Discovery*, 111-112; David Kaufmann, *Dr. Israel Conegliano und seine Verdienste um die Republik Venedig dis nach dem Frieden von Carolwitz* (Budapest, 1895).

medicine for many years (while earning great repute among his Venetian contemporaries), he established a boarding school in Padua for Jewish students where he taught medicine.<sup>51</sup> The school provided support for Jews who desired better access to the scientific culture of Padua and a means of a medical education for those unable to pay the university's fees. The proximity of the Jewish community to the university, the existence of a sizable group of Jewish students, and the support networks established within the Jewish community thus helped the transmission and dissemination of scientific knowledge reach beyond the privileged few named in this chapter.<sup>52</sup>

The reputation the university achieved among rabbis who did not formally matriculate is evidenced in a halakhic question David Corinaldi (1700-1771)<sup>53</sup> sent to Lampronti in 1741. Corinaldi wrote that before seeking Lampronti's opinion, he first requested the expertise of the "honored physicians of Padua, the city of science."<sup>54</sup> As Corinaldi was not himself a university-trained physician, he sought out the scientific knowledge of Paduan physicians to help him answer a difficult halakhic case. Corinaldi also wrote a commentary on the Mishnah that included his personal mathematical calculations.<sup>55</sup>

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<sup>51</sup> Tobias Cohen was one of Conegliano's most famous students and for whom he wrote a preface to Cohen's *Ma'aseh Tuvia*.

<sup>52</sup> The university and the cosmopolitan intellectual environment it fostered are considered to have helped to reestablish the Jewish community of Padua after the bubonic plague swept through northern Italy between 1629 and 1631. The epidemic reduced the Jewish population by more than half, from approximately 720 to 300, over the course of a year. But by the end of the seventeenth century, the community returned to its original numbers due to the attraction of the city and its university for Jews from all over Europe. See: Jonathan Israel, *European Jewry in the Age of Mercantilism* (New York: Oxford University Press, 1985), 115; Antonio Ciscato, *Gli Ebrei in Padova (1300-1800)* (Bologna: Forni Editore, 1967) 73-94; Daniel Carpi, *Pinkas Va'ad Kehilah Kadosha Padova*, vol 1 (Jerusalem: Alpha Press, 1979) 23-24.

<sup>53</sup> For bio-bibliographical information on David Corinaldi see: Asher Salah, *La République des Lettres: Rabbins, écrivains et médecins juifs en Italie au XVIIIe siècle* (Leiden: Brill, 2007), 214-216.

<sup>54</sup> Isaac Lampronti, *Paḥad Yizḥak*, Vol. 1, p. 5, s.v. "bedikat 'ishah" (Venice, 1753).

<sup>55</sup> David Corinaldi, *Sefer bet David* (Amsterdam, 1738-9). Lampronti also copied a manuscript of Corinaldi's, *Mikhtav le-David*, which similarly integrates mathematics and rabbinical commentary. The manuscript is currently held in Los Angeles, University of California 960 bx. 3.15.

The interaction between rabbis and men of science was made possible by the University of Padua's admission of significant numbers (on a relative basis to other universities) of Jews, the exposure to its educational and intellectual culture the university setting afforded a relatively large number of Jews, and how it helped to legitimize the integration of contemporary science and rabbinical study.<sup>56</sup>

Before examining the documents specifically pertaining to Lampronti, however, an examination of the educational program at the university during his time is necessary.

### **Padua Education**

In the late seventeenth and early eighteenth centuries, Padua offered an educational program that included both scholastic and empirical methods of medical study. The university's archival documents show the continuity of the Latin, book-focused tradition, while an overview of the research and teaching of many faculty members indicates that a Paduan education also included hands-on, experimental demonstrations. Both the older entrenched book-learning and the newer (for the university) empirical methods coexisted during this time.<sup>57</sup> To illuminate this range, the nature of the formal education as stated in the archival records is first examined, and then the empirical and experimental aspects of the university culture are discussed.

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<sup>56</sup> Another significant individual who matriculated at the university not yet mentioned is Moses Hayim Luzzatto. Modena and Morpurgo mentioned that he studied at the university but the archival records of his time had not previously been found by historians. I identified matriculation records for Luzzatto for 3 years: ASUPd, ms. 233, f. 168; ASUPd, ms. 233, f. 180; ASUPd, ms. 233, f. 187

<sup>57</sup> The evolution of the concept of empiricism and the importance of experiment will be explained at greater length in Chapter 5.

The university's archives contain rolls that name the professors and their courses of instruction for most academic years from 1531 to 1740.<sup>58</sup> According to these documents, the medical curriculum in the seventeenth century still focused primarily on ancient and medieval texts. The medical program addressed three major subject areas: theoretical medicine, practical medicine, and surgery/anatomy. For each area a few core texts were read on a rotating, three year cycle. The curriculum of theoretical medicine covered Avicenna's *Canon*, Hippocrates' *Aphorisms* with the commentary by Galen, Hippocrates' *Prognostics*, and Galen's *Art of Medicine*.<sup>59</sup> The curriculum of practical medicine included readings from Avicenna's *Canon* and Rhazes' *ad Almansorem* and their commentaries. The surgery lessons covered the *cirurgia Bruni*, Galen and Avicenna's surgical works, and book VII of Rhazes' *ad Almansorem*. Anatomical demonstrations were conducted during the winter months when bodies could be properly preserved for dissection.<sup>60</sup> Courses in botany and anatomy were added to the official curriculum in the sixteenth century, but only as supplements rather than substitutions for the

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<sup>58</sup> The first surviving Padua roll is in ASUPd, F. 648, ff. 35-36, dated November 10, 1422 and is printed in its entirety in Grendler, *Italian Universities*, 24. Photocopies of most other rolls and academic calendars from 1531 to 1740 can be found in ASUPd, Inventario 1320.

<sup>59</sup> These were the most important works of ancient and medieval medicine. Galen was a prominent second-century Roman physician and philosopher. He, along with Hippocrates, the fourth-century BCE Greek physician, are considered the founders of medicine. For a short overview of Galen's life and importance see: Fridolf Kudlien, "Galen," *Complete Dictionary of Scientific Biography*, Vol. 5 (Detroit: Charles Scribner's Sons, 2008), 227-233. For more recent work on Galen see: Susan Mattern, *The Prince of Medicine: Galen in the Roman Empire* (Oxford: Oxford University Press, 2013). Avicenna's *Canon* was essentially a compendium of Hippocrates and Galen with Arab additions. Gerard of Cremona (1114-87) translated it into Latin. For more on these specific texts, see: Nancy Sirasi, *Avicenna in Renaissance Italy: The Canon and Medical Teaching in Italian Universities after 1500* (Princeton: Princeton University Press, 1987).

<sup>60</sup> This summary of the medical curriculum was drawn from analysis of the professorial rolls in the late seventeenth century, specifically the last few decades, and the years 1693 to 1697, when Lampronti matriculated. ASUPd Inventario 1320, p.64-75.

traditional courses.<sup>61</sup> Even by the late seventeenth and early eighteenth centuries, university statutes still required instruction of Hippocrates, Galen, and Avicenna, and professors and students still found these texts useful. There was little agreement as to what other texts or methods should replace them.<sup>62</sup>

An accurate picture of the intellectual and educational milieu of Padua, however, cannot be deduced from an examination of the archival records alone. Indeed, the University of Padua is celebrated for supporting some of the most innovative scientific figures of the early modern period and institutionalizing some of the most important pedagogical changes in the study of medicine. It revolutionized anatomical study with the establishment of the first permanent anatomical theatre in Europe; in the sixteenth century it was also the first university to establish a professorship of medical botany, and the first to integrate clinical medicine into the curriculum.<sup>63</sup>

An overview of the major developments in anatomy, botany, clinical medicine, experimental medicine, and iatromechanics<sup>64</sup> that took place at the University of Padua throughout the early

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<sup>61</sup> To get a better sense of the distribution of courses, the typical arts and medicine roll in the seventeenth century included: 2 professorships in theology/scripture; 2 in metaphysics; 2 ordinary and 3 extraordinary professors of theoretical medicine; 2 ordinary and 3 extraordinary professors of practical medicine; 2 ordinary and 3 extraordinary professors of philosophy; 2 ordinary professors of anatomy; 1 lectureship in moral philosophy; 1 lectureship in astronomy and meteorology; 1 ordinary lectureship in surgery; 1 in medical botany; 1 in botany demonstration; 2 in the books of Avicenna; 3 in logic; 1 in mathematics; 1 in Greek and Latin literature.

<sup>62</sup> For general background on the larger context of early modern medicine see: Harold Cook, "Medicine" in *Cambridge History of Science: Early Moderns Science* eds. Katharine Park and Lorraine Daston, 407-434; Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999). For an introduction to eighteenth-century medical theory see: Lester King, *The Philosophy of Medicine in the Early Eighteenth Century* (Cambridge: Harvard University Press, 1978).

<sup>63</sup> For a summary of these developments see: Piero Del Negro, ed., *L'Università di Padova: Otto Secoli di Storia* (Padua: Signum Padova Editrice, 2002); Jerome Bylebyl, "The School of Padua: Humanistic Medicine in the sixteenth century" in *Health, Medicine, and Mortality in the Sixteenth century* (CUP Archive, 1979), 335-370; Charles Schmitt, "Science in the Italian Universities in the Sixteenth and Early Seventeenth Centuries" in *Emergence of Science in Western Europe*, eds. Maurice (London: Macmillan, 1975) 35-56; Paul Oskar Kristeller, "Philosophy and Medicine in Medieval and Renaissance Italy" in *Organism, Medicine, and Metaphysics: Essays in Honor of Han Jonas*, ed. Stuart Spicker (Dordrecht: D. Reidel Pub, 1978), 29-40.

<sup>64</sup> The attempt to explain the functions of the animal body on a mechanical basis.

modern period illustrates the complexity of the intellectual environment even in the eighteenth century. Seemingly contradictory methods coexisted and were embedded in the culture of the university that had long supported some of the most innovative scientific discoveries. To fully understand the educational culture of the university in Lampronti's time, therefore, it is important to understand the history of its major contributions to medicine and medical study.

### *Anatomy*

The University of Padua is perhaps most renowned in medical education for hiring and supporting innovative anatomical scholars and establishing the first permanent anatomical theatre in Europe.<sup>65</sup> The important changes in anatomical studies took place over the course of centuries and it is worth briefly exploring some of these developments and the university's most important anatomy professors, beginning with Andreas Vesalius.<sup>66</sup>

The information and conclusions found in Vesalius's *De humanis corporis fabrica*, published in 1543, marked a substantial change in the method by which individuals approached medical study. Although Vesalius had intended to confirm Galen's anatomical theories, which were based upon studies of non-human animals, Vesalius's work instead established that it was essential to distinguish between human and non-human anatomies because the differences were too vast to draw analogies from one to the other as Galen had mistakenly done. Based on

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<sup>65</sup> For this summary, I relied primarily on the work of Giuseppe Ongaro, "Medicina" in *La Università di Padova*, eds. Piero del Negro, 153-193. See also: Edgar Ashworth Underwood, "The Early Teaching of Anatomy at Padua, with Special Reference to a Model of the Padua Anatomical Theatre," *Annals of Science* 19 (1963): 1-26.

<sup>66</sup> For a short overview of Vesalius see: Charles Donald O'Malley, "Vesalius, Andreas," *Complete Dictionary of Scientific Biography*, Vol. 14 (Detroit: Charles Scribner's Sons, 2008), 3-12. For a longer discussion see a standard biography: Charles Donald O'Malley, *Andreas Vesalius of Brussels, 1514-1564* (Berkeley: University of California Press, 1964). See also: Nancy G. Siraisi, "Vesalius and Human Diversity in *De humani corporis fabrica*," *Journal of the Warburg and Courtauld Institutes*, 57 (1994): 60-88.

Vesalius's findings the medical community began to accept and give new regard for studying the human body through first hand observation by dissection and autopsy of human corpses.<sup>67</sup>

Realdo Colombo of Cremona (1516-1599), the author of an important fifteen-volume anatomical compendium, *De re anatomica*, succeeded Vesalius at Padua in a chair of surgery “with the requirement of autopsy.”<sup>68</sup> Colombo's most important discovery was his description of the flow of the blood from the right to the left heart through the pulmonary vessels, which made him the first to postulate the passage of the blood through the lungs. In 1551, Gabriele Fallopi of Modena (1523-1562) succeeded Colombo in a chair of surgery and anatomy. Fallopi was one of the most important sixteenth-century anatomists who is most famous for his descriptions of the female reproductive system and his studies of embryology. His student and successor in the chair of anatomy, Fabrici d'Acquapendente (1537-1619), helped to establish Padua's celebrated anatomical theatre. The works of these Paduan professors in the sixteenth century replaced Galenic texts as their studies and findings contained more medically precise knowledge of the human anatomy.

In the seventeenth century, experimental anatomical research at Padua was aimed at understanding the function of the organs, thereby revising Galen's physiology. Paduan anatomists, including Adriaan van den Spiegel of Brussels (1578-1625),<sup>69</sup> Johann Weslin of

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<sup>67</sup> The Jewish community of Padua paid the university 100 lire so that Jewish corpses would not be used for anatomical demonstrations: ASUPd C. 655 c. 13 r. For more on Jewish corpses being used for anatomical demonstration see: Antonio Ciscato, *Gli Ebrei in Padova (1300-1800)* (Bologna: Forni Editore, 1967), 209. Moses Vital Cantarini composed a treatise on the problem of using Jewish corpses for dissections. Modena-Morpurgo, *Medici*, 43.

<sup>68</sup> Giuseppe Ongaro, “*Medicina*” in *L'Università di Padova: Otto Secoli di Storia*, ed. Piero Del Negro (Padua: Signum Padova Editrice, 2002), 168.

<sup>69</sup> Adriaan van den Spieghel of Brussels (1578-1625), who discovered the now eponymous spigelian lobe of the liver, succeeded Casseri in the chair of surgery and Fabricius in the chair of anatomy.

Minden (1598-1649),<sup>70</sup> and Johann Georg Wirsung of Augsburg (1589-1643),<sup>71</sup> devoted their research and instruction to perfecting the descriptive results of human anatomical dissection and understanding the purpose and functions of internal organs.<sup>72</sup>

In the eighteenth century, Paduan anatomy research shifted to pathology, largely due to the work of Giambattista Morgagni (1682-1771),<sup>73</sup> who began teaching at Padua in 1712, and assumed the first rank professorship of anatomy in 1715 after the death of Michelangelo Molinetti. Morgagni's most famous work, *De Sedibus*, contained sixty cases of postmortem reports with commentary that established important links between anatomical findings and clinical symptoms.<sup>74</sup> Morgagni is widely considered the founder of pathological anatomy and his work contributed to epistemological transitions in medical study.<sup>75</sup>

### *Botany*

The University of Padua established the first permanent university chair in pharmacology in 1533.<sup>76</sup> The importance of this professorship rested not only in the subject matter but also in

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<sup>70</sup> Johann Wesling (1598-1649) assumed the Padua chair of anatomy in 1632. He had previously held the professorship of botany.

<sup>71</sup> Johann Georg Wirsung of Augsburg established himself in Padua in 1642 and is known primarily for his discovery of the pancreatic duct.

<sup>72</sup> The second half of the seventeenth century is generally considered to mark a decline in anatomical studies at the university. The anatomy professors in this period, Antonio Molinetti (d. 1675), Domenico Marchetti (1626-1688), and Michelangelo Molinetti (1651-1714), were not international sensations as were some of their predecessors. Nevertheless, these individuals still contributed to anatomical studies and modern medicine. Molinetti, for example, authored studies on the sense organs, and Marchetti successfully used intravascular injections in his anatomical research.

<sup>73</sup> Luigi Belloni, "*L'opera di Giambattista Morgagni dalla strutturazione meccanica dell'organismo vivente all'anatomia patologica*" *Morgagni*, 4 (1971): 71-80.

<sup>74</sup> John Baptist Morgagni, *The Seats and Causes of Diseases Investigated by Anatomy: In Five Books, Containing a Great Variety of Dissections with Remarks*, trans. Benjamin Alexander (3 vols; London, 1769).

<sup>75</sup> Ongaro, "*Medicina*."

<sup>76</sup> This professorship is listed in the professorial rolls as *ad lecturam simplicium*.

the method by which the course was taught: by cultivating the very plant substances under discussion. Francesco Bonafede of Padua (1474-1588) was the first person named to the chair. Although he continued to cover the traditional pharmacological texts of Dioscorides, Galen, and their commentaries in his course, Bonafede advocated for the establishment of a public garden where medicinal plants could be grown and studied by Padua's professors and students. The Venetian Senate approved the proposition and in 1546 the garden was opened to the public.<sup>77</sup>

The breadth of Bonafede's undertaking is suggested by the first printed catalogue of the garden (published in 1591) that listed 1200 plant species. The establishment of a central place under university auspices and approved by the state at which a broad range of plants could be studied under controlled conditions allowed medical scholars to make new findings, classify botanical knowledge in new ways, and publish new monographic works on their observations. By providing not only a permanent teaching position on the subject, but also the circumstances where new research and practical demonstrations could be conducted, the University of Padua contributed to the establishment of botany as a separate science rooted in the study of empirical data.<sup>78</sup>

### *Clinical Medicine*

The University of Padua was also the first European institution to integrate clinical medicine into university studies. The most significant and longest lasting change took place in

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<sup>77</sup> The approval of the Venetian Senate to establish the garden emphasizes how significant the proposal was to the curricula, and also suggests that the garden's construction and upkeep required financial support from the state. Within just a few years, scholars throughout Europe, including the Swiss naturalist Conrad Gessner (1516-1565), lauded the garden. For more on the importance of Padua's botanical garden see: M.A. Visentini, *L'Orto botanico di Padova e il giardino del Rinascimento* (Milan: Polifilo, 1984).

<sup>78</sup> This summary relies primarily on Ongaro, "Medicina" and Grendler, 350-1. For more on the significance of botanical gardens and descriptions see: Brian Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006).

the sixteenth century when Giovanni Battista Da Monte (1498-1551),<sup>79</sup> professor of practical medicine at Padua and also a physician at the hospital of St. Francis, brought medicine outside of the lecture hall and into the patients' wards, establishing the still common method of physician education, "rounds," whereby students are brought to patients' bedside for hands-on examinations and discussion of their symptoms and diagnoses. This method of instruction was formalized and state sanctioned in 1578 when the Venetian Senate declared that two professors would be present at a hospital at an appointed hour to discuss specific cases and diseases present in patients there.<sup>80</sup>

### *Experimental and Mechanical Philosophies*

A common link among the innovations in anatomy, botany, and clinical medicine is the application of experimental and observational methods of acquiring data.<sup>81</sup> This move away from book-learning can be identified in the significant work of a number of other Padua professors and graduates throughout the early modern period. The renowned Galileo, professor of mathematics at Padua from 1592 to 1610, applied the principle of measurement beyond the realm of astronomy to the study of the mechanism of the movements of animals, considering the influence that the size of an animal has on its organs, their functioning, and anatomical structure. According to Galileo, and other empirically inclined individuals, natural phenomena were best

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<sup>79</sup> Giuseppe Ongaro, "L'insegnamento clinico di Giovan Battista Da Monte (1489-1551): una revisione critica," *Physis*, n.s., 31, (1994): 357-369; Francesco Pellegrini, *La clinica medica padovana attraverso i secoli* (Verona 1939).

<sup>80</sup> Northern European universities lagged behind Padua and other Italian schools in this regard as clinical medicine was not instituted in northern European universities until 1636, when the University of Leiden established its clinical school. Grendler, 341-342.

<sup>81</sup> More on the evolution of these practices is discussed in Chapter 5.

understood by means of measuring them as precisely as possible.<sup>82</sup> Sanctorius Sanctorius (1561-1636), professor of ordinary theoretical medicine at Padua from 1611 to 1624, similarly applied the principles of measurement to biology. He created an instrument that was used to measure the frequency of the pulse (prior to this the study of the pulse measured only quality). Sanctorius also introduced other significant instruments of measurement to assess the effects of temperature on the human body, including, most famously, the thermometer.<sup>83</sup> William Harvey, one of Padua's most famous graduates, advanced experimental medicine by applying the principle of measurement to the functioning of the human body.<sup>84</sup> Harvey calculated that the quantity of blood driven by the heart into the aorta in a half an hour is greater than the total quantity of blood found in the organism, and thus concluded that the blood must be circulating throughout the body. He postulated the idea of capillaries but did not have a microscope to prove the observation. In 1661, Marcello Malpighi (1628-1694) confirmed the existence of capillaries through microscopic observation of frog lungs. Iatromechanics also had a place at Padua.<sup>85</sup> Domenico Guglielmini (1655-1710), for instance, wrote an important treatise, *Della Natura de'*

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<sup>82</sup> Ongaro, "Medicina"; Belloni, "Il primo ventennio della microscopia (Galilei 1610-Harvey 1628) alla anatomia microscopica dell-insetto," *Clio medica*, 4, 1969: 179-190.

<sup>83</sup> Though the use of new instruments, especially in the classrooms, was a hallmark of the new science of the seventeenth century, many practitioners of these new methods had not yet abandoned the old authority. Sanctorius, for example, described these instruments and his experiments in books written as commentaries on Galen's *Art of Medicine* (1612) and Avicenna's *Canon* (1625).

<sup>84</sup> William Harvey studied at Padua from 1599 to 1602 and earned his degree in April 1602. Harvey reexamined Galen's opinions on the movement of blood (flux and reflux) leading him to the discovery of the circulation of the blood. Like Sanctorius and others, Harvey was still indebted to and drew heavily from ancient texts, particularly the works of Aristotle. For more on the complexity of Harvey's approach see: Roger French, *William Harvey's Natural Philosophy* (Cambridge: Cambridge University Press, 1994).

<sup>85</sup> Giuseppe Ongaro, "La iatromatematica nello Studio di Padova e nel Veneto," in *Riccati e la cultura della Marca nel Settecento europeo, Atti del Convegno internazionale di studio (Castelfranco Veneto 5-6 Aprile 1990)*, eds., Gregorio Piaia - Maria Laura Soppelsa (Florence, 1992), 221-245.

*fiumi* (1697), in the field of hydraulics and mechanical medicine.<sup>86</sup> Michelangelo Fardella (1650-1718) embraced the philosophy of Descartes and introduced Cartesianism in his university lectures. And Francesco Spoletti (d. 1712), an acquaintance of Leibniz, published a work defending the mechanical interpretation of secretion.<sup>87</sup>

The work of these individuals and others suggest that the archival records of the university (its professorial rolls) alone are not reliable indicators of the educational context of Padua. The course records list only official ones; they do not show how critically professors taught the traditional texts and whether they supplemented textual discussions with experiments and demonstrations. Examination of the lesson plans of Giovanni Poleni and Antonio Vallisneri, two early eighteenth-century professors at Padua, for example, show that they taught the traditional ancient texts, but in a more critical vein.<sup>88</sup> They contradicted the texts when necessary, and supplemented their lectures with information acquired through anatomical, clinical, and botanical observations. They even brought scientific demonstrations into the classroom and integrated them into their lectures.<sup>89</sup> Classrooms thus served as forums for

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<sup>86</sup> In 1701 he published *De sanguinis nature et constitutione* which postulated that some of the principal laws governing the movement of water apply also to the movement of blood.

<sup>87</sup> Ongargo, “*Medicina*,” 181-183.

<sup>88</sup> This is based on the work of both Dooley and Siraisi: Brendan Dooley, *Science and the Marketplace in Early Modern Italy* (Lanham, Maryland: Lexington Books, 2001); Brendan Dooley, “Science Teaching as a Career at Padua in the Early Eighteenth Century: The Case of Giovanni Poleni” in *History of Universities*, eds. Charles Schmitt (Oxford: Oxford University Press, 1998), 115-151; Nancy Siraisi, *Avicenna in Renaissance Italy: The Canon and Medical Teaching in Italian Universities after 1500* (Princeton: Princeton University Press, 1987), 195-6; 201. It is beyond the scope of my research to examine the primary sources other than the professorial rolls of the university, and I am convinced by the results of Dooley and Siraisi’s work.

<sup>89</sup> Lectures accordingly involved less scholastic and dialectical discourse and more straightforward and factual information. Additionally, Paduan scholars often veered away from writing commentaries on traditional texts and started writing focused monographs instead. For more on this subject, see: Dooley, *Science and the Marketplace in Early Modern Italy*; Dooley, “Science Teaching as a Career at Padua in the Early Eighteenth Century: The Case of Giovanni Poleni”.

professors to show the application of new scientific methods and to advance their own research agendas.<sup>90</sup>

Analysis of both the university's archival records and the work of renowned men of science thus highlights the paradox of the university in the early modern period: The entrenched intellectual position of the university supported little change from the medieval scholastic model. Yet a distinct departure from the traditional course and an embrace of a new scientific epistemology were underway, albeit slowly. Even by the early eighteenth century, both old and new approaches coexisted in the university culture and the faculty and students remained committed to a range of methodologies.<sup>91</sup> A long process of change did, however, take place over centuries.<sup>92</sup> The ideal prototype of the philosopher/physician, master of theoretical medicine and dialectical discourse, eventually gave way to the more practically and experimentally inclined medical scholar.<sup>93</sup> By the early eighteenth century, the Padua professorship of anatomy was the most prestigious position at the university and paid the highest

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<sup>90</sup> For a similar perspective on a different university, see: Mordechai Feingold, *The Mathematicians' Apprenticeship: Science, Universities and Society in England, 1560-1640* (Cambridge, 1984).

<sup>91</sup> The university culture reflects a small part of the larger context of the diversity of early modern science. For an introduction to this subject see: Steven Shapin, *The Scientific Revolution*, (Chicago: University of Chicago Press, 1996); Katharine Park and Lorraine Daston eds., *The Cambridge History of Science - Volume 3 Early Modern Science* (Cambridge: Cambridge University Press, 2006); Roy Porter ed., *The Cambridge History of Science - Volume 4 Eighteenth-Century Science* (Cambridge: Cambridge University Press, 2003); Mary Lindemann, *Medicine and Society in Early Modern Europe* (Cambridge: Cambridge University Press, 1999).

<sup>92</sup> For broad perspective on this transition see: Roger French and Andrew Wear eds., *The Medical Revolution of the Seventeenth Century* (Cambridge: Cambridge University Press, 1989); Owsei Temkin, *Galenism: Rise and Decline of a Medical Philosophy*, (Ithaca: Cornell University Press, 1973).

<sup>93</sup> Grendler, Siraisi, and Dooley all make this point about Padua.

salary.<sup>94</sup> The official curriculum was slow to change due to the diverse commitments of the faculty and students and institutional inertia.<sup>95</sup> But significant revision did eventually come in the eighteenth century with the establishment of new chairs that reflected the latest scientific approaches and clinical needs.<sup>96</sup>

Although historians had considered universities bastions of traditionalism while they saw scientific academies<sup>97</sup> as the chief centers of innovation, newer research has shown that in Italy, in particular, this strict dichotomy is not sustained.<sup>98</sup> Universities and academies did not clash over opposing agendas; rather they complemented each other. The same individuals were often involved in both institutions and the academies were not as progressive as previously thought nor

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<sup>94</sup> At Padua, in the seventeenth century, professors of practical medicine began to earn higher salaries than those of theoretical medicine. In 1580, the first ordinary professor of medical theory and the first ordinary professor of practical medicine both earned 900 Paduan florins (1 florin = 1.24 Venetian ducats). In 1616, the first ordinary professor of medical theory earned 800 Paduan florins and the first ordinary professor of practical medicine earned 1000 Paduan florins. By the eighteenth century, Giambattista Morgagni earned more than 2000 ducats as professor of anatomy (I am not sure if Morgagni was paid in Venetian ducats or Paduan florins. Professors were generally paid in florins, but some individuals petitioned for payment in Venetian ducats instead. See Grendler, 22). ASUPd, F. 651, f. 425. Grendler, 352.

<sup>95</sup> For the diversity of approaches in eighteenth century science, especially the conflicts between mechanists and vitalists see: Elizabeth Williams, *A Cultural History of Medical Vitalism in Enlightenment Montpellier* (Burlington: Ashgate, 2003); G.J. Barker-Benfield, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago: University of Chicago Press, 1992); Anne C. Vila, *Enlightenment and Pathology: Sensibility in the Literature and Medicine of Eighteenth-Century France* (Baltimore: John Hopkins University Press, 1998).

<sup>96</sup> In 1760, the university established a chair of experimental chemistry, followed by, in 1765, two new chairs of practical medicine and surgery. The curriculum of theoretical medicine in this period was revised to include the study of physiology, pathology, and hygiene.

<sup>97</sup> The *Accademia die Lincei* and *Accademia del Cimento* were two of the oldest and most prominent such institutions in Italy. The *Accademia del Lincea* was established in 1603 by Frederico Cesi, an aristocrat from Umbria with an interest in the sciences, especially botany. Cesi advocated for the implementation of an experimental program still respectful of the traditional authorities. Galileo joined the society in 1611 and the society supported him throughout his Inquisition trials. The *Accademia del Cimento* was also founded on similar principles -- the importance of experiments and observation -- and its members included some of the most renowned scientists and university professors of the period. The most prominent academies and societies of the seventeenth century, however, were the Royal Society of London and the Paris Academy of Sciences.

<sup>98</sup> For a typical older approach, see: William Middleton, *The Experimenters: A Study of the Accademia del Cimento* (Baltimore and London, 1971). For newer studies, see: Luciano Boschiero, *Experiment and Natural Philosophy in Seventeenth-Century Tuscany: The History of the Accademia del Cimento* (Dordrecht: Springer, 2007); Luigi Pepe, "Universities, Academies, and Sciences in Italy in the Modern Age" in Mordechai Feingold and Victor Navarro-Brotons eds. *Universities and Science in the Early Modern Period* (Dordrecht: Springer, 2006), 141-151.

the universities as conservative. Universities were places of encounter between various audiences, in which the scholastic tradition and empirically acquired data coexisted. And as previously discussed, nearly all the major developments in medicine in the early modern period — particularly in the fields of anatomy, botany, and clinical medicine — were made in a university context, and many of them at Padua.<sup>99</sup> Additionally, though historians identify a shift in medical predominance from Italy in the sixteenth and early seventeenth centuries to northern Europe in the late seventeenth and eighteenth centuries, the innovative work of Italian professors such as Vallisneri and Morgagni in the latter period shows that Padua's education did not stagnate after the seventeenth century.<sup>100</sup>

By the late seventeenth century, when Lampronti matriculated at Padua, the intellectual milieu of the university included both text- and experiment-based approaches to natural knowledge. Students observed anatomical demonstrations from some of the most renowned anatomists; they studied botany from actual plants grown in the botanical garden; they learned how to treat patients through bedside instruction in the hospital; and they watched first-hand demonstrations of the application of new scientific instruments. Traditional texts still formed the

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<sup>99</sup> See: Charles Schmitt, "Science in the Italian Universities of the Sixteenth and Early Seventeenth Centuries," in Maurice Crosland, ed., *The Emergence of Science in Western Europe* (New York, 1976), 35-56; John Gascoigne, "A Reappraisal of the Role of the Universities in the Scientific Revolution," in *Reappraisals of the Scientific Revolution*, eds. David C. Lindberg and Robert S. Westman (Cambridge: Cambridge University Press, 1990), 207-60; Mordechai Feingold, *The Mathematicians' Apprenticeship: Science, Universities, and Society in England, 1560-1640* (Cambridge: Cambridge University Press, 1984).

<sup>100</sup> For the most comprehensive summary of university education in Europe in the early modern period see: Walter Rugg, ed., *A History of the University in Europe: Volume II Universities in Early Modern Europe (1500-1800)* (Cambridge: Cambridge University Press, 1996). For more on the education in French universities see: Laurence Brockliss, *French Higher Education in the Seventeenth and Eighteenth Centuries: A Cultural History* (Oxford: Clarendon Press, 1987); Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997). For perspective on England and Germany see: W. F. Bynum and Roy Porter eds., *William Hunter and the Eighteenth-Century Medical World* (Cambridge: Cambridge University Press, 1985); John Gascoigne, *Cambridge in the Age of the Enlightenment: Science, Religion and Politics from the Restoration to the French Revolution* (Cambridge: Cambridge University Press, 1989); Roy Porter, *Disease, Medicine and Society in England, 1550-1860* (Cambridge: Cambridge University Press, 1995).

stated core of the education, (and many of the Jewish students, including Lampronti, earned degrees in both philosophy and medicine) but a student at the university would be exposed to the medical world beyond the writings of Galen and Avicenna through the lectures of the most renowned university professors.<sup>101</sup>

With this context of the academic legacy and environment at the University of Padua in the late seventeenth century, we can now examine Lampronti's degree and his relationship with leading professors to establish a better sense of his place in the university and its continued effect on his intellectual development.

### **Lampronti at Padua**

Lampronti received his doctorate in medicine and philosophy on May 14, 1696.<sup>102</sup> The text of his degree is preserved in the old archives of the University of Padua in large volumes of similarly transcribed certificates. The text of these certificates are mostly formulaic, with the specific exam questions and performance assessment varying by individual.<sup>103</sup> Despite their standard nature, the content of Lampronti's certificate is one of the few extant documents specifically pertaining to the nature of his university education.<sup>104</sup>

The certificate details the following: The exam took place over the course of two days. On the first day, May 13, 1696, Lampronti appeared before a committee of eight university

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<sup>101</sup> In the words of historian Vincenzo Ferrone, the scientific culture of the Veneto region “interwove (and confused) the Galilean experimental heritage, the naturalist tradition of the Paduan university, and Cartesian metaphysics.” Ferrone, 26.

<sup>102</sup> ASUPd CO.V. 285, 103b-104b.

<sup>103</sup> For more on the standard process of degree examination and conferral see: Grendler, 175-178. For more on the cost of degrees see: Grendler, 178-180.

<sup>104</sup> See Appendix A, Text 1 for a transcription and translation of the degree certificate.

professors: the first and second chairs of theoretical medicine, first and second chairs of practical medicine; first and second professors of philosophy; and first and second chairs of anatomy.<sup>105</sup> Carlo Renaldini, the president of the college, presided and Alexander Borromeo, first professor of ‘extraordinary’ theoretical medicine, promoted Lampronti’s examination. Borromeo declared Lampronti sufficient in philosophy and medicine and asked Renaldini to select the *puncta* (points - a selection of texts on which students had to expound) for Lampronti’s exam. Renaldini accepted Borromeo’s request and presented Lampronti with one *puncta* from Aristotle’s *Physics* and a second from Galen’s *Art of Medicine*. Lampronti returned the next day to complete his exam.<sup>106</sup> Lampronti presented his texts and answered the questions asked by the professors of the *Collegio*. Thereafter, the committee questioned Lampronti on a practical medical situation, following which Lampronti departed while the committee discussed his performance.<sup>107</sup> When he was called back, the committee informed him that he had tested at the highest level and it voted unanimously to confer his degree. The committee declared him a doctor of arts and medicine, bestowed upon him the paraphernalia of physicians -- a book, gold ring, and special hat -- and congratulated him.<sup>108</sup> The signatures of the presiding committee affirm Lampronti’s successful completion of the degree requirements.

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<sup>105</sup> The specific individuals on Lampronti’s committee were: Carlo Renaldino - first ordinary professor of philosophy; third extraordinary professor of practical medicine; Michael Angelo Molinetto - first professor of anatomy; Jacob Viscardi (examined medicine) - second professor of anatomy; Alexandro Borromeo (promoter) - first extraordinary professor of theoretical medicine; Pompeo Sachi (examined philosophy) - first extraordinary professor of practical medicine; Antonio de Marchetis - first lecturer in surgery; Francisco Alfonso Donnoli - second extraordinary professor of theoretical medicine; and Georgio Calaphates (presented case consultation) - second extraordinary professor of practical medicine. Though certainly some professors were ‘ordinary’ and others ‘extraordinary’, this classification actually refers to the days of the week on which professors taught. The university archives contain detailed academic calendars indicating which days were days of ordinary or extraordinary instruction or holidays. ASUPd Inventario 1320.

<sup>106</sup> Students were given one day to prepare to expound upon and defend their knowledge of the assigned texts.

<sup>107</sup> The degree does not specify the content of the medical case.

<sup>108</sup> Obtaining a university degree meant a change of social status, reflected in part by a new outward style of dress.

The presiding committee of professors rotated on a yearly cycle and was not individually selected by each degree candidate. Nonetheless, the appearance of these individuals at the exam shows that Lampronti was broadly familiar with them and their work. While some of these professors were more scholastically inclined, including Lampronti's promoter, Alexander Borromeo, we know others had empirical leanings. Carlo Renaldini was also a member of the *Accademia del Cimento* -- though he is considered to be the more traditional of the *Accademia* members. Molinetto and Viscardi were both professors of anatomy. Neither were the most renowned or innovative with respect to Padua's rich tradition, but they still taught observational anatomy as a course deserving of its own instruction and study. Pompeo Sachi advocated for the integration of more experimental study into the formal teaching curriculum, and even petitioned the governing board of the university, the *Reformatori*, to implement such reforms.<sup>109</sup>

Lampronti's degree shows us that he both read and knew well the traditional texts of Aristotle and Galen upon which he was examined and was also a trained clinician.<sup>110</sup> We also see from the diversity of Lampronti's committee that he was exposed to a variety of approaches to medical study. Beyond this general sense of Lampronti's exposure to the broad culture of the university, however, we cannot tell from the degree certificate alone where Lampronti actually stood in Padua's diverse educational environment.

### *Lampronti and Morgagni*

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<sup>109</sup> Though Sachi's proposal was turned down, the effort shows his commitment to the new scientific method. Dooley, *Science and the Marketplace*, 99.

<sup>110</sup> According to the text of his degree, Lampronti skillfully answered a practical medical consultation presented to him by Georgio Calaphates.

Lampronti's relationship with Giambattista Morgagni helps to fill this void. Morgagni is considered the father of pathological anatomy and one of the most influential figures in eighteenth-century medicine.<sup>111</sup> Even early in his career, Morgagni was already admired and celebrated as a pioneering physician. He left the University of Bologna in search of a more accepting academic environment for his experimental work and his first lecture as professor of theoretical medicine at the University of Padua in 1712 boldly outlined a high level program of clinical teaching.<sup>112</sup> Shortly thereafter, in 1715, following the death of Michelangelo Molinetti, Morgagni transferred to professor of first rank of anatomy at Padua. As previously noted, the first chair of anatomy during these years was the most prestigious professorship and Morgagni commanded the highest salary at the university during his years there.<sup>113</sup> Though, as previously discussed, the formal medical curriculum involved primarily textual analysis, the increased importance of anatomy and Morgagni's own inclinations towards empiricism reveals a more innovative academic environment than scholars often attribute to eighteenth-century Italian universities.

Lampronti was no longer a student at the University of Padua at the start of Morgagni's tenure, but Lampronti sought out and corresponded with Morgagni, and some of those letters

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<sup>111</sup> For more on Morgagni, see: Guglielmo Bilancioni: *Giambattista Morgagni* (Rome: Formiggini, 1922); Saul Jarcho, "Giovanni Battista Morgagni; his Interests, Ideas, and Achievements," *Bull. Hist. Med.* 22 (1948): 503-524; Luigi Belloni, "L'opera di Giambattista Morgagni dalla strutturazione meccanica dell'organismo vivente all'anatomia patologica," *Morgagni*, 4 (1971): 71-80. Luigi Belloni, "De la théorie atomistico-mécaniste à l'anatomie subtile (de Borelli à Malpighi) et de l'anatomie subtile à l'anatomie pathologique (de Malpighi à Morgagni)," *Clio medica*, 6 (1971): 99-107.

<sup>112</sup> According to Dooley, Morgagni left Bologna to escape his "Galenist adversaries." Dooley, *Science and the Marketplace*, 65. See also: Howard Adelman, *Marcello Malpighi and the Evolution of Embryology*, 5 vols. (Ithaca: Cornell University Press, 1966), 1: 542-3; Giambattista Morgagni, *Opera postuma*, 1: *Le autobiografie*, ed. Adalberto Pazzini (Rome: Istituto di storia della medicina dell'Università, 1964), 18-19. Morgagni titled this first lecture: "*Nova institutionum medicarum idea*" (a new plan of medical education).

<sup>113</sup> By the end of his career, Morgagni's salary was over 2000 ducats a year. Dooley, "Science Teaching as Career at Padua," 121.

have been preserved in Morgagni's collections. A few months prior to his death, Morgagni wrote to his student Michele Girardi (1731-1797), an anatomist at the University of Parma, entrusting him with his papers: "A few days ago while in my study I found many papers of greater importance than those already given you; these make up four large bundles. And so I shall await even more willingly whoever shall come in due course with the boxes, etc."<sup>114</sup> These significant papers included 13 volumes on various anatomical matters, Morgagni's anatomical-clinical observations, and a history of anatomy at the University of Padua. The 14th volume entrusted to Girardi was a collection of clinical consultations marked by Morgagni: "A very small number of consultations kept up to now for some reason."<sup>115</sup>

Morgagni received numerous medical consultations throughout his career but he preserved and entrusted to posterity a select 100 — 5 of which pertain to consultations sent to him by Lampronti.<sup>116</sup> Enrico Benassi, the first modern scholar to write about Morgagni's consultations, argued that these documents were not spared from the flames randomly, as Morgagni had specifically written that they were kept, "for some reason." Unfortunately, Morgagni did not specify the reason and it is left for the historian to decipher. The consultations address a variety of fields, including neurology, ophthalmology, orthopedics, gynecology, urology, and obstetrics. They were sent mostly by Italian physicians, but some also came from physicians throughout Europe, including, Vienna, Poland, and Bavaria. The consultations span the first half of the eighteenth century but are not distributed consistently thus eliminating the

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<sup>114</sup> Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)* (Boston: The Francis A. Countway Library of Medicine, 1984), xxi.

<sup>115</sup> Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni*, xxi-xxii.

<sup>116</sup> Consultations XXXIX, LIII, LXIX to LXXI in the Benassi collection. Enrico Benassi ed., *Consulti Medici*, (Bologna: L. Cappelli, 1935). I consulted the originals of these letters in the Palatine Library of Parma, though I have cited here only the printed references in Benassi and Jarcho's works.

possibility that the 100 selected were chosen by year and not subject matter.<sup>117</sup> Morgagni's response to the consultations are often written on the back of the letters received and almost all the consultations are written in Italian. Though Morgagni claimed he had better mastery of Latin than Italian, he still had a deep knowledge of vernacular literature and his writing style in the consultations attests to his affection for clear and eloquent Italian prose.<sup>118</sup>

Lampronti and Morgagni's epistolary exchange was perhaps not surprising considering the similarities between the genres of medical and rabbinic consultations.<sup>119</sup> Much like rabbinic *responsa*, in a medical consultation a physician would send a particularly complex or confusing case to an expert physician in another city. The letter would detail the patient's clinical history, physical findings, and course of treatment started by the corresponding physician. The consulted physician was then asked to offer his opinion on the case at hand based on the information included in the letter. The response would detail the course of action suggested by the consulted physician and the reasoning upon which he drew that conclusion. As this information was usually not preserved in monographic works written by these individuals, the consultations

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<sup>117</sup> There are eight consultations from the years 1736, 1741, 1748; 9 from 1751; and some years there are none. Most of the consultations were sent from 1729-1751. Jarcho, xxvi.

<sup>118</sup> Benassi was primarily interested in the Italian literary aspect of these letters. Jarcho, xxxi.

<sup>119</sup> *Responsa* and medical consultations have a similar style, and there is a convergence of the two types of writing in our circle of rabbi/physicians. Medical cases were reported in a few different textual forms in the early modern period, namely *Observationes* and *Consilia*. *Observationes* were collections of case histories that originated in the second half of the sixteenth century and flourished in the seventeenth and eighteenth centuries. They were characterized by an emphasis on practice over academic learning. For more on *Observationes* see: Gianna Pomata, "Sharing Cases: The *Observationes* in Early Modern Medicine," *Early Science and Medicine*, 15 (2010): 193-236. *Consilia*, an earlier form of medical writing, were cursory by contrast and often listed only basic symptoms, diagnoses, and treatment. They were also laden with doctrine and much less informed by practice. Studies of *consilia* include: Nancy G. Siraisi, "Girolamo Cardano and the Art of Medical Narrative," *JHI*, 52 (1991): 581-602; Gianna Pomata, "Praxis Historialis: The Uses of Historia in Early Modern Medicine," in *Historia: Empiricism and Erudition in Early Modern Europe*, eds., Gianna Pomata and Nancy G. Siraisi (Cambridge: MIT Press, 2005), 105-146. For an overview see also: "The Medical Case Report in a Historical Perspective," *Journal of English Linguistics*, 28 (2000): 60-76.

provide an unusual opportunity to examine the reasoning and thought processes of eighteenth-century physicians.<sup>120</sup>

The consultations make clear that Morgagni invested his time in practical medicine and show the deep extent of his knowledge and the importance he gave to clinical treatment. After the opening courtesies, Morgagni would often turn to a lengthy and verbose explanation of the pathogenesis drawn from both ancient and contemporary literature. The letter would then turn to therapeutic and treatment recommendations and conclude with exaltations for the questioning physicians and sometimes an invocation for divine assistance. In assessing a particular case he would carefully consider the clinical history of the patient at hand and those of other patients he had seen with similar symptoms. Morgagni also widely applied his knowledge of anatomy to clinical problems and their treatment. In the case of a child with a lacerated tongue,<sup>121</sup> for example, Morgagni warned of a nerve at the end of the tongue that should be avoided in operation. Morgagni also drew widely from traditional medical texts, including most frequently the ancient writings of Hippocrates. He systematically compared patient's symptoms to symptoms described by Hippocrates and Hippocratic commentators. Morgagni also supplemented this textual discourse with the writings of physicians up until his own time and boldly contradicted the writings of previous authorities.<sup>122</sup> His method thus combined various

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<sup>120</sup> Some of the consultations included models or sketches to help Morgagni answer the case at hand. Consultation VI, a question concerning a lacerated tongue, for example, included a red cloth shaped like the torn tongue; and consultation XXVIII included two sketches. Physicians' consultations are also useful for understanding the experience of illness. For more on this see the work of Michael Stolberg: Michael Stolberg, *Experiencing Illness and the Sick Body in Early Modern Europe* (New York: Palgrave Macmillan, 2011).

<sup>121</sup> Consultation VI in the Benassi collection.

<sup>122</sup> I rely here on both Benassi and Jarcho's comprehensive analysis of all the consultations.

doctrines and approaches, and in the characterization of Saul Jarcho, the most recent scholar of Morgagni's consultations, was "eclectic."<sup>123</sup>

One of the cases sent by Lampronti illustrates this combination of textual and empirical analysis of medical problems. The case concerned a Jewish woman of Ferrara named Susanna, who suffered from a swollen, painful, and suppurating breast after lactation. Her case is discussed in three separate reports for its intricate and difficult nature required Morgagni's careful attention.<sup>124</sup> After summarizing the conditions of the patient at hand, Morgagni began first with a quote from Hippocrates about the strength of the right breast, but qualified it by saying that this does not mean that the breast is therefore exempt from serious diseases, and confirmed this observation with a passage from Vallesius, a sixteenth-century Hippocratic commentator.<sup>125</sup> After these quotes, Morgagni attributed the woman's pain to irritating particles, a theory he discussed frequently in the consultations and appears prominently in much late seventeenth- and eighteenth-century medical literature. He also included detailed personal observations of the human body and its ailments. The consultation continues in such fashion by interspersing quotes and observations from the ancient medical writers, most frequently Hippocrates, personal observation, recent medical theories, and citations of opinions of contemporary doctors. Morgagni signed the last of his three reports on Lampronti's case, "Public Primary Professor at Padua, [Member] of the Royal Academies of Science of Paris and London."<sup>126</sup> That signature surely supported Morgagni's own vanities, but it also affirms his

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<sup>123</sup> Jarcho, pp. lxvii.

<sup>124</sup> Consultations LXIX to LXXI.

<sup>125</sup> Vallesius' works include: F. Vallesius, *Commentaria in septem libros Hippocratis de morbis popularibus*, (Aureliae: Borde, 1654).

<sup>126</sup> Consultation LXXI: Jarcho, 237.

authority and attachment to both old and new scientific methods that his response in the consultation addresses.<sup>127</sup>

From these consultations, and the other two cases sent by Lampronti, we see both Morgagni and Lampronti as physicians at the bedside, concerned about their patients and drawing upon a variety of sources, approaches, and doctrines to chart the best course of treatment. That Lampronti sent his consultations to Morgagni shows the respect he accorded the renowned anatomist. The one letter from Lampronti preserved in this collection (the other cases only include Morgagni's response) shows Lampronti's respect for Morgagni: "I interrupt a very long silence produced only by the wish to avoid causing you excessive unnecessary annoyance, and this originates in my worshipful fear of interrupting your very important work, and as always I have done so with awe."<sup>128</sup> Though Lampronti wrote in excessive flattery common to most of the consulting physicians in the collection, the act of his writing and the specifics of his compliment show Lampronti's support and reverence for one of the most innovative and renowned physicians of his period. But from these consultations we see that even Morgagni did not entirely abandon old methods and sources of authority. He still consulted and quoted ancient texts, albeit often in a critical vein and with the addition of other methodological approaches.<sup>129</sup> Lampronti may have seen in Morgagni a like-minded scholar upon whom he could rely.

## Conclusions

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<sup>127</sup> The signature also affirms that Morgagni was part of the international scientific scene.

<sup>128</sup> Consultation XXXIX: Jarcho, 152.

<sup>129</sup> Another example of this integration is seen in Morgagni's teaching. According to Nancy Siraisi, Morgagni used his required lectures on Avicenna's Canon as a platform to discuss seventeenth-century physiology. Siraisi, *Avicenna in Renaissance Italy*, 5.

Padua served as an important intellectual center for Jews in the early modern period. The university offered the formal circumstances and a tolerant environment for a substantial number of Jews to earn medical degrees. The individuals privileged to study at the university joined a community of similarly educated Jews and non-Jews and acquired knowledge in both the theoretical, scholastic course of medical study and new epistemological developments. Even in the late seventeenth and early eighteenth centuries, when Lampronti and many of his colleagues studied at the university, both methodological approaches were present in the education and culture of the university. Lampronti was examined on the classical texts of Aristotle and Galen, but he also studied practical anatomy, botany, and clinical medicine. Professors such as Vallisneri and Morgagni, who we know had relationships with Lampronti's rabbinic circle, implemented and advocated for increased use of experiments and observation in teaching the traditional texts. But even these individuals still respected and worked to some extent within the old book-learning model.

The challenge Lampronti and his colleagues confronted between scholastic and experimental methods of establishing true knowledge was not unique to rabbi/physicians. Indeed, as this chapter has shown, the difficulty was embedded in the culture of a university that continued to require the instruction of ancient and medieval medical texts well into the eighteenth century, despite the significant changes taking place in practical medical instruction there, especially in anatomy, botany, and clinical medicine. This paradox was also representative of the broader context of science in the early modern period in which new research and study methods did not swiftly displace, but rather supplemented, and were creatively integrated into old models of learning. Nonetheless, rabbis like Lampronti, committed to both the old and new

sources of authority, faced a problem that required resolution. In the next chapter we will see how Lampronti bridged that divide and made sense of the contradictions between rabbinic texts and contemporary medical knowledge.

## CHAPTER 4: Bodies of Knowledge in the *Paḥad Yizḥak*

We have encountered the two lives of Isaac Lampronti: the rabbinic authority who spent his life composing a multi-volume encyclopedia of Jewish law, who headed the yeshiva of Ferrara and the local Jewish communal board and served as preacher for the Italian and Sephardic congregations; and the university educated physician, both a scholar of medicine who studied and corresponded with other renowned physicians of his time and a practicing doctor who spent early mornings tending the sick. And now, in the convergence of the two, we confront a fundamental question: How did Lampronti and other rabbinically and academically educated men like him reconcile their rabbinic study with contemporary scientific knowledge?<sup>1</sup>

For Lampronti, the answer demanded a synthesis of the two systems.<sup>2</sup> As the previous chapter established, Lampronti understood deeply the power of the new scientific method and in particular its empirical processes of establishing knowledge. And Lampronti perceived the intellectual efficacy of applying that system beyond the realm of science. This chapter now demonstrates how Lampronti judiciously used contemporary scientific texts and methods in the adjudication of rabbinic law. Indeed, to integrate the contemporary scientific system with a rabbinical approach relying on the exegesis of ancient -- and divinely inspired -- texts and

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<sup>1</sup> As will be explained more fully in the following paragraphs, there was indeed significant encounter between rabbinic law and the natural sciences in previous generations. As just explored, however, Lampronti and his cohort encountered an important transformation in the scholarly study of science at the University of Padua, namely the departure from the scholastic model and movement towards an empirical system. Prior to this period, the methods and sources of authority for both the rabbinic tradition and academic science were the same: exegesis of ancient texts and precedent. The challenge Lampronti faced was how and when to integrate the new scientific sources of authority in his rabbinic scholarship.

<sup>2</sup> It is important to clarify again here that I am not writing about the ways in which natural sciences were invested with religious meaning or the ways in which individual scientists remained religiously devout in the early modern period. Nor am I writing about how science was used to establish or prove the fundamental tenets of religion. Those are subjects of other academic investigations. I am writing specifically about the interactions between two different methodological systems: rabbinic law and eighteenth-century medical study.

commentaries required complex negotiation. Lampronti, therefore, had to develop a novel intellectual framework that incorporated the scientific knowledge and methods of his era without undermining rabbinic tradition.

This chapter discusses the specific ways in which Lampronti integrated medical knowledge into the process of Jewish legal (halakhic) jurisprudence and analyzes how he reconciled the conflicts that inevitably arose between the rabbinic and scientific systems. To put this examination in context, we must first explore a brief history of the intersections between the rabbinic tradition and the natural sciences.

### **Traditions of Halakhah and Science**

In Jewish history there is a longstanding relationship between the rabbinic and medical traditions.<sup>3</sup> In antiquity, the rabbis of the Mishnah and Talmud were well versed in the Greek and Babylonian understandings of nature and the universe -- and they also sought the expert opinions of physicians of the period in a number of matters pertaining to ritual law.<sup>4</sup> Jews of the medieval period, too, studied and practiced medicine. Many of the renowned Jewish jurists, philosophers, poets, and grammarians of the medieval period -- including such figures as

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<sup>3</sup> There is a whole body of literature dedicated to this subject including: Harry Friedenwald, *The Jews and Medicine* (Baltimore: Johns Hopkins Press, 1944); Michael Nevins, *The Jewish Doctor: A Narrative History* (Northvale: Jason Aronson, 1996); Nathan Koren, *Jewish Physicians: A Biographical Index* (Jerusalem: Israel University Press, 1973); Joseph Shatzmiller, *Jews, Medicine, and Medieval Society* (Berkeley: University of California Press, 1994); David B. Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995); John Efron, *Medicine and the German Jews: A History* (New Haven: Yale University Press, 2001); Noah Efron, *Judaism and Science: A Historical Introduction* (Westport, Connecticut: Greenwood Press, 2007).

<sup>4</sup> See: Fred Rosner, *Encyclopedia of Medicine in the Bible and the Talmud* (Northvale: Jason Aronson, 2000). Talmudic texts that consult science include: Mishnah Bekhorot 4:4; Tosefta 'Ohalot 4:2, Berakhot 1:1-6, Nidah 1:3, Sanhedrin 33a, Nazir 52a, Nidah 22b, Pesahim 94b.

Maimonides, Abraham Ibn Ezra, Nahmanides, and Gersonides -- were also physicians.<sup>5</sup> And in the early modern period, Jews were not only well learned in natural philosophy, they were also permitted to enroll in some universities and to obtain medical degrees.

Accompanying this union of rabbinics and medicine, however, was also an inherent tension between the two -- a conflict that in many ways began with the development of the entire system of Jewish law (*halakhah*). According to the traditional rabbinic view, the uninterrupted transmission of the biblical texts from God to Moses, and the subsequent transmission of the oral law from Moses to his disciples and downward through the generations, established the eternal authority of these works. But while the divine inerrancy of the biblical texts -- the *written* law -- was not a matter of debate among rabbinical authorities before the modern period, the mishnaic and talmudic works -- the *oral* tradition -- have a more complex history.<sup>6</sup> The Talmud contains not only records of the ritual law as passed down from Moses through the generations, and rabbinic analysis and clarifications of those laws, it also contains stories, commentaries, and observations on the natural world that reflect the particular time and culture in which these texts were composed. Consequently, post-talmudic rabbinic authorities were conflicted as to the everlasting authority of the scientific understandings advanced by mishnaic and amoraic scholars.<sup>7</sup>

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<sup>5</sup> See: Joseph Shatzmiller, *Jews, Medicine, and Medieval Society* (Berkeley: University of California Press, 1994); Resianne Fontaine, Ruth Glasner, Reimund Leicht, and Giuseppe Veltri, eds. *Studies in the History of Culture and Science: A Tribute to Gad Freudenthal* (Leiden: Brill, 2011); Shlomo Sela, *Abraham Ibn Ezra and the Rise of Medieval Hebrew Science* (Leiden: Brill, 2003); Fred Rosner, *Medicine in the Mishneh Torah of Maimonides* (Northvale, New Jersey: Jason Aronson, 1997).

<sup>6</sup> For an overview of the development of the system see: Menachem Elon, *Ha-mishpat ha'ivri* (3 vols., 1973), trans. *Jewish Law: History, Sources, Principles* (Jewish Publication Society, 1974); Moshe Halbertal, *People of the Book: Canon, Meaning, and Authority* (Cambridge: Harvard University Press, 1997).

<sup>7</sup> The rabbis of the Mishnah and Talmud, extending roughly from the beginning of the Common Era to 600 C.E.

Some rabbis advocated for continued synthesis of the rabbinic tradition with contemporary scientific knowledge. In the tenth century, R. Sherira (d. 1006), *ga'on* (head) of the rabbinic academy of Pumbedita in Baghdad, wrote: “We must tell you that the [talmudic] rabbis were not physicians. They related what they saw in their day, [remedies for] each illness as it came up. These matters are not considered commandments and are not to be relied upon.”<sup>8</sup>

Moses Maimonides (1135-1204) also unequivocally believed that talmudic statements concerning certain aspects of nature held no lasting authority:

Do not ask of me to show that everything they [i.e. the rabbis] have said concerning astronomical matters conforms to the way things really are, for at that time mathematics was imperfect. They did not speak about this as transmitters of dicta of the prophets, but rather because in those times they were men of knowledge in these fields or because they had heard these dicta from the men of knowledge who lived in those times.<sup>9</sup>

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<sup>8</sup> Benjamin Lewin, ed. *'Ozar ha-ge'onim: Gittin* (Jerusalem, 1941), section “*ha-teshuvot*,” 152.

<sup>9</sup> Moses Maimonides, *Guide for the Perplexed*, ed. S. Pines (Chicago: University of Chicago Press, 1963), III, 14, 459. David Ruderman discussed this passage specifically, arguing that it is limited to astronomy: Ruderman, *Jewish Thought and Scientific Discovery*, 30-1. Indeed Maimonides is known as the rabbi/physician par-excellence but his general position regarding the rabbis of the Talmud and their statements about nature and health is somewhat more complex. We know Maimonides studied medicine extensively and wrote medical texts in addition to his rabbinic works. It seems, however, that he did not believe the list of animals declared unfit for consumption (*terefot*) as explicitly stated in the Mishnah, should ever be emended on the basis of new medical knowledge. He explicitly stated that other conditions that contemporary medicine would determine as terminal would not render an animal a *terefah* because the rabbis of the Talmud explicitly stated that their list was comprehensive. See Maimonides, *Mishneh Torah, hilkhot shehitah* 5:2 and *hilkhot shehitah* 10:12. Subsequent rabbinic authorities, including Joseph Karo (1488-1575) in his commentary on the Mishneh Torah, the *Kesef mishneh*, interpreted Maimonides’s words in this way: Karo, *Kesef mishneh, Shehitah* 10:12. Maimonides also ruled that in instances where an animal is found to have the specific condition listed by a rabbi in the Talmud and is found to survive past the 12 months stated in the Mishnah, it is still a *terefah* because the rabbis of the Talmud specifically said so. See Maimonides, *Mishneh Torah, hilkhot shehitah* 10:13. It is important to note that Maimonides acknowledged that there are medical differences, he just did not think the ruling of the rabbis should be changed on that basis. In some instances, Maimonides did explicitly state that a halakhic status is dependent upon current medical consensus. An example of this is found in *Mishneh Torah, hilkhot rozeah* 2:12.

Sherira and Maimonides thus argued that the sages of the Talmud were absolutely authoritative in some areas but that the system was also meant to continuously adapt to changes in general scientific understandings of the natural world.<sup>10</sup>

There were many other rabbis throughout the ages, however, who objected to the revision of any part of the talmudic corpus. These individuals feared that the intrusion of new scientific theories into halakhah would undermine the fundamental tenets of Jewish law. Rabbi Solomon ben Adret (Rashb'a; 1235-1310) for example took a very strong stance regarding the list of animals deemed unfit for consumption (*terefot*) by the rabbis of the Talmud.<sup>11</sup> He argued that even when contemporary medicine seemed to contradict the Mishnah, we rule according to the sages: "And even though we see now that they can survive with the application of remedies by physicians, and even if most of the skull is open, we do not render any animal a *terefah* (not kosher for consumption) other than those the sages enumerated."<sup>12</sup> Rabbi Isaac ben Sheshet (Rivash; 1326-1408) similarly stated: "It is not according to nature and medicine that we live. And on our sages of blessed memory we rely, even if they would say our right hand is our left, for they received the truth and the explanation of the commandments each man from the mouth

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<sup>10</sup> Abraham Maimonides, the son of Moses Maimonides, and Azariah de' Rossi were two other main proponents of this ideology. Azariah de' Rossi was viewed as heretical during his time. The conclusion of this study will address the difference between rabbinic reactions to de' Rossi and Lampronti. Abraham Maimonides followed in his fathers ways and even went one step further. He explicitly extended Maimonides stance on astronomy to medicine and other sciences. See Abraham Maimonides, "*Ma'amar al 'odot derashot hazal*," in *Milhamot Adonai*, ed., R. Margulies (Jerusalem, 1953), p. 84.

<sup>11</sup> This is the same issue that Maimonides discussed, as mentioned in the footnote above. Rashb'a took an even stronger line, and wrote more on the subject matter than did Maimonides. His opinions can be found in his responsa, his commentary on the Talmud, and his halakhic compendium (*Torat ha-bayit*).

<sup>12</sup> Solomon ben Adret, *Hidushei ha-Rashb'a*, *Hulin* 54b. Rashb'a makes similar statement in *Torat ha-Bayit*, *bayit sheni*, *sha'ar shlishi*. The Babylonian Talmud in *Hulin* 54a states that a skull with holes does not render an animal a *terefah*. Many commentaries explained that the statement was only referring to small holes; larger holes, however, do render an animal a *terefah*. In this instance Rashb'a argued that even if the skull is gaping open, and medicine can fix it so that the animal will live, the animal is still a *terefah*.

of another back until Moses our Rabbi.”<sup>13</sup> Like Rashb’a, Rivash thus concluded that judicial rulings should be made on the basis of the words of the rabbis, not contemporary science. In the sixteenth century, Rabbi Moses Isserles (Rama; 1520-1572) affirmed that all statements made by the rabbis in the Talmud concerning nature were authoritative. According to Isserles, if a talmudic teaching contradicted reality, it must be due to insufficient knowledge in current times. The sages had access to knowledge that escaped non-Jewish scholars and, therefore, the rabbis were always correct.<sup>14</sup> To these individuals, the scientific and medical portions of the Talmud were too deeply intertwined with the authority of ritual law to be questioned and updated according to new scientific discoveries.<sup>15</sup> If the talmudic sages were wrong in their understandings of nature, perhaps they were also wrong in their discussions of ritual law. Many post-talmudic rabbis accordingly avoided these questions by maintaining a strict system based on precedent and exegesis of texts internal to the rabbinic tradition.<sup>16</sup>

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<sup>13</sup> This is referring to the chain of tradition passed down from God to Moses to the rabbis and downward through the generations. It is a rhetorical way of emphasizing the divine authority of the words of rabbis of later generations; they are a part of this chain of transmission. Isaac ben Sheshet, *Shu”t ha-Rivash, Siman 447*.

<sup>14</sup> Moses Isserles, *Torat ha-’olah*, 1:2. Isserles engaged in astronomy, but not in contemporary science. He made use mainly of medieval astronomical manuscripts translated into Hebrew. See: David E. Fishman, “Rabbi Moshe Isserles and the Study of Science among Polish Rabbis,” *Science in Context* 10 (1997): 571-588; David Ruderman, *Jewish Thought and Scientific Discovery*, 69-76. Similarly, on more philosophical grounds Judah Loew ben Bezalel (Maharal of Prague; d. 1609), who believed in the validity of studying the natural world, strongly affirmed that the rabbis of the Talmud were infallible, and they should be viewed akin to prophets. This statement was not made in a halakhic context but in response to Azariah de’ Rossi: *Be’er ha-golah, Be’er ha-shishi*. For more on Maharal’s views of scientific study and the religious and spiritual aspects to be gained from that pursuit see: Ruderman, *Ruderman Jewish Thought and Scientific Discovery*, 76-82. I have limited this discussion to halakhic considerations of science and have not entertained religious and philosophical treatises that broadly consider the relationship between Judaism and science, such as the Maharal’s work.

<sup>15</sup> The stances of Lampronti’s contemporary central European rabbinic counterparts will be considered in the next chapter.

<sup>16</sup> We will see in the next chapter that some rabbinic authorities continued to rely primarily upon the older science (Aristotle and Galen) already sanctioned by some within the tradition, while ignoring or rejecting contemporary books and methods.

Talmudic medicine (specifically the prescriptions discussed in talmudic literature), however, presents one possible exception even for the individuals just discussed. Whereas Rashb'a took a strong line with *terefot*, he argued that regarding medicinal prescriptions with no legal ramifications, the sages may not have based their words entirely on divine authority.<sup>17</sup> In the fifteenth century, Jacob Moelin (1365-1427) similarly wrote: "It is forbidden to try any of the medical remedies or spells recommended in the Talmud because no one today knows how they should be applied; and if they are found to be ineffective, ridicule would come upon the words of our sages."<sup>18</sup> Moelin recognized that the talmudic passages regarding natural remedies were probably out of date, but not because the sages based their knowledge on different scientific theories, but because the rabbis in his time no longer knew how to apply the talmudic remedies correctly. The error lay not with the rabbis of the past but in the rabbis of the present and their insufficient knowledge. Other rabbis explained the discrepancy as a result of changes in nature. *Tosafot*, for example, stated that the talmudic remedies were no longer applicable in their time because biological circumstances had changed.<sup>19</sup> Rabbi Solomon Luria (Maharshal; 1510-1573) took a similar stance and even argued that there was a long-standing communal ban against using the remedies, because their failure to work in a different time and place would still bring mockery to the sages.<sup>20</sup> Whether the reason for the failure of talmudic remedies lay in the ignorance of current scholars or changes in physical circumstances, a distinction is made

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<sup>17</sup> See for example Adret, *Shu"t Rashb'a* 1:413.

<sup>18</sup> Jacob Moelin, *Sefer Maharil, likutim siman* 49.

<sup>19</sup> Tosafot, *Mo'ed katan* 11a, s.v. "*kavarah*." The *Tosafot*, as previously explained, were a group of rabbis in France and Germany in the twelfth through fourteenth centuries who focused their efforts on careful dialectical readings of the Talmud.

<sup>20</sup> Solomon Luria, *Yam shel Shlomoh, Hulin* 8:12.

between this issue and others. Talmudic medicine did not concern the continued applicability of legal rulings based on the medical knowledge of the rabbis of the Talmud, rather these cases concerned whether or not to try prescriptions mentioned in talmudic passages. In areas with legal ramifications, many rabbinic authorities unambiguously stated that the law was not to be changed in line with contemporary scientific discoveries.<sup>21</sup>

Among these rabbinic authorities there were also regional differences of import. The medieval Spanish tradition was generally more open to the study of philosophy and science than the medieval German and French cultures.<sup>22</sup> Although historians have questioned the extent of the difference, the evidence for sustained Ashkenazic engagement with philosophy, science, and

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<sup>21</sup> Most of the cases the rabbis of the Talmud categorized as life threatening, later rabbinic authorities treated with the same status, despite possible evidence otherwise. See for example Jacob ben Asher (1269-1343) and Joel Sirkis's (1561-1640) commentaries on the talmudic ruling that one may violate the Sabbath to treat a patient with a specific condition they call *Zafdin'a*, which first involves pain in the teeth and throat. See: B.T. *Yom'a* 84a; Jacob ben Asher, *'Arba'ah turim*, *'Orah hayim*, *siman* 328; Joel Sirkis, *Bayit hadash*, *'Orah hayim*, *siman* 328, s.v. "*ha-hoshesh*." In the instances in which the Talmud does not explicitly spell out the nature of the illness, however, later rabbis gave themselves more room to rule according to contemporary knowledge. For example in Babylonian Talmud *Pesahim* 25b, the sages stated that an illness they called *'Esht'a z'mirt'a* is life threatening. Rashi, Maimonides, and Rashb'a provided different explanations for what illness exactly the rabbis of the Talmud were referring based on the common opinions of their times. See: Rashi, *Pesahim* 25b; Maimonides, *Mishneh Torah*, *Hilkhot Shabbat* 2:5; Rashb'a, *Shu"t ha-Rashb'a* 3:214. See also Joseph Karo, *Shulhan 'arukh*, *'Orah hayim* 328: 7.

<sup>22</sup> There is a significant body of scholarship on the Spanish philosophical study and its opposition among French and German rabbis. For an overview see David Berger, "Judaism and General Culture in Medieval and Early Modern Times," in *Cultures in Collision and Conversation: Essays in the Intellectual History of the Jews* by David Berger (Boston: Academic Studies Press, 2011) [originally published in *Judaism's Encounter with Other Cultures: Rejection or Integration?* ed. Jacob J. Schacter (Northvale, NJ: Jason Aronson, 1997)], 21-116. Berger argues that Ashkenazic Jews were more open to observations of nature than philosophical or scholastic study. It may be true they did not oppose, in principle, observation of the natural world, but such endeavors were not a sustained or formal area of scientific study before the early modern period. Such endeavors remained marginal and outside the context of academic medicine (which was heavily influenced by doctrine), as will be explained more fully in Chapter 5. In the sixteenth century, Ashkenazic rabbis open to the study of astronomy studied astronomical works in translation, and did not engage in practices of observation themselves. See Fishman, 581-84.

medicine throughout the medieval period remains limited.<sup>23</sup> One important factor in determining the respective cultures' general receptivity and access to non-Jewish sources was language. Medieval Spanish Jews read philosophical and scientific texts in Arabic; most medieval Ashkenazic Jews, however, could not read the Latin works produced by the surrounding culture. Translation was thus the key to their access. Historian Gad Freudenthal argues that nonetheless, on the whole, only the minority of European Jews in the medieval period studied texts outside of the traditional Jewish canon.<sup>24</sup> And even among the few who followed in Maimonides' ways of acquiring knowledge from a variety of sources, including non-Jewish works, there was a strong preference in the thirteenth and fourteenth centuries for the Arabic sciences and philosophy, and only in the fifteenth century were Latin works (primarily medical treatises) translated at a significant rate.<sup>25</sup>

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<sup>23</sup> In the early 1970s, Ephraim Kupfer challenged the regnant thesis that Ashkenazic society was hermetically sealed from non-Jewish culture by showing that Ashkenazic rabbis in Poland in the fourteenth through sixteenth century read works by Aristotle, Averroes, Algazali, Joseph ibn Caspi, and Moses Narboni. See Ephraim Kupfer, "Concerning the Cultural Image of Ashkenazic Jewry and Its Sages in the Fourteenth and Fifteenth Centuries" (in Hebrew), *Tarbiz* 42 (1972-73):113-7. Though Kupfer is absolutely correct that Ashkenazic Jews did engage to some extent in non-Jewish intellectual culture, the evidence for engagement remains limited and still seems relatively small when compared to the Spanish context. For studies since Kupfer on the Ashkenazic context see: Y. Tzvi Langermann, "An Unknown Ashkenazic Composition on the Natural Sciences" (in Hebrew), *Kiryat Sefer* 62 (1988-89): 448-49; Y. Tzvi Langermann, "A Hebrew Version of the Encyclopedia of Guillaume de Conches" (in Hebrew), *Kiryat sefer* 60 (1985): 328-29; Israel Ta-Shema, "Sefer ha-Maskil: An Unknown French-Jewish Book from the End of the Thirteenth Century" (in Hebrew), *Jerusalem Studies in Jewish Thought* 2, no. 3 (1982-83): 416-38; Gad Freudenthal, "Blessed Is the Air and Blessed Is Its Name in Sefer ha-Maskil of R. Solomon Simhah of Troyes: Toward a Portrait of Scientific-Midrashic Cosmology under Stoic Influence from the Thirteenth Century" (in Hebrew), *Da'at* 32-33 (1994): 182-234. By the sixteenth century, a sustained interest in philosophy and Maimonides works can be identified among eastern European rabbis. For more on this see: Lawrence Kaplan, "Rabbi Morekhai Jaffe and the Evolution of Jewish Culture in Poland in Sixteenth-Century Eastern Europe" in *Jewish Thought in the Sixteenth Century*, ed. Bernard Cooperman (Cambridge, 1983) 266-282; David E. Fishman, "Rabbi Moshe Isserles and the Study of Science among Polish Rabbis," *Science in Context* 10 (1997): 571-588. David Ruderman discussed Kupfer and the approach of eastern European rabbis in *Jewish Thought*, 55-60.

<sup>24</sup> Freudenthal emphasizes this point a few times in his article on Arabic and Latin translations into Hebrew: Gad Freudenthal, "Arabic and Latin Cultures as Resources for the Hebrew Translation Movement: Comparative Considerations, Both Quantitative and Qualitative," in *Science in Medieval Jewish Cultures*, ed. Gad Freudenthal (Cambridge: Cambridge University Press, 2011), 74-105.

<sup>25</sup> Freudenthal, 82.

Texts translated from Arabic had a higher status and air of legitimacy in the eyes of medieval Jews than those translated from Latin. Arabic was both linguistically related to Hebrew and the language employed by the *ge'onim* and rabbinic authorities in the Muslim world including, Isaac Alfasi (1013-1103), Maimonides (1135-1204), and Rabbenu Nissim (1320-1376). It was also often written and studied in Hebrew characters. Latin was a wholly foreign tongue, which not only required the learning of a new alphabet, it also had no Jewish precedent. No Jewish works were composed first in Latin and no whole books appeared in Latin in Hebrew characters in the early medieval period.<sup>26</sup> Therefore, many Jewish scholars, even those who engaged with non-Jewish literature, remained unaware of developments in the Latin culture. Gersonides (Levi ben Gershon; 1288-1344), for example, worked in a Christian court, but his astronomical works are based entirely on Arabic and Hebrew sciences. His works show no familiarity with the most famous Latin texts of his day, including the Alfonsine Tables.<sup>27</sup> Medicine presented a slightly different case than philosophy and other sciences, as the practical and pressing needs of treatment often facilitated cultural exchange. The earliest medical works translated from Latin into Hebrew date back to 1197-9.<sup>28</sup> Despite the higher degree of cultural transfer in medicine, the language of Jewish medicine remained Hebrew throughout the medieval period. Jewish physicians studied medicine in Hebrew with family members and not in Latin at universities, where they were forbidden entrance.<sup>29</sup>

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<sup>26</sup> Freudenthal 90. There were Latin quotations in polemical works written in Hebrew characters, but not whole works.

<sup>27</sup> Freudenthal, 94.

<sup>28</sup> Freudenthal, 100. These works were written anonymously under the pseudonym *Do'eg Ha-Edomi*.

<sup>29</sup> Freudenthal, 103; Shatzmiller, 22-4. David Fishman also mentions that even in the early modern period no prominent eastern European rabbis were also physicians: Fishman, 572-3.

A major transformation thus came with the admittance of large numbers of Jewish students to Italian universities. For the first time, Jewish students gained formal and systematic access to works beyond the translated canon. They began reading more academic works in Latin and the vernacular and with the changes occurring in the educational culture and philosophy of Padua in the seventeenth century, they also started gaining exposure to empirical methods of study, “the new philosophy,” in the university context. Prior to this period, traditional rabbinic study shared a fundamental approach with the academic sciences. Both were largely based on the continued interpretation of a few key ancient works. Accordingly, the medieval rabbis who did study non-Jewish medical texts, often read works based on Galen and Hippocrates -- the same fundamental sciences consulted by the hallowed sages of the Talmud. The Italian rabbis in the seventeenth and eighteenth centuries, however, were reading new works, written in different languages, that incorporated novel modes of study.<sup>30</sup>

Although there was no abrupt or revolutionary change, no “scientific revolution” as historians once marked the period, Lampronti and his fellow Jewish students at Padua gained access to a significantly larger canon of non-Jewish medical works as well as exposure to new empirical and experimental methods of scientific investigation. This transformation presented a new and profound problem for rabbinic authorities also committed to scientific scholarship. Could the halakhic tradition, which derived knowledge through the study of divinely inspired texts and commentaries, be integrated with new non-Jewish works as well as the observational

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<sup>30</sup> There may have also been more fundamental transformations that influenced early modern rabbis’ relationship to science. Peter Harrison makes the intriguing point that the relationship between “science” and “religion” fundamentally changed between the medieval and modern periods. In the medieval period science was an intellectual habit whereas religion was a moral one. In the modern period, by contrast, both science and religion were considered thought systems and therefore contradictions between them required resolution. See Peter Harrison, *The Territories of Religion and Science* (Chicago: University of Chicago Press, 2015). I will consider Harrison’s model more fully and highlight the differences for Jewish history in the next iteration of this project.

and experimental methods of study gaining credence? Could non-Jewish works, beyond the few implicitly sanctioned by some medieval rabbis, be relied upon authoritatively regarding matters of Jewish law? Should human-determined methods of clinical and empirical investigation be utilized to assess matters pertaining to divinely rooted sources of authority? Should rabbinic law be revised in light of new knowledge, especially the knowledge one observes empirically with one's own eyes? For Lampronti and his colleagues the answers were in the affirmative, but there were qualified affirmations that depended on the specifics of each case. As this chapter will explore more fully, Lampronti was committed to both the contemporary scientific system encountered in his university studies and the rabbinic tradition. Unable to fully relinquish the authority of either, he navigated a path where both systems held sway, but in different ways depending on the specific circumstances at hand.

The manner in which Lampronti incorporated the two systems will be elucidated through an analysis of textual examples from the *Paḥad Yiẓḥak* pertaining to medical matters. Research for the present study required a careful reading of the entire fourteen printed volumes of the *Paḥad Yiẓḥak* and the foremost examples that best illustrate Lampronti's use of contemporary scientific knowledge are explored here.<sup>31</sup> The first half of this chapter's discussion examines four cases in which Lampronti applied contemporary medical knowledge, specifically derived through both direct engagement with non-Jewish texts (aside from the primary ancient works of Galen, Aristotle, and Hippocrates) and empirical sciences to rabbinic scholarship. The first two examples concern practical matters of ritual law: (1) a rabbinic injunction against the combination of fish and dairy and (2) the condition of a woman with a prolapsed uterus. The

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<sup>31</sup> I consulted the texts discussed in this chapter in both the printed and manuscript original editions, though I have cited only the printed references here as they are more easily accessible.

latter two regard axiomatic concepts and definitions: (3) ritual slaughter and (4) the plant substances of the ancient Israelite incense offering. The second half of the chapter's discussion explores three different examples that highlight the nuanced method with which Lampronti reconciled contradictions between contemporary science and the rabbinical tradition.

### **Examples of Integration of Medical and Rabbinic Knowledge**

#### **Case 1: Fish and Dairy**

The first example of Lampronti's integration of rabbinic and scientific sources of knowledge is his treatment of a particular rabbinic injunction against the combination of fish and dairy. Though relatively obscure in that it is primarily, if not exclusively, attributed to one individual, Rabbi Joseph Karo (1488-1575), this prohibition illustrates how Lampronti weighed scientific authority in his rabbinic scholarship.

The issue at hand in this case is whether one can eat fish together with dairy products. In his lengthy commentary on Jacob b. Asher's thirteenth-century *'Arba'ah turim*, the *Beit Yosef*, Karo stated that one should not eat these two food items together, specifically because of a health risk.<sup>32</sup> This passage is unusual both in its content and form -- the stipulation has scant mention in the halakhic corpus and Karo did not attribute a source to his opinion.<sup>33</sup> Moreover, Karo himself arguably retracted this statement by not codifying it in his universal Jewish code, the *Shulhan 'arukh*. Because of these irregularities and obscurities, some Jewish jurists attributed the specific

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<sup>32</sup> Joseph Karo, *Beit Yosef, Yoreh de'ah*, 87:3.

<sup>33</sup> Among the scant mentioning of this injunction is Baḥya b. Asher's (d. 1340) commentary on the Bible regarding the verse prohibiting milk and meat (Ex. 23:19): "It is the opinion of the doctors regarding the mixture of fish and cheese that were cooked together that it produces a negative disposition and leprosy."

passage in the *Beit Yosef* to a scribe's error.<sup>34</sup> Karo, they postulated, had meant to write "meat," but instead he, or a scribe, wrote "fish."

In his entry in the *Paḥad Yiṣḥak* entitled "Meat and Fish," Lampronti began discussion of the subject in a manner typical of a rabbinic authority. He stated the problem and cited the valid legal authorities upon whom he could rely to reject Karo's statement, specifically the well-respected Jewish jurists who attributed the passage to a writer's mistake. Only one authority, the *She'erit Yehudah* (Judah b. Solomon Taitazak), an early seventeenth-century commentary on the *Beit Yosef*, claimed he heard from physicians that eating fish with dairy can cause leprosy. After the traditional halakhic discourse, however, Lampronti continued in an unusual fashion:

And I, the author, lowly of the doctors, have searched all my years though the opinions of the sages and the great medical authorities and I have not found a single reason in support of the words of the *Beit Yosef*, nor the words of the *She'erit Yehudah*, who thought to help him. What danger is there to eat fish with butter or cheese?<sup>35</sup>

Rather than settle for the opinions of the rabbinical authorities who had rejected Karo's statement within the strict terms of halakhic discussion, Lampronti tried to find a medical or scientific explanation that would support Karo's declaration that the ban against eating fish and dairy together was due to a health risk and the *She'erit Yehudah's* confirmation of the position according to the physicians' opinions. Lampronti argued that there was reason to worry about drinking milk before or after eating fish, but no cause for concern about leprosy specifically, as the *She'erit Yehudah* had claimed. Lampronti then cited a passage from one of his medical books as affirmative evidence for this position:

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<sup>34</sup> The authorities who ruled in favor of a scribal error include: Moses Isserles (1520-1572); Sabbatai b. Meir ha-Kohen (1621-1662); Abraham Gombiner (1635-1682); Hezekiah Silva (1659-1698).

<sup>35</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 1b, p. 69r, s.v. "*basar dagim*" (Venice, 1753).

So I place before you the work of the sage Mattioli, who explained the words of Dioscorides and added to them in a book that was written in Italian, and in another book that was written in Latin -- and I will translate his words into Hebrew as follows...<sup>36</sup>

Lampronti then quoted from Pietro Mattioli's sixteenth-century commentaries on the *Materia Medica* of Dioscorides, where Mattioli explained the precautions one should take after drinking milk directly from an animal.<sup>37</sup> Lampronti concluded on this basis: "Dear reader, see for yourself that there is no substance to the words of the physicians told to the *She'erit Yehudah* and we do not rely on them."<sup>38</sup>

The significance of Lampronti's citation and translation of Mattioli in this passage is that it marks an unusual meeting place of two distinct and seemingly foreign sources of knowledge. For Lampronti, though the context was rabbinic, he derived the authority upon whom he relied from an entirely separate tradition. Lampronti could have very well explained this case without direct reference to the medical literature. And indeed most other rabbis treated the matter with such internal rabbinic methodologies.<sup>39</sup> But in this instance, the opinions of the rabbis alone did not suffice. Lampronti was compelled to inquire himself into the medical sources and use them

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<sup>36</sup> *Paḥad Yiẓḥak*, *ibid*; also, Pietro Mattioli, *Opera quae extant omnia, hoc est, Commentarii in VI. libros Pedacii Dioscoridis Anazarbei De medica materia* (1674), 300-303.

<sup>37</sup> The *Materia Medica*, compiled by Dioscorides in the first century, is an encyclopedic compendium of the medicinal properties of plant and animal substances. Mattioli's commentaries updated and made Dioscorides's work more accessible through the inclusion of new observations and studies of the substances mentioned by Dioscorides, elaborate illustrations that helped in plant and animal identification, and translations of key words into Italian, German, and French. Mattioli's name is most commonly linked with this work as it became a popular practical treatise studied and referenced by physicians throughout Europe in the early modern period. For further discussion of Mattioli and his works see: Vincenzo Cappelletti, "Nota sulla medicina umbra del Rinascimento: Pietro Andrea Mattioli," in *Atti del IV Convegno di studi umbri* (Perugia, 1967), 513-532.

<sup>38</sup> Interestingly, in the end of his passage on the subject Lampronti actually commented that despite his ruling otherwise, in his own home, he was careful to keep fish and dairy separate. His personal stringency, combined with his unwillingness to impose it on others due to the insufficient support, is telling of both his rabbinic and medical commitments.

<sup>39</sup> The *She'erit Yehudah* is perhaps an exception as he said he "heard from physicians," but provided no other medically informed substance to that opinion. He also quoted the source as affirmation of Karo's statement, whereas other authorities simply rejected Karo's words.

authoritatively for determining practical, ritual law. For Lampronti, the permission to eat fish together with dairy hinged not on the other well respected rabbis before him who had ruled as such (and with good reason and support), but on the insufficient contemporary medical evidence for the supposed health risk under discussion.

## Case 2: Prolapsed Uterus

The second example of Lampronti's integration of the rabbinic and contemporary scientific systems is a responsum concerning the condition of a woman with a prolapsed uterus.<sup>40</sup>

Aviad Sar Shalom Basilea -- the renowned kabbalist and interlocutor of Samson Morpurgo -- asked the question in the year 1730. Basilea wrote to Lampronti about a woman afflicted with the sickness of a fallen womb. Even after her menstrual cycle had ended, the woman experienced continuous red secretions. The physicians advised her to make a small circular device out of various absorbent materials that when inserted would stop the irregular flow of blood. The halakhic problem, however, was that according to the laws of ritual immersion, the woman should be obligated to remove the device before immersing herself in the *mikveh* (ritual bath). Jewish law regulates sexual relations during female menstruation and specific prescriptions including checking to ensure the menstrual blood has ceased and the performance of a ritual immersion in a *mikveh*, fully unclothed and free from any object foreign to the body, before a woman is declared ritually pure and therefore permitted to resume sexual relations. According to these laws, the woman should be obligated to remove the apparatus

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<sup>40</sup> Responsa is a genre of halakhic literature in which one party consults another about a Jewish legal matter. The Hebrew term for this genre is "*she'eilot u-teshuvot*" -- questions and answers. Sometimes these texts were written as letters (one party sent a question, the other responded) and sometimes a rabbinic authority would use the genre as a means to pen short essays on a given subject. These questions and answers were traditionally organized and printed in author specific volumes; one of the innovative aspects of Lampronti's work was the presentation of this literature in an alphabetically organized database. This is discussed more fully in Chapter 6.

before immersion; but in this case, as soon as she did so, the red secretions resumed, thereby interrupting her period of ritually clean days. In his question, Basilea wrote that he believed that once the woman removed the device the new red secretions rendered her impure for immersion, but he wanted to permit her to immerse with it anyway. He reasoned that the water did not need to enter into the area of the body she had inserted the device, and therefore its presence did not interfere with the immersion. Basilea, however, sought Lampronti's judgment as both a rabbi and physician on the matter.<sup>41</sup>

Lampronti responded to the query as follows:

I answer in short that there is agreement among the physicians concerning the writings of *Sennarti*<sup>42</sup> [Daniel Sennert 1572-1637], *Schenckav*<sup>43</sup> [Johann Georg Schenck von Grafenberg d. 1620], and *ha-Boneto*<sup>44</sup> [Theophile Bonet 1620-1689] on Cesarean birth, Volume 6, Chapter 5, and *ha-Bauhino*<sup>45</sup> [Caspar Bauhin 1560-1624]. And according to all of them, the woman willingly places in the womb rings or some other suppository that achieves the same purpose, so the womb no longer falls. It is her will to receive this ring or suppository and to wear it all times, at all places, all hours, even every second; and since it does not interfere with her walking or any of the activities she needs to do as a

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<sup>41</sup> Basilea specifically wrote here that he consulted Lampronti because he was both a rabbi and physician.

<sup>42</sup> Book 4, Chapter 16 of Daniel Sennert's *Practicae medicinae* specifically covers "the falling of the womb." There Sennert explained how and what materials can be used to make a device to keep the prolapsed uterus in place, and writes: "they [the device] neither hinder conception, nor bring any inconvenience, nay, that they help conception, and retain it, and cure this disease perfectly." Sennert also referenced the work of Caspar Bauhin on Caesarean birth, which Lampronti later mentioned. For a seventeenth-century English translation of this passage, see: Daniel Sennert, *Practical Physick* (London, 1664), 52-3.

<sup>43</sup> This is either a reference to Johann Schenck von Grafenberg (d. 1598), whose *Observationes Medicae*, a seven volume pathological work containing case descriptions including many gynecological, was a standard medical text used throughout the seventeenth and eighteenth centuries, or to his son, Johann Georg Schenck von Grafenberg (d. 1620), who wrote books on pathology and the occurrence of monstrosities, and in 1606 published the first extended list of gynecological authors as an appendix to a commentary on the *Gyneciorum Libri*. The specific passage to which Lampronti is referring could not be located, but the most reasonable conclusion is that Lampronti is referencing either Schenck the elder or younger here.

<sup>44</sup> A dedicated work on Cesarean birth (or a Volume 6 to the *Sepulchretum*), as Lampronti refers, could not be found so it is possible that this reference is to another physician or work.

<sup>45</sup> Caspar Bauhin specifically discussed the ramifications of the prolapsed uterus and its treatment in his appendix to Francis Rousset's works on Cesarean Birth, both published in Israel Spach's edition of the *Gyneciorum Libri*. Israel Spach, *Gynaeciorum sive de mulierum tum communibus...* (1597), 480-91. For more on this work see Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Burlington: Ashgate, 2007).

woman -- not intercourse, pregnancy, or childbirth -- it does not form an impediment for immersion.<sup>46</sup>

Lampronti argued that the woman should be permitted to immerse with the ring for a different reason, derived by a different method, than the answer Basilea proposed. According to Lampronti, the non-Jewish physicians Daniel Sennert, Johann Georg Schenck von Grafenberg, Theophile Bonet, and Caspar Bauhin determined such devices not to be impediments to the daily life of women.<sup>47</sup> Therefore, according to Jewish law, the device does not form a barrier to proper immersion and should be allowed. Lampronti did not base the authority of his ruling on halakhic texts or even the older science already sanctioned by the rabbis -- as would more typically be found in responsa literature. Instead, he immediately and unapologetically cited and relied on the authority of renowned non-Jewish physicians of the seventeenth century. Daniel Sennert was a German physician and prolific author of books on chemistry, alchemy, and medicine.<sup>48</sup> He is chiefly known for his desire to reform ‘chymistry’, but his medical writings, including *Practicae medicinae* (Volumes 1-6), were also widely circulated.<sup>49</sup> Johann Georg Schenck von Grafenberg

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<sup>46</sup> Lampronti, *Paḥad Yizḥak*, Vol 1a, p. 111v, s.v. “*ishah ro’ah dam*” (Venice, 1753). See Appendix B, Case 2 for a full transcription and translation of this passage.

<sup>47</sup> My extensive investigation of the medical literature of the period did not yield conclusive identification of the works and passages of two of the above authors; nonetheless, my research eliminated other options and convinced me that these are the four individuals intended in the reference.

<sup>48</sup> Sennert’s many works include: *Institutionum medicinae libri V* (Wittenberg, 1611); *Disputatio medicina, qua suam de occultis, seu totius substantiae quasvocant morbis sententiam defendit D. Sennertus* (Wittenberg, 1616); *De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu liber I* (Wittenberg, 1619); *De febribus libri IV* (Wittenberg, 1619); *Practicae medicinae, liber I, II, III, IV, V, VI: De chymicorum cum Aristotelicis et Galenicis consensu ac dissensu liber: cui accessit appendix de constitutione chymiae* (Wittenberg, 1629); *De arthritide tractatus* (Wittenberg, 1631); *Epitome institutionum medicinae* (Wittenberg, 1631). Lampronti’s contemporary and fellow Padua educated colleague, Tuviya ha-Cohen, in his Hebrew encyclopedias of medicine, *Ma’ase Tuviya*, also referenced Sennert, among other contemporary medical works. See Samuel Kottek, “An Introduction to *Ma’ase Tuviya*: The Work in Context,” *Korot* 20 (2009-2010): 13.

<sup>49</sup> A great deal has been written on Sennert’s contributions to ‘chymistry’, but there is not yet a thorough biography of his life and many works. For a brief overview of such matters see: Hans Kangro, “Sennert, Daniel,” *Complete Dictionary of Scientific Biography*, Vol. 12 (Detroit: Charles Scribner’s Sons, 2008), 310-313. For more on his chemical views consult: Reijer Hooykaas, “Het Begrip Element” (1933), 160–167; Alan Debus “The Paracelsians and the Chemists: the Chemical Dilemma in Renaissance Medicine,” in *Clio medica*, 7 (1972): 195.

was also a renowned physician of the seventeenth century whose writings focus primarily on pathology and the occurrence of monstrosities.<sup>50</sup> His father, Johann Schenck von Grafenberg, wrote an influential compendium, *Observationes medicae*, which signaled the start of a new genre of medical writing that focused more on collected empirical observation and less on doctrine.<sup>51</sup> The Swiss physician Theophile Bonet was educated in Bologna and wrote many medical treatises on his clinical and anatomical studies, the most significant of which is the *Sepulchretum*.<sup>52</sup> And lastly, Caspar Bauhin was a prolific scholar of anatomy and biology who was responsible both for the establishment of our modern terminology of muscles, veins, and nerves, and for the improvement of the taxonomy of biology.<sup>53</sup> He authored many books on

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<sup>50</sup> There was a genre of literature in the early modern period that sought to study and explain the occurrence of the wondrous and mysterious. Various birth defects were seen as monstrosities and studied in such fashion. For more on this subject, see Lorraine Daston and Katharine Park, *Wonders and the Order of Nature: 1150-1750* (New York: Zone Books, 1998).

<sup>51</sup> Though the specific passage to which Lampronti referred could not be located, extensive examination of medical bibliographies and texts of the period did not turn up any other strong possibilities. Johann Schenck von Grafenberg's medical work was widely used and influential especially for his method of compiling observations. For more on the importance of Schenck's observations see: Gianna Pomata, "Praxis Historialis: The Uses of *Historia* in Early Modern Medicine," in *Historia: Empiricism and Erudition in Early Modern Europe*, eds. Gianna Pomata and Nancy G. Siraisi (Cambridge: MIT Press, 2005), 133-4; Lorraine Daston, "The Empire of Observation: 1600-1800," in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 88.

<sup>52</sup> The first edition of the *Sepulchretum* was published in 1679 and contained notes on observations from over 3,000 anatomical dissections, classified both alphabetically and anatomically by disease. This work was an influential medical work and the basis upon which Giambattista Morgagni, with whom Lampronti had personally exchanged letters, built his path breaking work, *De Sedibus*. Bonet also wrote: *Pharos Medicorum* (1668), a short compendium on the practice of medicine; *Mercurius* (1682), translated into English as *A Guide to the Practical Physician* (1684), a more extensive practical compendium for the physician; and *Medicina Septentrionalis Collatitia*, a compilation of reports sent to Bonet from Danish, English, and German physicians. For more on Bonet see: "Theophile Bonet (1620-1689), physician of Geneva" *JAMA: the Journal of the American Medical Association* 210:5 (1969): 899; J. Crellin, "Theophile Bonet (1620-1689)," *The American Journal of Pathology*, Volume 98, Issue 1 (1980): 212; Ernest Irons, "Théophile Bonet, 1620-1689, His Influence on the Science and Practice of Medicine," *Bulletin of the History of Medicine*, Vol 12 (1942): 623.

<sup>53</sup> He developed a system for naming the muscles where some were called according to their substance, others according to their origin, others according to their shape or the number of their heads (biceps, triceps), and some according to their position (pectoralis). He named veins and arteries according to their use or course, and nerves according to their function.

biology and anatomy, and edited many others, including *Gynaeciorum*, a three volume work specifically devoted to female illnesses.<sup>54</sup>

Lampronti's *reference* to these non-Jewish, scientific figures, let alone his *reliance* on their authority, was contrary to the normative methods of the Jewish legal system and the practices according to which rabbis had determined the law for centuries. Within the framework of a traditional system constructed around ancient authority and precedent, Lampronti unapologetically consulted contemporary and ostensibly foreign sources.

Furthermore, in this case Lampronti went beyond the mere citation of medical texts; he also applied the methods of the new scientific philosophy by drawing upon his knowledge gained through actual medical practice and unambiguously integrated what he had personally observed to render a halakhic judgment:

Your reasoning sounds to me like an answer from the head, that is, an answer without any resource behind it, because every wise hearted person well versed in the science of dissection sees with his eyes that the case of a fallen womb is like a case of the falling of the large intestine to the outside [prolapsed rectum]. In the majority of these cases there is a minor reddish secretion when the intestine falls out, or when it is put back in with force, as in this process one of the thin veins, as thin as a hair, which are called capillary veins, is broken. Therefore, it is certain that this blood in our case did not originate from the womb.<sup>55</sup>

Lampronti argued against Basilea on two points. First, the woman should be allowed to immerse with the device not because of the reason Basilea stated, but because of a different reason

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<sup>54</sup> As stated above, Caspar Bauhin specifically discussed the ramifications of the prolapsed uterus and its treatment in his appendix to Francis Rousset's works on Cesarean Birth, both published in Israel Spach's edition of the *Gyneciorum Libri*. Israel Spach, *Gynaeciorum sive de mulierum tum communibus...* (1597), p. 480-91. For an overview of Bauhin's life and contributions to medicine see: Gweneth Whitteridge, "Bauhin, Gaspard," *Complete Dictionary of Scientific Biography*, Vol. 1 (Detroit: Charles Scribner's Sons, 2008), 522-525. Bauhin's numerous written works include, but are not limited to: *De corporis humani partibus externis* (1588); *De corporis humani fabrica: Libri IIII; Theatrum anatomicum novis figuris aenis illustratum...* (Frankfurt, 1605); *Prodromos* (1620); and *Pinax* (1623).

<sup>55</sup> Lampronti, *Pahad Yizhak*, Vol 1a, p. 111v, s.v. "ishah ro'ah dam" (Venice, 1753).

supported by the writings of medical authorities. Second, even if the woman removed the apparatus, anatomically the blood did not originate in the womb and therefore would not render her impure for immersion. Lampronti emphasized that anyone well versed in the “science of dissection,” a phrase he frequently used in his halakhic scholarship, would agree with him and render a similar judgment. Thus, by both means of his medical books and practice, Lampronti concluded that the woman should be permitted to immerse in the *mikveh* and declared ritually pure. Here Lampronti used contemporary scientific sources and methods to adjudicate a matter of pressing concern to the daily life of a particular woman.

### **Case 3: Ritual Slaughter**

A third illustration of how Lampronti viewed the manner in which medical knowledge and practice should inform rabbinic reasoning is found in Lampronti’s response to the question of what a person must know before studying the laws of ritual slaughter.<sup>56</sup> Lampronti answered that to study such laws, one must first be familiar with the science of dissection and basic anatomy, so as to be able to correctly identify an animal’s internal organs:

One needs to know the following few things connected to the science of dissection and be an expert in them, and their names, and places: 1. What is the liver. 2. That it is located between the breathing organs and the digestive organs. And on it there are two membranes - one on the side of the breathing organs and one on the side of the digestive. And the way of the area of the liver is to be stretched. 3. The ribs are the bones that span the width of the animal, between each bone there is flesh, and these are called the walls of the lung. 4. The spine from which the bones are connected to the ribs, within it is the spinal cord...<sup>57</sup>

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<sup>56</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Vol. 7, p. 59r-60v, s.v. “*nituaḥ ha-rey’ah*” (Lyck: Mikizei Nirdamim, 1864).

<sup>57</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Vol. 7, p. 59r-60v, s.v. “*nituaḥ ha-rey’ah*” (Lyck: Mikizei Nirdamim, 1864). See Appendix B, Case 3 for a Hebrew transcription of this passage.

The passage continues in such fashion, up to point thirty two, detailing all elements of bovine anatomy. The interesting and innovative aspect of this passage is that for Lampronti, the rabbinic sources on ritual slaughter were alone insufficient for properly understanding that area of Jewish law. Lampronti advocated for the importance of acquiring a knowledge of contemporary anatomy and surgery to understand these laws, even though all the relevant information concerning ritual slaughter was contained in various halakhic texts. This was a radical stance for a rabbinic authority of the time to take, specifically in this matter of Jewish law. The rabbis of the Talmud had not only inspected the insides of animals, they explicitly stated that the Mishnah's list of *terefot* (animals not kosher for consumption), was exhaustive. The medieval commentators confirmed this ruling and argued that post-talmudic rabbis could not add or subtract from the original list on the basis of new medical information and remedies.<sup>58</sup> Only halakhic texts were to be taken into consideration in matters of *terefot*. Thus, not only was it extraneous for Lampronti to say that knowledge of anatomy would help the study of these laws, it was contrary to the traditional methods for approaching this area of halakhah.

For Lampronti, studying the vast corpus of halakhic literature no longer sufficed because of the significant advances made in anatomy in his era. By the eighteenth century, Vesalius' theories had gained traction and William Harvey had discovered and written extensively on the circulation of blood.<sup>59</sup> As the previous chapter established, the medical school at Padua, which Lampronti attended and received his medical degree from, and its famous anatomical theatre were particularly influential in this transition and the accompanying development of new

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<sup>58</sup> Refer to the discussion of this subject at the beginning of the chapter.

<sup>59</sup> Andrew Cunningham, *The Anatomist Anatomis'd: An Experimental Discipline in Enlightenment Europe* (Farnham: Ashgate, 2009).

understandings of the human and animal bodies.<sup>60</sup> Furthermore, prior to the early modern period anatomy was an academic discipline learned through the study of ancient medical treatises, particularly Galen, and subsequent commentaries. It was not a subject one learned through application and practice. Lampronti thus internalized the importance many physicians and indeed the University of Padua itself placed on observational anatomy and advocated not only for the acquisition of knowledge beyond the realm of rabbinic texts, but also, in a way, for the importance of reaching beyond texts and books altogether. The necessary knowledge of anatomy was not derived from medical treatises alone but first hand empirical training.

This particular example thus illustrates Lampronti's belief in not only the usefulness but the necessity of applying contemporary scientific methods and practices to rabbinical study. Lampronti considered the contemporary knowledge of surgery and anatomy essential for properly understanding the Jewish religious laws of ritual slaughter. Unlike the previous case, the issue of concern in this example was a matter of theoretical, academic discussion, not of practical import. The ritually kosher status of a particular animal was not at stake; the question concerned what knowledge one must generally know to study the laws of ritual slaughter. Thus, this example shows that Lampronti did not employ medical knowledge only when presented with a difficult halakhic question, rather he believed in the intellectual efficacy, and even necessity, of reaching beyond the opinions of other rabbinic authorities and employing the knowledge and methods of contemporary science.

#### **Case 4: The Ancient Israelite Incense Offering**

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<sup>60</sup> George Newman, "A Century of Medicine at Padua," *The British Medical Journal*, Vol. 1 No. 3195 (1922): 489.

The final example that demonstrates Lampronti's reliance on contemporary medical knowledge for both the academic study and resolution of a problem within Jewish sources is found in his passage on the ancient Israelite incense offerings, the *ketoret*.<sup>61</sup> The question concerned a possible mistake made by the medieval (and Renaissance) commentators who seemed to have erroneously conflated two different plant substances of the *ketoret*. As in the prolapsed uterus case, Aviad Sar Shalom Basilea of Mantua, a contemporary of Lampronti and a respected rabbi in his own right, raised the query.<sup>62</sup>

The dilemma Basilea encountered was that the names his rabbinic predecessors provided for the substances of the incense mixture did not seem to match contemporary understandings of the properties of those plants. Basilea reviewed the pharmacological literature and even questioned some pharmacists but could not find support for the opinions of the earlier rabbinic sages. Although these commentators said that *canella* and *cassia lignea* were the same substance, the contemporary medical sources Basilea consulted all differentiated between the two.

Unlike the major cosmological issues Basilea grappled with in *'Emunat ḥakhamim*, this question concerned a seemingly minor issue of plant identification. But it troubled Basilea that he could not reconcile the opinions of such towering figures as Maimonides, Nahmanides, and

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<sup>61</sup> Isaac Lampronti, *Paḥad Yizḥak*, Vol. 11, p. 174v-175v, s.v. "*ketoret ve-samemanav*" (Lyck: Mikizei Nirdamim, 1874).

<sup>62</sup> Basilea is today chiefly known for his work *'Emunat ḥakhamim*, a defense of the Jewish faith against philosophy and science. Basilea was also a mystic and kabbalist. Thus it is of particular interest for the study of Lampronti and his circle that this question was asked by Basilea. For more on Basilea see: David Ruderman, "Kabbalah, Science, and Christian Polemics: The Debate Between Samson Morpurgo and Solomon Aviad Sar Shalom Basilea," in *Jewish Thought and Scientific Discovery* (New Haven: Yale University Press, 1995), 213-228.

even Abraham Portaleone, a fellow Italian rabbi/physician and the author of the Renaissance text, *Shiltei ha-giborim*,<sup>63</sup> with the pharmacological literature of his day.<sup>64</sup>

Lampronti responded to Basilea's question first with a general philosophy for approaching such matters: "The names of the [ancient Israelite Temple] incense and oil, and the names of the wild animals, and the pure and impure animals, and the names of the stones are not matters of received tradition and we need not treat them with the method of talmudic inquiry."<sup>65</sup> Lampronti could have left Basilea's dilemma at that -- the inability to reconcile the rabbinic sages' opinions with contrary facts was important because it involved a matter in which the sages were not all knowing. Instead, Lampronti sought to answer the question more fully and substantively by relying upon contemporary medical literature. The answer to Basilea's inquiry, Lampronti argued, could be found in the scientific dictionary of Nicolas Lemery (1645-1715), one of the most knowledgeable authorities in these matters. Lampronti translated the following passage from Lemery's work:

Cassia lignea. cassia odorata. xylocassia -- it is the bark that composes the form, the color, the taste, and the smell of canella; but it is larger, less aromatic, and has a less distinct flavor. It becomes sticky when chewed, and it melts little by little; and all this does not happen with canella. And it comes from Ceilan [Ceylon] in India; and if you mix these two trees you would not be able to distinguish one from the other, if not for their bark.<sup>66</sup>

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<sup>63</sup> Abraham Portaleone had actually embarked upon a similar mission in *Shiltei ha-giborim* by trying to make use of his contemporary medical knowledge to understand the substances of the incense offering. For an in-depth discussion of Portaleone's treatment of this subject see: Andrew Berns, *The Bible and Natural Philosophy in Renaissance Italy: Jewish and Christian Physicians in Search of Truth* (New York: Cambridge University Press, 2015), 194-229.

<sup>64</sup> Lampronti, *Paḥad Yiẓḥak*, Vol. 11, p. 174v-175v, s.v. "ketoret ve-samemanav" (Lyck: Mikizēi Nirdamim, 1874).

<sup>65</sup> *Paḥad Yiẓḥak*, "ketoret ve-samemanav," *ibid.*

<sup>66</sup> *Paḥad Yiẓḥak*, "ketoret ve-samemanav," *ibid.*; original passage is found in Nicholas Lemery, *Dizionario Overo Trattato Universale delle Droghe Semplici* (Venice, 1721), 80.

Lampronti wrote this responsum in 1733, almost forty years after he concluded his university studies at Padua. Lemery was a contemporary and a renowned French chemist who wrote a number of medical and pharmacological treatises.<sup>67</sup> Lemery's pharmacological dictionary was translated into Italian and published in Venice in 1721. So citing Lemery's dictionary is significant both because it shows the extent to which Lampronti kept current with pharmacological literature and that he relied on its authority in the resolution of a halakhic matter.

In this case, Lampronti inquired further and quoted from another scientific dictionary, provided the expert opinion of a pharmacist, and even confirmed the information with his own comparison of the available substances. Lampronti concluded that he believed the author of the *Shiltei ha-giborim* made a mistake by not distinguishing between *canella* and *cassia lignea*. He did not, however, want to dismiss Nahmanides' writings so quickly; instead he suggested that perhaps a scribe mistakenly copied Nahmanides' attribution of the quote to Maimonides: Nahmanidies in fact had referred to a different Rabbi Moses, not Moses Maimonides. According to Lampronti, Maimonides would not have made such a basic scientific mistake. Despite the weak attempt to explain away the errors of Nahmanides and Maimonides, this case unambiguously illustrates Lampronti's use of contemporary medical knowledge to clarify a matter of rabbinic discussion.

This particular example is different from the previous ones because Basilea is troubled by a discrepancy between rabbinic writing and contemporary scientific knowledge. In the other

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<sup>67</sup> Owen Hannaway, "Lemery, Nicolas," *Complete Dictionary of Scientific Biography*, Vol. 8 (Detroit: Charles Scribner's Sons, 2008), 172-175. For further discussion of Lemery see: James Partington, *A History of Chemistry*, III (London, 1962), 28-41; John Read, *Humour and Humanism in Chemistry* (London, 1947), 116-123; H el ene Metger, *Les doctrines chimiques en France du d ebut du XVIIe   la fin du XVIIIe si cle* (Paris, 1923; repr. 1969), 238-81.

cases, application of contemporary medical knowledge did not lead to a different conclusion than what would have been derived from rabbinical methods alone. Here, however, knowledge of contemporary scientific works leads one to question the conclusions of the rabbinic sources written centuries earlier. Significantly, Lampronti departed from the words of his rabbinic predecessors and instead relied upon the authority of Lemery to resolve this dilemma.

Lampronti chose contemporary science over the rabbinic tradition.

All of the preceding examples demonstrate that Lampronti internalized contemporary medical knowledge within his halakhic scholarship. He readily relied on medical works of some of the most influential physicians of the seventeenth and eighteenth centuries and without any fear of undermining the halakhic system, he integrated the sciences of pathology, botany, biology, female anatomy, animal anatomy, and dissection into his interpretations of Jewish law.

### **A System of Reconciliation**

Most of the medical material included in the *Paḥad Yitzhak* is integrated in the fashion previously discussed: to buttress Lampronti's decisions, support other authorities, and decide difficult medical matters. Cases where Lampronti identified and outwardly grappled with true conflict between the two bodies of knowledge are very limited, and such passages have been discussed by other historians.<sup>68</sup> Lampronti fundamentally saw the rabbinic and scientific systems as complementary; so, integrative endeavors characterize his work more often than

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<sup>68</sup> David B. Ruderman, "Contemporary Science and Jewish Law in the Eyes of Isaac Lampronti of Ferrara and Some of his Contemporaries," in *The Frank Talmage Memorial*, Vol. II, ed. Barry Walfish (Haifa: Haifa University Press, 1992), 211-224; David Malkiel, "Empiricism in Isaac Lampronti's *Paḥad Yitzhak*," *Materia Giudaica* 10,2 (2005): 341-351. Ruderman argues that Lampronti inconsistently employed medical knowledge towards overturning halakhic precedence. It is indeed true that Lampronti is not always consistent, but I argue that there is more logic to Lampronti's methodology than Ruderman accounted.

considerations of conflict between the two systems. Nonetheless, Lampronti was not blind to the conflicts that arose in the union of those branches of knowledge and in those instances, he employed a nuanced method of reconciliation. His willingness to employ medical knowledge to reject prior rulings was based on both the relative authority of biblical, talmudic, and post-talmudic sources as well as the level of acceptance of the scientific sources under discussion. Post-talmudic sources could readily be trumped by contemporary medical knowledge; talmudic sources could be contradicted only in cases of complete consensus among non-Jewish scholars; and scriptural authority was not to be challenged. The next section of this chapter examines how Lampronti made those distinctions in the specific cases of the “three tubes,” lice, and the “kidneys’ counsel.”

### **Overturning Post-Talmudic Sources**

The first often cited example of Lampronti’s judicial independence is his interpretation of the passage concerning the “three tubes” in Babylonian Talmud *Hulin* 45b. In the laws of ritual slaughter, the Talmud states that mammals possess three tubes [*kaneh* - a term in the Talmud that means both air passageways and blood vessels]: one splits off to the heart, one to the lungs, and one to the liver.<sup>69</sup> The towering medieval authority Rashi,<sup>70</sup> in his eleventh-century commentary on the Talmud, had explained that this passage meant that the trachea originated in the lungs and terminated in both the heart and the liver. Anatomical studies of the seventeenth and eighteenth

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<sup>69</sup> B.T. *Hulin* 45b: “Amemar said in the name of R. Nahman: There are three main vessels, one leads to the heart, the other to the lungs, and the third to the liver; the one that leads to the lungs is counted as the lungs, the one that leads to the liver is counted as the liver; but with regard to the one that leads to the heart there is the above mentioned dispute [between Rab and Samuel].”

<sup>70</sup> Rashi (Solomon Isaacides; 1040-1105) was a medieval French rabbi who composed highly influential commentaries on the Bible and Talmud. He was one of the most towering and authoritative medieval rabbis whose writings were widely studied and revered for its comprehensiveness and clarity.

centuries would unequivocally show, however, that Rashi's explanation was incorrect.

Lampronti accordingly took issue with Rashi:

And to me, the young author, Rashi's explanation is difficult to accept. Rashi explains that the tube that emanates from the lungs is the same tube that ends in the heart and the liver [the trachea is directly connected to the heart and liver]. But all the wise individuals who have studied even a small amount of the science of dissection have seen with their own eyes that this is not the case...<sup>71</sup>

Lampronti objected to Rashi's interpretation because advances in contemporary anatomy proved Rashi incorrect. Lampronti explained that in a dissection, if the liver and heart are completely separated from the lung, the lung can still be inflated. If the bronchi were directly connected to the heart and liver, that would not be the case. Rashi did not have access to the correct anatomical knowledge and he clearly also never confirmed his opinion through personal observations or nor experimentations with animal anatomy. Lampronti, therefore, did not hesitate to straightforwardly contradict the towering medieval authority.

Though the passage is an appropriate illustration of Lampronti's willingness to accept scientific knowledge that contradicts halakhah, he did not categorically give preference to medical observation. Although Lampronti rejected Rashi's uninformed and incorrect interpretation, he argued that in this case the sages of the Talmud correctly understood bovine anatomy. In Lampronti's view, a straightforward reading of the talmudic text is that the three tubes do not each branch from one source, the lungs, but rather there are three separate tubes.

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<sup>71</sup> Isaac Lampronti, *Paḥad Yiẓḥak*, Vol. 14, p. 53r-54r, s.v. "tilt'a kanei havei" (Berlin, 1887).

Lampronti thus believed that Rashi had misinterpreted the rabbis of the Talmud who had originally been correct in their understandings of anatomy.<sup>72</sup>

### Questioning Talmudic Authority

The most widely known example of Lampronti's willingness to reevaluate halakhah in light of contemporary science is his discussion of killing lice on the Sabbath.<sup>73</sup> Since antiquity, the halakhic tradition had deemed it permissible to kill lice on the Sabbath because they were not believed to be fully living creatures. Unlike fleas, which the halakhah had expressly forbidden to be killed, the rabbis had allowed the killing of lice because contemporary understandings considered them to be organisms that spontaneously reproduced. By the early modern period, however, men of science had determined otherwise. In the seventeenth century Francesco Redi observed that decomposing material did not itself generate insects, rather it provided a suitable nesting ground for the eggs to hatch. Other scientists confirmed Redi's theses and by the end of the seventeenth century the scientific community had largely rejected the idea of spontaneous generation.<sup>74</sup>

Lampronti was aware of these developments and concluded that the halakhah should be revised according to the new medical consensus:

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<sup>72</sup> Similarly, in his passage on the incense mixture Lampronti objected to the opinions of medieval (not ancient) authorities on the basis of contemporary scientific knowledge. For specific discussion of his use of medieval and ancient rabbis see: David Malkiel, "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the *Paḥad Yizḥak*," *Jewish Law Annual* 16 (2006): 93-132.

<sup>73</sup> Isaac Lampronti, *Paḥad Yizḥak*, Vol. 11, p. 21r-22r, s.v. "zeidah" (Lyck: Mikizei Nirdamim, 1874). The discussion of the passage on lice is found under Lampronti's entry on "entrapment" -- rabbinic law prohibits the entrapment of living creatures as it is a situation that would likely lead to the creature's death.

<sup>74</sup> Luigi Belloni, "Francesco Redi, biologo," *Celebrazione dell'Accademia del Cimento nel tricentenario della fondazione* (Pisa, 1958), 53-70. See also: John Farley, *The Spontaneous Generation Controversy from Descartes to Oparin* (Baltimore: The Johns Hopkins University Press, 1977).

And I the young author write that I would think that in our days when the natural scientists have observed, concluded, and wrote that all living creatures originate from eggs and all of this has been proven in clear demonstrations, that any conscientious individual should distance himself from them and not kill either a flea or a louse and thus not place himself in the situation of being obligated for a sin offering. And in this matter I say that if the sages of Israel had considered the proofs of the gentile scholars [regarding spontaneous generation] they would have reversed their position and admitted to the truth of the gentile scholars as they did regarding the matter of the rotation of the spheres.<sup>75</sup>

Lampronti here rhetorically argued that the sages of the Talmud themselves would have formulated the law differently, if only they had access to the proofs of the scholars of Lampronti's day. Lampronti nonetheless sought confirmation of his opinion from his teacher Judah Briel (1643-1722), who responded:

And in this responsum it was asked of me if in this time in which our land is filled with the scientific consensus that all living creatures are born of sexual reproduction, should it be permissible to kill a louse on the Sabbath? And I answered that we should not change our laws on the basis of the research of gentile scholars.<sup>76</sup>

Contrary to Lampronti, Briel strongly argued for the upholding of the halakhic tradition regardless of advances in scientific knowledge. In Briel's view, the rabbis had access to insight that extended beyond human levels of understanding. Like many of his predecessors and contemporaries, Briel believed in elements of the occult and that God revealed secrets of knowledge to the sages. The words of the ancient rabbis were incontrovertible because they had access to a higher level of understanding: "the opinions of scientists are incomplete because no human intellect can arrive at a true understanding of nature and creation."<sup>77</sup>

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<sup>75</sup> *Paḥad Yiẓḥak*, s.v. "zeidah."

<sup>76</sup> *Paḥad Yiẓḥak*, s.v. "zeidah."

<sup>77</sup> *Paḥad Yiẓḥak*, s.v. "zeidah."

As David Ruderman argues, Briel and Lampronti disagree on the extent to which scientific research should influence halakhah.<sup>78</sup> Briel stands as the staunch upholder of the tradition, and Lampronti as the willing emender. Ruderman's foil is correct insofar as Lampronti clearly juxtaposed his opinion with that of his teacher. But an important distinction also needs to be made. Lampronti did not disagree with the fundamental philosophy advanced by Briel. Rather, Lampronti objected to its application in this specific case which came with its own contours:

I saw the determination of the distinguished master of Torah on lice and I said: It is very well done even though it is against the usual reasoning employed in such cases; where there is uncertainty we follow the more stringent opinion and not the more lenient.<sup>79</sup>

This was a case where accepting the knowledge of non-Jewish scholars in fact led to a stricter interpretation of the law. Therefore, Lampronti did not seek to undermine the tradition but rather enhance it by incorporating recent scientific developments.

Lampronti then supported his position with another argument:

And the gentile researchers made known with clear proofs that no living creature emerges from rotting substances and no eggs generate from sweat -- rather they emerge from other living creatures. And the sages of Israel who retracted their original opinions in order to agree with gentile scholars with the matter of the rotation of the spheres pointed with a finger [themselves admitted] that not every word that is said in the Talmud is received tradition, rather the sages of Israel sometimes spoke out of reason and human research and not from the mouth of tradition. Because if that was not the case, why would they not have tried to strengthen the tradition by not retracting their original position concerning the spheres instead of following the proofs of the gentiles?<sup>80</sup>

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<sup>78</sup> David B. Ruderman, "Contemporary Science and Jewish Law in the Eyes of Isaac Lampronti of Ferrara and Some of his Contemporaries," in *The Frank Talmage Memorial*, Vol. II, ed. Barry Walfish (Haifa: Haifa University Press, 1992), 211-224.

<sup>79</sup> *Paḥad Yiẓḥak*, s.v. "zeidah."

<sup>80</sup> *Paḥad Yiẓḥak*, s.v. "zeidah."

Lampronti made two significant points here. First, the proofs of the non-Jewish scholars are irrefutable in this case. Second, the sages were not all knowing in all matters. Similar to his answer to Basilea regarding the ancient Israelite incense offering, Lampronti clearly took the view here that sometimes the sages were divinely inspired and sometimes they simply based their conclusions on the common knowledge of their day. The rabbis of the Talmud received divine revelation in some instances, but not others. In this case, Lampronti advanced the argument that the sages themselves knew this was so, because regarding the rotation of the spheres in the universe the sages of the Talmud originally held a heliocentric view and later conceded to geocentrism in line with the scientific consensus of their time.<sup>81</sup> Lampronti rhetorically asked why they would have conceded to Ptolemaic science, if the original view was based on divine inspiration. It would have strengthened their authority to completely reject the view of the non-Jewish scholars. The implication of Lampronti's analysis is that in cases where the science has irrefutably advanced, as it had with spontaneous generation according to him, the rabbinic tradition should change in line with the new consensus. As he put it in the original question addressed to Briel, even the sages would have changed their opinions if only they had access to the new science.

This was a radical, for the time, conclusion for which Lampronti then provided a caveat. The tradition should only change in cases where the proofs are irrefutable; regarding more theoretical matters, the tradition should remain unaltered. His specific example, interestingly, concerned the conclusions of Copernicus:

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<sup>81</sup> This argument concerns a passage in Babylonian Talmud *Pesahim* 94b in which Judah the Patriarch juxtaposed the rabbinic view with that of the non-Jewish astronomers and in the end stated that the opinion of the non-Jews appeared to be correct.

And if in our own time there are those gentile scholars who explain like Copernicus that the sun is stationary, there are also not an insignificant number who explain the opposite. These matters are not arithmetical sciences, that is mathematics, whereby a person is able to present clear and accurate evidence and indubitable proof until there no longer remains room for one to counter or respond. Rather, one says this and the other says that and everyone brings their own evidence in the matter.<sup>82</sup>

According to Lampronti, the matter of the rotation of the spheres was still subject to scholarly debate -- which was not an uncommon position even in the eighteenth century as his Jewish contemporaries including Tobias Cohen (1652-1729) and David Nieto (1654-1728) also held similar views and many non-Jews too were of the same opinion.<sup>83</sup> It seems from this passage Lampronti fully accepted the methods of empirical science, and its conclusions that he could observe and evaluate himself, but he was doubtful of what he perceived to be more theoretical endeavors. To him, there was an important distinction between the sciences whose proofs he could validate himself -- including mathematics and Redi's work on spontaneous generation -- and those he was unable to confirm by virtue of his own tests and observations -- such as astronomy, particularly the specific assertions of Copernicus.

A reexamination of this responsum thus shows Lampronti's more nuanced approach towards the reconciliations of science and talmudic authority. He valued medicine and the direct observation and confirmation research provided, but only in a case of uncertainty within halakhah, and when contemporary scientific knowledge and methods would lead to a more stringent interpretation of the law, or when the non-Jewish, scientific proofs were irrefutable, should it be included. In other cases the halakhah should remain on its own terms. When it

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<sup>82</sup> *Paḥad Yiẓḥak*, s.v. "ẓeidah."

<sup>83</sup> Andre Neher, "Copernicus in the Hebraic Literature from the Sixteenth to the Eighteenth Centuries," *Journal of the History of Ideas* 38:2 (1977): 211-226; David B. Ruderman, *Jewish Thought and Scientific Discovery*, 266.

came to matters inferred or postulated, what he perceived to be theoretical sciences, it was his position that the tradition should remain uninfluenced by such unobservable phenomena.

## Defending Scripture

A final example concerns how Lampronti treated rabbinic discussions of scriptural verses referencing the kidneys' ability to provide counsel. Throughout biblical texts the kidneys and the heart are referred together as the seat of understanding.<sup>84</sup> The sages of the Talmud similarly perceived the kidneys to have cognitive capacities.<sup>85</sup> Yet by the medieval period it was widely understood, especially in the Islamic world, that the brain was the only source of cognition.<sup>86</sup> To reconcile the traditional sources with the contemporary medical knowledge, various explanations for the meaning of the Bible and Talmud were proposed by medieval rabbinical scholars.<sup>87</sup>

Judah ha-Levi (1075-1141) argued that although there was room to doubt the straightforward

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<sup>84</sup> See for example: Jeremiah 17:10: "I, God, probe the heart, and examine the kidneys, and repay each man according to his ways, with the fruit of his deeds." Psalms 7:10: "...The Lord, the righteous, examines the hearts and kidneys." Proverbs 23:15-6: "My son, if your heart is wise, my heart also rejoices. My kidneys rejoice, when your lips speak with uprightness." The King James Bible translates the Hebrew *kelayot* as reins and the Jewish Publication Society (JPS) translates it as "mind" or "conscience."

<sup>85</sup> The most commonly cited and discussed is Babylonian Talmud, *Berahot* 61a-b: "The rabbis taught: man has two kidneys, one that advises him to do good, the other to do evil; and it is explained that the good one is on his right side and the bad one is on his left, as it is written: (Ecclesiastes 10:2) 'A wise man's understanding is at his right hand, but a fool's understanding is at his left.' The rabbis taught: the kidneys advise, the heart understands, the tongue articulates, the mouth finishes, the esophagus brings in and lets out all kinds of food, the windpipe gives sound, the lungs absorb all kinds of fluids, the liver causes anger, the gallbladder secretes a drop into it and allays it, the spleen produces laughter, the gizzard grinds [the food], the stomach [causes] sleep, and the nose awakens."

<sup>86</sup> In the ancient period Galen had actually already postulated that the brain controlled a person's cognitive capabilities. See Julius Rocca, *Galen on the Brain: Anatomical Knowledge and Physiological Speculation in the Second Century AD* (Leiden: Brill, 2003). But other authorities including Aristotle believed the brain served to cool the blood and the mind was controlled by the heart. It seems the sages of the Talmud followed Galen's view in some respects; for example Rabbi Judah Hanasi's statement "It appears he does not have a brain in his head." But the rabbis also clearly believed in the kidneys' cognitive capacity. This thought may have been influenced by Akkadian and ancient Babylonian medicine. See: Mark J. Geller, "Akkadian Healing Therapies in the Babylonian Talmud" (Berlin: Max-Planck-Institut für Wissenschaftsgeschichte, 2004).

<sup>87</sup> The rabbis of medieval Ashkenaz, including Rashi, did not question the literal meaning of these biblical and talmudic passages and therefore do not appear to be troubled by this matter as were the Sephardic commentators.

meaning of the texts, he nonetheless adhered to it. Abraham Ibn Ezra (1089-1164) rejected the literal meaning of the Talmud and interpreted the scriptural references allegorically.<sup>88</sup>

Nahmanides (1194-1270) argued that the kidneys were connected to the sexual organs, and thus did not control cognition, but did control the faculty of desire. Judah HaLevi and Simon b.

Zemah Duran (1361-1444) argued similarly that the kidneys functioned in the production of sperm, and thus the cognitive capacity mentioned in the scriptural texts concerned the sexual desires for good and bad.

When Lampronti took up this discussion he first defended the words of the Talmud. He argued that although the philosophers and scholars of natural knowledge had discovered many remarkable things, they could never fully understand how the world works, because they were not steeped in the secrets of God like the Jewish sages. Lampronti went on to articulate his two methods for treating confrontations between contemporary understandings of the natural world and halakhah:

And therefore when I encounter passages [in the Talmud] that pertain to matters of nature, I am inclined to explain them in one of two ways: First, according to the opinion of one of the early philosophers, even if other rabbis, in that time and subsequently, disagreed, and this is not a blemish on the wisdom of our sages because many times in these matters they did not speak from [Divinely] received tradition, as the author of the *Me'or Einayim* said in the name of Maimonides.<sup>89</sup> Second, according to the truth that was known to the wise sages but escaped the natural scientists, even if it does not seem possible to reconcile their opinions with current scientific thought.<sup>90</sup>

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<sup>88</sup> He also discusses the connection between the kidneys and the sexual organs in his commentary to Ex 23:25. This passage is discussed by Shomo Sela in *Abraham Ibn Ezra and the Rise of Medieval Hebrew Science*, 130-7.

<sup>89</sup> The *Me'or Einayim* is a skeptical treatise composed by Azariah de' Rossi in the sixteenth century. It was a controversial work, widely rejected by many rabbinic authorities, and thus it is curious that Lampronti cited this source of Maimonides, instead of quoting Maimonides directly. David Ruderman noted the significance of this citation in *Jewish Thought and Scientific Discovery*, 270.

<sup>90</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 5, p. 72v, s.v. “*kelayot yo‘aṣot*” (Reggio, 1813).

Lampronti would either assume that the sages of the Talmud did not have complete knowledge so it was acceptable to contradict their conclusions where contemporary science found otherwise, or he would assume that the rabbis had a greater access to truth even if the natural scientists seemed to be more knowledgeable.<sup>91</sup>

David Ruderman juxtaposed the kidney case with Lampronti's treatment of lice -- in one (lice) Lampronti gave preference to contemporary scientific knowledge while in the other (kidneys) halakhah was not to be contradicted -- and argued that Lampronti's attempt to clarify his position here confused it even further, as the two approaches articulated are essentially contradictory and appear to be outcome determinative rather than a methodological approach to analysis. Another explanation of these statements, however, is more convincing. Lampronti did not see the two approaches to be self-contradictory, but rather equally valid principles to be applied in different circumstances. The kidneys case was, in Lampronti's view, fundamentally different from the situation with lice. With the kidneys, if Lampronti had wholeheartedly accepted the interpretation of contemporary medical scholars he would be implying that Scripture, and therefore God, was mistaken, rather than just that the medieval rabbis got it wrong or the sages of the Talmud did not have access to the correct science. Accepting contemporary scientific conclusions here did not lead to a more strict interpretation of the law; it undermined not just the Talmud, but the biblical texts as well. That was a step Lampronti was unwilling to take. There was indeed a thoughtful reason Lampronti decided one way with lice and another with the kidneys.

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<sup>91</sup> His stated position in "*ketoret ve-samemanav*" helps to further clarify his position as there he specifies some areas of the tradition in which the sages did not have complete knowledge.

Furthermore, though other historians, specifically David Ruderman and David Malkiel, discussed this passage at length, they did not mention how Lampronti ultimately interpreted the talmudic text. Indeed Lampronti's explanation helps to further elucidate his approach towards contradictions between established tradition and contemporary science. Lampronti was not willing to interpret the talmudic passage metaphorically as other rabbis had done. Instead, he opted for the more literal and even semi-scientific explanations proposed by Judah ha-Levi, Abraham Ibn Ezra, and Simon b. Zemaḥ Duran, as previously discussed. Like them, Lampronti argued that the kidneys are connected to male sexual organs that serve both the good function of procreation and also lead to the bad desires of sexual licentiousness. Lampronti seemed to believe that there was in fact a contemporary medical basis to explain that the kidneys produce sperm so when the rabbis of the Talmud interpreted the biblical passage that says the wise heart is on the right and the simple heart on the left they were, from Lampronti's standpoint, referring to the kidneys' connection to sexual organs and desire. Though Lampronti did not here explicitly discuss or cite contemporary medical authorities on the matter, the connection between the kidneys and sexual organs could be shown anatomically with the connection of the left testicular vein to the renal vein. Andreas Vesalius, the famed anatomist, had even observed as such, though Lampronti's detailed explanation concerning the production of sperm remained tenuous from a medical standpoint. Nonetheless, in this case Lampronti chose the path that he believed stayed true to both anatomy and the literal interpretation of Scripture and the Talmud. Lampronti made every effort to adhere to both systems, and even in this most difficult case, he attempted to reconcile the two without undermining scriptural authority. He also, in this instance, continued to explain each section of the original talmudic passage as closely as possible

according to the medical theory of the day. In the remaining sections of the entry he commented on the talmudic text organ by organ, explaining their functions and in some cases even citing contemporary non-Jewish sources, such as the *Letters of Francesco Redi*, as supporting evidence.<sup>92</sup>

## Conclusions

Lampronti unambiguously integrated contemporary medical knowledge, non-Jewish authority, and empirical methods in his halakhic jurisprudence. Throughout the *Paḥad Yiṣḥak* he drew upon his educational experience at the University of Padua and his practice of medicine to determine or explain matters of Jewish ritual law. His work is characterized by this positive application far more than instances of conflict between the two bodies of knowledge. This point is the most significant one for understanding the significance of the *Paḥad Yiṣḥak*.

Nonetheless, Lampronti did not ignore the conflicts that inevitably arose between knowledge derived from halakhic and new scientific methods, nor was he inconsistent in his treatment of such matters. Lampronti indeed took different positions in the cases of the three tubes, lice, and kidney's counsel. But each of those instances was a different circumstance to be treated differently. Lampronti did not just decide in favor or against contemporary science at whim or arrive at a pre-determined outcome; there were substantive methods to his approach. He was willing to reject medieval rabbinic interpretations of natural phenomena that were not in line with his contemporary understanding, but the ancient rabbis were only objected in limited circumstances, when non-Jewish men of science had offered clear evidence and when acceptance

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<sup>92</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 5, p. 72v, s.v. “*kelayot yo‘aẓot*” (Reggio, 1813).

of their research did not undermine the tradition but rather led to a more stringent interpretation of the law. In all other talmudic and biblical passages, Lampronti believed the sages had access to the highest levels of understanding that no mortal research could attain.

This chapter's analysis illustrates the complexity of the confrontation between scientific and rabbinic authority encountered by Padua's rabbi/physicians in the eighteenth century. The emergence of new approaches and practices in the field of medicine in the period presented a particular challenge for rabbis committed to the divinely rooted traditions of the past. There were three potential responses to this problem: ignore it, reject one of the systems outright, or attempt to reconcile the two. Lampronti, we now know, chose the latter. He strongly believed that contemporary medical knowledge, specifically non-Jewish texts and empirical investigation, was a source of truth that enhanced the traditions of rabbinic scholarship and practice. He was not blind to the conflicts that arose in the union of these branches of knowledge and he thought some of those instances warranted reconsideration in light of new discoveries while others did not. Lampronti was ultimately unwilling to reject the value of new medical knowledge and its usefulness within the framework of old traditions. He was thus forced to create for himself a system in which he could hold two seemingly incompatible truths.

## CHAPTER 5: Experience is Proof: Texts versus Observation

The complexity of Lampronti's reconciliation was not unusual in the broader scientific context, but rather very much a part of the culture of his time. Though historians once saw the period as marking a great separation between religion and secularization, in recent decades scholars have shown the nuanced religious thought of the major figures in early modern science.<sup>1</sup> René Descartes, Isaac Newton, Robert Boyle, and Gottfried Wilhelm Leibniz all maintained fidelity to God and religious tradition to varying degrees.<sup>2</sup> The era did not witness a strict triumph of secular science over religious belief; rather numerous middle positions, creative integrations, and conflicting views characterized the thought of early modern practitioners of

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<sup>1</sup> For an introduction to these issues see: John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press, 1991); Allison P. Coudert, *Religion, Magic, and Science in Early Modern Europe and America* (Santa Barbara, California: Praeger, 2011); Rivka Feldhay, "Religion," in *The Cambridge History of Science: Volume 3, Early Modern Science*, eds. Katharine Park and Lorraine Daston (Cambridge: Cambridge University Press, 2006), 727-755.

<sup>2</sup> For example: Descartes advanced a mechanistic theory of the origins of the Earth (the universe grew from the inherent motion in matter), but still left a place for God in that mechanism. According to Descartes, God could be found in the random movement of atoms. Newton and Boyle nonetheless saw Descartes' approach as heretical. Newton in particular maintained fidelity to the biblical text as the primary framework for understanding creation. According to his approach, creation occurred outside of natural law, though natural law governed the remainder of history. Leibniz stood somewhere in the middle of Descartes and Newton: Leibniz ascribed to Descartes' mechanism but believed God chose the best universe from an array of infinite possibilities. For an overview of these issues see: Paolo Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico*, trans. Lydia G. Cochrane (Chicago: The University of Chicago Press, 1984), 41-47; Daniel Garber, "Physics and Foundations," in *The Cambridge History of Science: Early Modern Science*, eds. Katharine Park and Lorraine Daston (Cambridge: Cambridge University Press, 2008), 21-69. For more on Descartes see: Daniel Garber, *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science* (Cambridge: Cambridge University Press, 2001); Matthew Jones, *The Good Life in Scientific Revolution: Descartes, Pascal, Leibniz, and the Cultivation of Virtue* (Chicago: University of Chicago Press, 2006); Dennis Des Chene, *Spirits and Clocks: Organism and Machine in Descartes* (Ithaca: Cornell University Press, 2001); Stephen Gaukroger, *Descartes, An Intellectual Biography* (Oxford: Oxford University Press, 1995). For more on Newton see: James Force and Richard Popkin eds., *Essays on the Context, Nature, and Influence of Isaac Newton's Theology* (Boston: Kluwer, 1990); Scott Mandelbrote, "Isaac Newton and Thomas Burnet: Biblical Criticism and the Crisis of Late Seventeenth-Century England," in *The Books of Nature and Scripture: Recent Essays on Natural Philosophy, Theology, and Biblical Criticism in the Netherlands of Spinoza's Time and the British Isles of Newton's Time*, eds. Force and Popkin (Boston: Kluwer, 1994) 149-178; Matt Goldish, "Newton on Kabbalah," in *The Books of Nature and Scripture*, eds. Force and Popkin, 89-104; James Force, "The God of Abraham and Isaac (Newton)," in Force and Popkin, 179-200. For more on Boyle see: Michael Hunter, *Boyle: Between God and Science* (New Haven: Yale University Press, 2009). For more on Leibniz see: Allison Coudert, Richard Popkin, and Gordon Weiner eds., *Leibniz, Mysticism, and Religion* (Dordrecht: Kluwer Academic Publishers, 1998); Maria Rosa Antognazza, *Leibniz on the Trinity and the Incarnation: Reason and Revelation in the Seventeenth Century*, trans. Gerald Parks (New Haven: Yale University Press, 2007).

science. Scholars now describe the relationship between science and religion in the period in reciprocal terms: religious devotion shaped early modern science and science in turn shaped religious devotion. This chapter addresses the messiness of those relationships and the complex intersections between the early modern religious and scientific systems. It shows that like some of his non-Jewish counterparts, Lampronti embraced the empirical method, but he did not wholly reject older systems. Instead, he sought integration.

The chapter begins with a comparative analysis of one of Lampronti's contemporaries, the renowned Italian physician Antonio Vallisneri, who presents the best contemporary non-Jewish, Italian analogue to Lampronti. It highlights the significance to Vallisneri of the empirical method and discusses the evolution of empiricism throughout the medieval and early modern periods. The chapter then explores how Lampronti weighed textual and empirical sources of authority through analysis of three examples from the *Paḥad Yiṣḥak*. Lastly, the novelty of Lampronti's approach is contrasted with those of his central European rabbinic counterparts.

### **Antonio Vallisneri *On Marine Bodies***

Antonio Vallisneri (1661-1730) was one of the most renowned medical scholars of his era, an advocate of experimental philosophy, who imparted empirical methods to his students through his lectures and scientific demonstrations. Vallisneri was a key figure in early modern Italian science, both through his research and his role in disseminating contemporary scientific knowledge beyond the scholarly community.<sup>3</sup> Vallisneri was a close disciple of the famed

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<sup>3</sup> Michael Cunningham, "Seashells on the Mountains: Antonio Vallisneri, Fossils, and the Republic of Letters," (PhD diss., University of Connecticut, 2005), 18-19.

experimental biologists Marcello Malpighi and a friend of Francesco Redi.<sup>4</sup> In 1700, Vallisneri assumed the professorship of practical medicine at Padua and in 1709 transitioned to the illustrious post of first professor of theoretical medicine. A short time later he, along with Apostolo Zeno and Scipione Maffei, founded the foremost Italian academic journal of the time, *Giornale de' letterati d'Italia*.<sup>5</sup> We also know Vallisneri had contact with Lampronti's Jewish circle. Vallisneri functioned as an intermediary in the exchange of letters between European scholars and Jewish physicians in Lampronti's cohort at Padua. Vallisneri also served as promoter for both of Lampronti's sons' graduation exams.<sup>6</sup> Though thorough research did not uncover any evidence that Lampronti himself corresponded with Vallisneri, we know they studied and worked in the same orbit.<sup>7</sup>

An examination of Vallisneri's approach to natural evidence and religious tradition, which follows, elucidates that Lampronti's methods and reconciliations were a product of his

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<sup>4</sup> Vallisneri identified himself as such in a letter he wrote to Hans Sloane in 1703. Vallisneri also wrote there that he was dedicated to observation and experiment. Rhoda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997), 23.

<sup>5</sup> The *Giornale de' letterati d'Italia* is explained at length in Chapter 6.

<sup>6</sup> A promoter was a position similar to a dissertation sponsor in today's academic system. For Salomon Lampronti's degree see: ASUPd, ms. 290, p. 188-189. For Samuel Lampronti see ASUPd, ms. 290, p. 219

<sup>7</sup> As discussed in Chapter 3, a closer connection can be drawn between Lampronti and Morgagni, but I could not locate any work of Morgagni's that would serve as a useful comparison for Lampronti's religious thought. Vallisneri presented the better religious case to analyze for this study.

time and place. The analysis of Vallisneri's religious thought is based upon both a primary reading of his work, *De Corpi Marini (On Marine Bodies)*, and secondary scholarship.<sup>8</sup>

To best understand Vallisneri's work it is first necessary to explain the primary subject of his religious conflict and the broader discourse in which it was situated. One of the major questions at the intersection between science and religion in the late seventeenth and early eighteenth centuries concerned the compatibility of natural evidence seen in fossils and the veracity of the biblical creation and flood stories.<sup>9</sup> Fossil remains of once living sea-creatures found on the sides of mountains far from ocean waters seemed to imply that the Earth was much older than the one described in Scripture.<sup>10</sup> Natural historians of the time generally accepted the accuracy of the scriptural narrative. For many, the question to be addressed was whether studies of the natural world would confirm the biblical stories or would relegate them to the supernatural. Particularly popular in the second half of the seventeenth century was the attempt

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<sup>8</sup> Vallisneri was an important figure in the European scientific community in the early eighteenth century, but has been largely ignored, as evidenced by paltry academic studies of his life and work. Following the 1730 publication of his biography, he has been the subject of a few studies in Italian. See for example: Paola Masat Lucchetta, *A.V. Medico naturalista: Scienza e filosofia nel Settecento* (Venice: Cafoscarina, 1984). For a useful bibliography of studies on Vallisneri see: Mario Sabia, *Le opere di Antonio Vallisneri: medico e naturalista reggiano, 1661-1730: bibliografia ragionata delle opere vallisneriane* (Rimini: Luise, 1996). Despite these Italian works, Vallisneri is rarely or at best cursorily mentioned in broader histories of science in Europe in the period; and when he is mentioned it is only in a cursory fashion. In March 2000, Dario Generali and Ivano Dal Prete launched the Milan based *Edizione Nazionale delle Opere di Antonio Vallisneri*, an impressive project to catalogue and eventually digitize and publish in critical editions some 12,000 letters Vallisneri wrote and received during his lifetime from 800 correspondents throughout Europe. These letters are beginning to form the basis of important scholarly treatments of Vallisneri; hopefully the correspondences will be a useful tool for integrating Vallisneri in the broader European framework. The following analysis draws on a few studies that feature Vallisneri and his writings on fossils: Michael Cunningham, "Seashells on the Mountains: Antonio Vallisneri, Fossils, and the Republic of Letters," (PhD diss., University of Connecticut, 2005); Rhoda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997); Paolo Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico*, trans. Lydia G. Cochrane (Chicago: The University of Chicago Press, 1984). Cunningham, Rappaport, and Cochrane translate significant sections of Vallisneri's work that I draw upon in this study. In each case, unless otherwise noted, I read and checked the original sources before relying upon these translations.

<sup>9</sup> The best introduction to the subject is: Rhoda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997).

<sup>10</sup> Some scholars rejected the organic origin of fossils arguing that fossils merely appeared to be in the form of sea-creatures and were not actually the remains of them. For more on this see: Rappaport, 105.

to reconcile the theories, an approach advanced especially by the English scholars Thomas Burnet (1635-1715) and John Woodward (1665-1728). Thomas Burnet's *Sacred Theory of the Earth*, first published in Latin in 1681, argued that where there is no natural evidence contrary to the biblical text, the Bible should be interpreted literally. Where there is contrary evidence, however, it must be confronted, and the biblical text reinterpreted in line with nature.<sup>11</sup> The weakness of Burnet's theory was his failure to address important specifics, most conspicuously the absence of a discussion of fossils. Burnet's chief critic, John Woodward, filled that void. Woodward argued that fossils were organic in origin but they were found where the biblical flood deposited them. According to Woodward, the flood completely destroyed the composition of all earthly matter, even rocks and mountains dissolved. After the flood, as the earth began to solidify again, organisms became lodged in the other matter leaving fossil remains.<sup>12</sup>

Vallisneri's treatise on the subject, *De Corpori Marini (On Marine Bodies)*, engaged the theories of these two scholars in particular.<sup>13</sup> Like them, Vallisneri could not fully explain the flood in naturalistic terms; he accepted the authority of the biblical narrative. Vallisneri did not, however, believe the flood destroyed Earth's entire surface and proved this point with recourse to the biblical text itself. If, as Woodward claimed, the universal flood entirely destroyed everything on Earth rather than just its human occupants, how could the dove have brought back an olive branch? How did an olive tree survive the flood or where would an olive tree have

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<sup>11</sup> Rappaport, 149.

<sup>12</sup> The works of Burnet and Woodward had their shortcomings; nonetheless, the diluvialist position, that the biblical flood was in fact responsible for depositing seashells in mountainous rock, remained the norm until at least 1750.

<sup>13</sup> Antonio Vallisneri, *De' corpi marini, che su' Monti si trovano, della loro orinine; e dello stato del Mondo avanti 'l Diluvio, nel Diluvio, e dopo il Diluvio: Lettere critiche* (Venice, 1721); Antonio Vallisneri, *De' corpi marini, che su' monti si trovano*, 2nd edition, (Venice, 1728).

grown?<sup>14</sup> The purpose of the flood according to Scripture was to destroy people, the evil of humanity, not to change the natural composition of Earth.<sup>15</sup> Furthermore, if Earth's crust and all its solid objects including mountains were completely destroyed, how did organisms survive and lodge themselves in rock?

Another inconsistency with nature Vallisneri encountered was how enough water rained down as to cause a universal flood. Natural historians generally agreed that 40 days of rain would not have been sufficient to flood Earth's entire surface. Therefore, some of the flood waters must have come from somewhere else — a great abyss, they posited, opened up and unleashed its fury onto Earth. Vallisneri, however, could not accept this explanation: "Where did it open, this horrendous chasm that absorbed half a world of water and gulped it down into the Earth? And why is the rift, or at least something of its vestiges, not visible [now]?"<sup>16</sup> Vallisneri also questioned how massive subterranean water sources would not vaporize due to the hot magma of Earth's crust. He thus rejected the theory that water was stored in caverns deep within the earth and released at the start of the flood.

Another significant challenge Vallisneri faced was Francesco Redi's findings disputing the concept of spontaneous generation, which meant that the ark could not contain all living creatures. The conspicuous absence of insects in the ark, according to the biblical account, had meshed well with the theory of spontaneous generation.<sup>17</sup> According to this theory, insects did

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<sup>14</sup> Vallisneri, *De' corpi marini*, 61.

<sup>15</sup> Vallisneri, *De' corpi marini*, 49.

<sup>16</sup> Vallisneri, *De' corpi marini*, 91; translation by Cunningham, 169.

<sup>17</sup> It is also important to consider Vallisneri's own work on insect generation, especially his treatises, *Dialogues on the Curious Origins of Many Insects* (1696-1700) and *History of the Generation of Man and Animals* (1721). For more on the issue of generation specifically see: Elizabeth B. Gasking, *Investigations into Generation 1651-1828* (Baltimore, Johns Hopkins Press, 1967).

not need to be on the ark because they would regenerate after the flood. But once Redi had shown that to be impossible, the only way to explain the presence of insects in the eighteenth century and remain faithful to the literal biblical narrative was to believe they were on the ark. All species of insects and the fauna required to sustain them, however, would have posed a problem for the space constraints of the ark. Vallisneri thus concluded that it was impossible for the ark to contain all living beings.<sup>18</sup>

For Vallisneri, as for Lampronti, Redi's conclusions were powerful. Vallisneri himself was committed to the study of insect generation and even recreated some of Redi's experiments in the effort to verify them, which he did while adding evidence to Redi's work but also noting some shortcomings.<sup>19</sup> In the last decades of the seventeenth century, Vallisneri and Lampronti's writings indicate that Redi's findings were wholly accepted by at least some segments of the Italian scientific community even as there were still those who opposed Redi.<sup>20</sup>

Vallisneri reconciled the scientific and religious descriptions of the flood with a simple supposition: the flood was limited to Asia. In his words, there was a "more natural and simpler cause, one more in conformity with the laws of the Great Mother, who, even in her oddities and her errors, knows her own limits and neither knows how to nor is able to escape out of those limits, except on the explicit command of the Most High."<sup>21</sup> As the flood was to intended to

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<sup>18</sup> Cunningham, 171.

<sup>19</sup> Brendan Dooley, *Science, Politics, and Society in Eighteenth-Century Italy: The Giornale de' letterati d'Italia and its World* (New York: Garland Publishing, 1991), 24.

<sup>20</sup> For an analysis of the persistence of the belief in spontaneous generation, see: Everett Mendelsohn, "Philosophical Biology vs. Experimental Biology: Spontaneous Generation in the Seventeenth Century," *Actes du XIIIe Congrès international d'histoire des sciences* (Paris), 1, B, 201-26. According to Howard Adelman, Vallisneri and his colleagues considered the debate resolved and poked fun at those who continued to believe in spontaneous generation: Howard Adelman, *Marcello Malpighi and the Evolution of Embryology (5 vols)* (Ithaca: 1966), 1: 636.

<sup>21</sup> Vallisneri, *De' corpi marini*, 31; translation by Rossi, *Dark Abyss*, 76.

destroy the human population and according to Vallisneri, most of the world's population at the time lived in Asia, a local flood would accomplish the goal. Confining the flood to Asia also explained how 40 days of rain would be enough to cause the flood and why insects and their needed fauna could be excluded from the ark.

Vallisneri thus used his knowledge of the natural world to interpret Scripture. He accepted as truth the outlines of the biblical story and fit his understanding of natural evidence into the narrative. In doing so, however, he drew some radical conclusions for the time: the flood was not universal to the entire globe and the Earth probably had a history much longer than 6000 years.<sup>22</sup> It was also unlikely, to Vallisneri, that the Earth as he knew it was created all at once, over the course of a few days, as he wrote:

Nevertheless, anyone who is not blind can see that the structure of the mountains, where they are worn to the rock or laid bare, is very different from that of the plains, where deep wells are dug. He will see a layer of round or blunted stones...and above this another layer of smaller stones, and in a third a layer of sand, and finally earth; and he can see this order repeated again in other places, and again above these, in other places up to the top of the mountain, which shows clearly that the mountain was made in several different times and by several inundations, not just by one.<sup>23</sup>

Vallisneri did not, however, remove God from the equation. He argued:

God therefore formed the world in layers, and he also set laws for the elements, for motion, and for nature, so that his fundamental and essential layers would always be conserved, and so that the alterations, which we see occurring through subterranean fires or other causes would all be directed to his purposes, even if these changes were unimportant details, considered in relation to that great whole, and were of little importance to the massy bulk, so to speak, of the most admirable structure ordained by Him. Indeed, God chose to establish an order in such a way that if somethings were ruined, others would continually be regenerated, but that the first bases would for ever be

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<sup>22</sup> Rappaport, 197.

<sup>23</sup> Vallisneri, *De' corpi marini*, 56-57; translation by Rossi, *Dark Abyss*, 77.

solid, and the primal, immeasurable framework of the mountains would never be unhinged or removed.<sup>24</sup>

In another place he argued even more forcefully for God's role in nature:

When we can explain things without recourse to the omnipotent hand of God, this is more philosophical and does not diminish but increases the glory of the great Master who constructed the great machine in such fashion that what often appears miraculous to us really is subject to laws, even if these may be beyond our understanding.<sup>25</sup>

To Vallisneri, the complexity of creation and the autonomy of nature were testaments to God's glory.

Some historians have argued that the seeming contradictions in Vallisneri's thought were a result of self-censorship. He had to profess a religious view in order to get his work passed by the censors, read, and accepted. His written works, according to these historians, do not accurately reflect his real beliefs.<sup>26</sup> It is also possible, however, that Vallisneri's pious declarations were authentic, that he held in his mind a complex and seemingly contradictory worldview, while seeing himself as a devout Catholic.<sup>27</sup> Galileo too perceived himself to be a religious man and not the hero of secular science as history once claimed. Descartes, Leibniz,

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<sup>24</sup> Vallisneri, *De' corpi marini*, 73-4; translation by Rossi, *Dark Abyss*, 77.

<sup>25</sup> This quote is drawn from Vallisneri's 1708 review of Woodward's treatise published in *La Galleria di Minerva: Galleria* 6 (1708), 17; translation by Rappaport, 167.

<sup>26</sup> Vincenzo Ferrone, Rhoda Rappaport, Dario Generali, and Saverio Tucci are of this view. Vincenzo Ferrone is the most extreme. He argues that Vallisneri was an "intellectual militant in favor of modern, secular, Galilean science based on his hypothesis of mechanism": Vincenzo Ferrone, *The Intellectual Roots of the Italian Enlightenment*, trans. Sue Brotherton (Atlantic Highlands: Humanities Press, 1995), 106. For the others, see especially: Rhoda Rappaport, "Italy and Europe: the case of Antonio Vallisneri (1661-1730)," *History of Science* 29 (1991): 73-98; Dario Generali, "Repubblica delle lettere fra censura e libero pensiero," *Intersezioni*, Anno VI, n. 1 (April, 1986): 73-94; and Saverio Tucci, "Il parlare della S. Scrittura e l'operare della natura: gli interrogativi della geologica storica nella riflessione di Antonio Vallisneri," *Contributi* 1 (1983): 5-37. The question of Vallisneri's sincerity in his writing and the way it was written is largely a historiographical problem that says more about the way historians wrote about early modern science than early modern science itself.

<sup>27</sup> Rossi and Cunningham also advance this argument. See: Rossi, 78-9; Cunningham, 189-0. Cunningham especially emphasizes that there is no evidence that shows Vallisneri was trying to secularize society, as Ferrone implied.

and Newton also did not abandon God.<sup>28</sup> Physico-theology<sup>29</sup> was an important intellectual strain in the eighteenth century and the attempt to reconcile competing views and simultaneously hold two seemingly incompatible ones was part of the culture of the time. There is good reason to argue that Vallisneri was not trying to impeach religion, he wanted to enhance its credibility. He believed natural and civil history were compatible, complementary endeavors, and that civil history began with Scripture.<sup>30</sup>

Lampronti did not participate in the larger debates with which Vallisneri engaged -- questions concerning the origins of the universe, its age, and the process of its development -- although Lampronti did embrace the same fundamental methodologies that provoked those questions. Vallisneri believed truth was acquired through empirical investigation and that one could and should try to integrate such knowledge with religious texts. A thorough explanation of the nature of Vallisneri's commitment, the meaning of empirical methods according to historians of science, and the evolution of the place of experiment, observation, and experience in medieval and early modern science is thus requisite for fully understanding Lampronti's work. An analysis of these issues follows.

Vallisneri's commitment to empiricism was initially fostered by his mentorship with the famed biologist Marcello Malpighi and the instruction of anatomist Girolamo Sbaraglia during his student years at the University of Bologna. The innovative work of these two scholars,

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<sup>28</sup> As mentioned in the introduction to this chapter.

<sup>29</sup> Physico-theology is a term used to describe a seventeenth- and eighteenth-century phenomenon in which scholars tried to reconcile natural philosophy and Christian theology. It was particularly popular in England where the Boyle lectures were established as a public forum to consider such issues. The term physico-theology was used in the title of a significant work based on a series of Boyle lectures: William Derham, *Physico-theology: Or, a Demonstration of the Being and Attributes of God from his Works of Creation* (1713). As mentioned in Chapter 2, Lampronti cited Derham's *Physico-theology* and was obviously aware of his work. Regarding the substance of this Chapter, the influence of physico-theology is largely seen in Thomas Burnet's work.

<sup>30</sup> Rappaport, 87-8.

especially in teaching through experimental demonstration, inculcated in Vallisneri a faithfulness to the validity of acquiring scientific truth through close observation and testing of real world circumstances.<sup>31</sup> Subsequent to his student years, Vallisneri sought empirical knowledge by making the acquaintance and observing the practice of anatomists, pharmacists, and physicians throughout Italy, including individuals such as Jacobo Grandi, Lodovico Testi, and Pompeo Sacco.<sup>32</sup> His curiosity unsatisfied, Vallisneri devoted his life to learning as much as he could about the natural world, through collecting natural specimens, traveling to mountains and fields to observe nature, and sharing with his students his knowledge and the means through which he acquired it.<sup>33</sup>

Throughout his works Vallisneri advanced what he called a “hands in the dough” approach: one must closely observe and test nature in order to understand how it works.<sup>34</sup> And indeed much of his research and writing concerned direct experience and observation. By the end of the seventeenth century he had filled eleven volumes with minute observations of the natural world. He was highly confident of the value of observation, as he frequently stated that

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<sup>31</sup> Dooley, 22.

<sup>32</sup> Dooley, 23. Jacobo Grandi was a Venetian anatomist whose demonstrations excited scholars throughout Italy, including Francesco Redi. Lodovico Testi was a pharmacist who invented a method to turn milk into a substance useful for treating gout. Pompeo Sacco, as seen in Chapter 3 (listed as Pompeo Sachi on Lampronti’s graduation certificate), was a professor at Padua who advocated heavily for greater teaching of experimental methods.

<sup>33</sup> Dooley, 23.

<sup>34</sup> Vallisneri to Vogli, 24 June 1721, BUB, Carteggio Vogli, Ms. 2086,15 vol. II, letter 25. Cited from Cunningham, 50. I was unable to see the original copy of this letter and identify the Italian or Latin equivalent of what Cunningham translated as “hands in the pasta.” I thank Francesca Bregoli for informing me that the Italian expression is “*avere le mani in pasta*,” which is best translated as “hands in the dough” and in English idiom means, “to get your hands dirty.”

anyone with keen eyes would see and draw conclusions similar to his.<sup>35</sup> He even once explicitly aligned his method with that of Francis Bacon, an early advocate of scientific empiricism: "One must not look at nature from afar, as if from a high tower, occupying ourselves with vain speculations; [as] said the great Francis Bacon...one must descend and draw near the particulars, seeing them with scrupulous exactness, then one finds a more useful and true understanding."<sup>36</sup> In his work on generation of insects, Vallisneri explicitly criticized the adherents of Aristotle's theory of spontaneous generation. Vallisneri believed knowledge of the natural world was hindered by incorrect and unquestioned theoretical understandings.<sup>37</sup> Vallisneri respected the ancients and did not want to abandon their work, but he also did not believe that their theories should always override empirical understandings of nature. In fact, he argued that the greatest contribution of the ancients actually lay in their *empirical* investigations; according to Vallisneri, Aristotle and Galen observed the natural world and constructed their theories from those observations.<sup>38</sup> To support this point, Vallisneri framed his first influential work, *Dialogues on the Curious Origins of Many Insects* (1696-1700), as a series of imagined dialogues between Pliny and Malpighi, in which they discussed the extent to which the work of the ancients should be viewed as authoritative. Vallisneri placed Pliny and Malpighi on equal footing as respective representatives of ancient and contemporary science, and even had Pliny articulate many of the arguments in favor of experiment and observation. Such questioning, however, should not be

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<sup>35</sup> For example: "We now return to the ancient authorities' occult generation, to the spontaneous production of living beings, plastic spirits, and the designs of the wandering breeze... we are tempted anew by the obscure stench of ancient ignorance; I hold this maxim in little esteem, and do not wish to lose time by refuting it, since those with keen eyes can see for themselves that it is falling, or already fallen." Vallisneri, *De Corpi marini*, 16; Cunningham, 154.

<sup>36</sup> Cunningham, 134.

<sup>37</sup> He criticized his teacher Sbaraglia for his uncritical acceptance of the Galenic three-spirit theory. Dooley, 24.

<sup>38</sup> Dooley, 24.

confused with complete abandonment. Vallisneri still very much respected and worked within the theories and intellectual models established by his ancient predecessors. In his first lecture as professor at the University of Padua, for example, Vallisneri advocated an experimentalist approach, while stating clearly that “moderns support the ancients.” The two, he argued, should go hand-in-hand.<sup>39</sup>

Vallisneri’s frequent correspondence with the Royal Society of London provides some insight into the nature of his empirical leanings and the novelty of these methods in the early modern period. The Royal Society of London was not only a centering point for scholars throughout Europe committed to acquiring knowledge of nature especially through experiment and observation, it is the place where the articulation of the significance of those views has been best investigated and understood by historians.<sup>40</sup> Steven Shapin and Simon Schaffer, for example, examined the meaning of experimental practices and their systematic and institutionalized establishment as a proper means of acquiring natural knowledge through examination of Robert Boyle’s (1627-1691) work in pneumatics and on the air-pump, and the opposition he faced from Thomas Hobbes (1588-1697).<sup>41</sup> Though Hobbes is mostly remembered

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<sup>39</sup> The original manuscript of Vallisneri’s lecture has been lost, but the content is discussed in a 1733 biography of Vallisneri, edited by Dario Generali: Giovanni Artico Di Porcia, *Notizie della vita, e degli studi del kavalier Antonio Vallisneri*, ed. Dario Generali (Bologna: Patron, 1986), 65-74. See Dooley and Cunningham for secondary reference to the lecture: Brendan Dooley, “*La scienza in aula nella Rivoluzione scientifica: dallo Sbaraglia al Vallisneri*,” *Quaderni Storici dello Studio di Padova* 21 (1988): 27; Cunningham, 51. According to Dooley, who examined and analyzed Vallisneri’s lecture notes, Vallisneri’s lectures often began with the ancients. Though he would often spend the majority of time talking about recent discoveries, sometimes his own, he did not entirely abandon ancient theory in his teaching. Dooley, 27.

<sup>40</sup> See for example the work of Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985); Michael Hunter, *Establishing the New Science: the Experience of the Early Royal Society* (Wolfeboro, N.H.: Boydell Press, 1989); Michael Hunter, *Boyle: Between God and Science* (New Haven: Yale University Press, 2009).

<sup>41</sup> Despite the problems some historians have identified with Shapin and Schaffer’s work (for example Michael Hunter’s critique that Shapin and Schaffer exaggerate Boyle’s preoccupation with Hobbes: Hunter, *Boyle*, 275), I discuss Shapin and Schaffer’s study specifically here because of the usefulness of their articulation of what the experimental method meant in that period and how it established scientific truth.

for his political writings, he was also, in his time, an important natural philosopher. And unlike Boyle, Hobbes believed that experiment could never yield a degree of certainty necessary for validating understandings of nature.<sup>42</sup> Boyle met this opposition by providing multiple means through which scientific experiment established “facts” and those “facts” came to be viewed as credible. According to Shapin and Schaffer, there were three technologies in the mechanics of fact-making: material, literary, and social.<sup>43</sup> The “material technology” constituted the construction and operation of the air-pump. The “literary technology” was the means of making the phenomena known to others. And the “social technology” consisted of the evaluation of knowledge-claims among experimental philosophers.<sup>44</sup> The latter two technologies will be explored in greater depth in the next chapter and explained with respect to Lampronti’s work. For the purposes of this Chapter, further explanation of the first technology helps to better elucidate what validated the empirical method for individual scholars, including Vallisneri and Lampronti. The empirical man of science considered perceptual experience paramount for understanding nature. The eye was the most important of the senses; unaided, however, it could only see so far. The use of tools and machines, such as the microscope, telescope, and air-pump, was thus requisite and provided some discipline for best seeing and understanding the world.

The use of observation in the natural sciences was certainly not entirely novel in the seventeenth century. Individuals always made observations concerning the world around them. Its significance in the academic sciences prior to the early modern period, however, was never

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<sup>42</sup> Shapin and Schaffer, 22.

<sup>43</sup> Shapin and Schaffer, 25.

<sup>44</sup> Shapin and Schaffer, 25.

formal and always secondary and subordinate to theory.<sup>45</sup> Further explanation of the evolution of observation and experience and their place in the natural sciences according to the research of historians Katharine Park, Gianna Pomata, Lorraine Daston, and Peter Dear, in particular, helps to better understand and situate the commitments of Vallisneri and Lampronti.<sup>46</sup>

In the late sixteenth and early seventeenth centuries the specific Latin words *observatio* and *experimentum* (and their vernacular cognates), which indicated experiential practices, began to be linked in new and more frequent ways in physician case studies and other medical and scientific literature.<sup>47</sup> Variations of these words had been used in scientific literature prior, although they carried different meanings and implications.<sup>48</sup> For example, Aristotle frequently employed the Greek term *teresis* (which translates to *observatio*) to describe animal behavior. His specific intent with the word was not test or trial, but rather attentive waiting. Indeed Aristotle's method was not experimental and experience played a minor role. According to Peter Dear, experience in the Aristotelian sciences was rooted in common axioms; it was used to

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<sup>45</sup> As stated in the Introduction to this study, despite the anachronism of the use of the word "science" for the early modern period it has heuristic benefits. In this section "science" (unless otherwise qualified) is meant to refer to the broad complex of premodern scientific practices, including the wide range of formal and informal attempts to understand the natural world. The terms "academic sciences" and "learned sciences" are meant to distinguish the formal, elite activities bound primarily to institutions such as universities, from other informal natural endeavors, including the practices of healers of various sorts.

<sup>46</sup> The best and only study of scientific observation specifically is: Lorraine Daston and Elizabeth Lunbeck, eds., *Histories of Scientific Observation* (Chicago: University of Chicago Press, 2011). The volume contains a collection of essays on the subject; most important for my premodern summary are the articles by Katharine Park, Gianna Pomata, and Lorraine Daston. Peter Dear's work on experience and Lorraine Daston's on objectivity are additionally important for understanding the substance and meaning of scientific methodologies: Peter Dear, *Discipline and Experience: The Mathematical Way in the Scientific Revolution* (Chicago: University of Chicago Press, 1995); Lorraine Daston, *Objectivity* (New York: Zone Books, 2007). Other useful studies of early modern scientific experience are: Barbara J. Shapiro, *A Culture of Fact: England, 1550-1720* (Ithaca: Cornell University Press, 2000); Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: Chicago University Press, 2004); Gianna Pomata and Nancy G. Siraisi, eds., *Historia: Empiricism and Erudition in Early Modern Europe* (Cambridge, Mass.: MIT Press, 2005); Jutta Schickore, *The Microscope and the Eye: A History of Reflections, 1740-1870* (Chicago: University of Chicago Press, 2007).

<sup>47</sup> Lorraine Daston and Elizabeth Lunbeck, eds., *Histories of Scientific Observation* (Chicago: University of Chicago Press, 2011), 3.

<sup>48</sup> The specific language used is significant as the same or similar words meant different things in different contexts.

derive statements that were perceptible by all, such as “the sun rises in the east.” The authority of experience in Aristotelian sciences thus only extended to universal behaviors; particular observations had no authority. Aristotelian sciences also to some extent disallowed experimental methods because they interfered with the goal of studying final causes; animal behavior for example was not studied to understand what animals did but for what purposes their behaviors served. In other words, observation was employed to gain *philosophical* knowledge. To that end, experimentation could interfere with interpretation.<sup>49</sup>

In the medieval period observation was primarily limited to the non-Aristotelean sciences: astronomy, astrology, and weather.<sup>50</sup> Katharine Park’s careful analysis of astrological books shows that even in those realms experience and observation were understood as practices with no formal place in the learned sciences.<sup>51</sup> She shows that observation never merited its own genre in the medieval period and was typically employed as a supplement to scholarly analysis, as can be discerned from the marginalia of various book in which observations were recorded. Weather observations were often written in the margins of almanacs and astrological observations on the edge of astrological treatises.<sup>52</sup>

In the fifteenth century, artisans began paying more attention to the detail of natural phenomena (as is well known by the work of Leonardo da Vinci in particular), but the academic curriculum of this period still retained a non-empirical focus that privileged knowledge based in

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<sup>49</sup> Peter Dear, “The Meanings of Experience,” in *The Cambridge History of Science: Volume 3, Early Modern Science*, eds. Katharine Park and Lorraine Daston (Cambridge: Cambridge University Press, 2006), 110.

<sup>50</sup> By contrast, observation had a greater role in the Arabic sciences, where the calendar was determined through observation of the moon.

<sup>51</sup> Katharine Park, “Observation in the Margins: 500-1500,” in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 15-44.

<sup>52</sup> Park’s study also shows that the notations indicate that observation was considered an individual and not a collective endeavor. Park, 30.

books and upon syllogistic and logical reasoning.<sup>53</sup> In the realm of practical medicine, diagnosing illnesses and testing remedies derived from natural substances required empirical methods to some degree. The ancient Greek and medieval Arabic writers had catalogued many remedies, but these lists were not exhaustive and new substances were becoming known.<sup>54</sup> Nonetheless, empirical methods were considered informal endeavors and were not part of regular practice, certainly not academic medicine. The term “empiric,” in fact, was often a pejorative attributed to healers of various sorts without formal medical training.<sup>55</sup>

In the sixteenth through early seventeenth centuries, by contrast, *observationes*, collections of observations in astronomy and medicine, as well as other disciplines including law, philology, and natural history, crystallized into their own genre (with standardized formats and conventions of style) that has been studied at great length by Gianna Pomata.<sup>56</sup> For astronomy, the distinction was more than formal (the move from marginalia to established text). It reflected the significance to which scholars attributed the observations, as can be seen through the contrast drawn by the sixteenth-century mathematician, physician, and cartographer Gemma Frisius: Copernicus “emended many things by comparing what he had observed himself (*sua observata*) with what was observed by his predecessors.” The compilers of the Alfonsine Tables, on the

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<sup>53</sup> For more on the relationship between artisans and the development of science in the sixteenth and seventeenth centuries see: Pamela Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2004).

<sup>54</sup> Practica and alchemy are the two areas we find empirical methods employed regularly before the sixteenth century.

<sup>55</sup> For example, a sixteenth-century physician, John Securis, commented on the problematic nature of the available medical practitioners in London: “unlearned surgeons,” “meddling empirics,” and “presumptuous women.” See Deborah E. Harkness, “A View from the Streets: Women and Medical Work in Elizabethan London,” *Bulletin of the History of Medicine* 82, 1 (2008): 53.

<sup>56</sup> Gianna Pomata, “Observation Rising: Birth of an Epistemic Genre, 1500-1650,” in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 45-80; Gianna Pomata, “Sharing Cases: The *Observationes* in Early Modern Medicine,” *Early Science and Medicine*, 15 (2010): 193-236.

other hand, “did not use observations (*observationes*) they themselves made, but rather followed those of Ptolemy and others.”<sup>57</sup>

The word *observationes* most consistently characterized the new texts, though it was not exclusively used, thus emphasizing the not yet stable meaning of the word.<sup>58</sup> By contrast the word “*experimentor*” was never used in these works, in part because of the still negative association the word had with the healing powers and remedies of illiterate peasants and old women, drawn from experience and contrasted with the supposedly more stable authority of academic medicine.<sup>59</sup> From the middle ages to the sixteenth century the word *observationes* carried a prescriptive connotation, it meant observance of rules -- prescriptive medical or legal -- not descriptive observations of procedures. The first occurrence of observation in a medical title at the end of the fifteenth century, in Alessandro Benedetti’s *De observatione in pestilentia* (1493), did not refer to what he observed during the plague but to the rules that were to be kept to prevent pestilence. By the second half of the sixteenth century, the word evolved to mean observation in the descriptive sense as we now know it. One prime example of an early use of the modern meaning is Gabriele Falloppio’s *Observationes anatomicae* (1561), which is formulated as a letter to a colleague, in an informal tone and lacking systematic analysis. Falloppio intended to check Vesalius’s *Fabrica* for mistakes in observation, and in doing so Falloppio consistently used the verb *observare* with reference to his own anatomical observations. The use of this particular word (*observare*) is significant as it was not used to

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<sup>57</sup> Pomata, 50-1.

<sup>58</sup> *Observationes* across the disciplines including astronomy, medicine, jurisprudence, and philology sometimes consisted merely of an individual’s personal notes or work in progress.

<sup>59</sup> Pomata, 52.

describe anatomical practice prior to this period (the verbs previously used included *videre*, *perscrutari*, and *inspicere*). The consistent use of *observare* in this context, particularly in the first person past tense form, shows a self-conscious understanding of the descriptive nature of anatomical study.<sup>60</sup>

Another distinguishing characteristic of the *observationes* is that they were often compiled by authors with more heterodox leanings, such as Paracelsianism, and some who were on the margins of medical practice such as the Jewish physician Amatus Lusitanus (1511-1568).<sup>61</sup> These itinerant physicians began to stress the importance of practical success over academic book learning. In stark contrast to scholastic medicine, doctrine became subordinate to practice in these works.<sup>62</sup> By the late seventeenth and early eighteenth centuries, the *observationes* were established as the primary means of sharing medical information among physicians.<sup>63</sup> More collections were published, translated, and excerpted in this period than any earlier one. *Observationes* as the primary means of medical correspondence also became a

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<sup>60</sup> Pomata, 53.

<sup>61</sup> Paracelsianism, a medical movement popular in the late sixteenth and seventeenth centuries, was based on the treatments and therapies of Paracelsus (Theophrastus Bombastus von Hohenheim, ca. 1493–1541), a Swiss German physician. For more on Paracelsianism see: Allen Debus, *The English Paracelsians* (London: Oldbourne, 1965); Allen Debus, *The French Paracelsians: The Chemical Challenge to Medical and Scientific Tradition in Early Modern France* (Cambridge: Cambridge University Press, 1991); Gerhild Scholz, Williams and Charles D. Gunnoe Jr. eds., *Paracelsian Moments: Science, Medicine, and Astrology in Early Modern Europe* (Kirksville: Truman State University Press, 2002). For more on Amatus Lusitanus see: Andrew Berns, *The Bible and Natural Philosophy in Renaissance Italy: Jewish and Christian Physicians in Search of Truth* (New York: Cambridge University Press, 2015), 37-70; Eleazar Gutwirth, “Amatus Lusitanus and the Location of Sixteenth-Century Cultures” in *Cultural Intermediaries: Jewish Intellectuals in Early Modern Italy*, eds. David Ruderman and Giuseppe Veltri (Philadelphia: University of Pennsylvania Press, 2004).

<sup>62</sup> Pomata, 55-7.

<sup>63</sup> It should be noted that the *observationes* departed from and adapted two other similar medical genres of the medieval period: *experimenta* and *consilia*. The *experimenta* were collections of recipes for remedies that had been shown to be effective but were not supported by doctrine, and therefore marginal for academic medicine. The *consilia* were physicians case studies heavily laced with doctrinal concerns at the expense of the factual details of the case. The *observationes*, in contrast, focused on descriptive knowledge of a disease acquired through detailed observation. Pomata, 55.

building block of sorts for some medical periodical publications of the late seventeenth century.<sup>64</sup>

By the mid-eighteenth century, observation had not only become the essential way of reasoning in the academic sciences, it had also become a recognized scholarly category that spread from medicine and astronomy to other areas of human inquiry.<sup>65</sup> One eighteenth-century man of science wrote: “Never had so much been observed as in our century.”<sup>66</sup>

Though experience, experiment, and observation were not entirely novel forms of evaluating the natural world in the early modern period, historians have shown that academic science at that time witnessed a broad overarching shift from a focus on the theory of the ancients to the careful observation, discovery, and recording of matters of fact of nature. Nevertheless, the increased authority of empirical scientific methods was still slow and uneven.

At the University of Padua, curricular reform did not come until the eighteenth century though anatomy, botany, and clinical medicine became an established part of university medical studies in the sixteenth and seventeenth centuries. The scholastic and empirical methods coexisted in the educational program for a long time. This context shaped Lampronti’s approach to textual and empirical authorities, as the next section addresses.

### **Lampronti’s Hands in the Dough**

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<sup>64</sup> Pomata, 62. For example, the medical periodical established by the *Academia Naturae Curiosorum* (The Academy of Those Curious about Nature) in southern Germany was constructed around the model of sharing medical *observationes*.

<sup>65</sup> Lorraine Daston, “The Empire of Observation: 1600-1800,” in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 81-113.

<sup>66</sup> Daston, 100. Quote is from Carrard, *Essai*, 1. See Daston, 112 for further information on the man and the context of his statement.

A brief explanation of the usual methods employed to interpret Jewish law will enhance understanding of Lampronti's use of empiricism in his halakhic scholarship.

The study and adjudication of halakhah was based primarily on analysis of a few key textual sources and rabbinic interpretations over the centuries. The general process by which rabbis determined the law were textual derivations, logical reasoning, and legal precedent.<sup>67</sup> Observation, experience, and testing of real world circumstances had no formal place in the halakhic system before Lampronti's time, just as the role of these methodologies was marginal in the academic sciences prior to the early modern period.<sup>68</sup> There are, however, exceptions to this practice in halakhah, as the rabbinic system is also inherently practical and involves real world considerations. For example, rabbis sometimes relied upon the testimony of expert witnesses in determining complex legal questions.<sup>69</sup> Custom also was a legal determinant of particular importance to Ashkenazic Jews in the medieval period, though its authority was not tied to

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<sup>67</sup> For an introductory overview of these methods see Menachem Elon, *Jewish Law: History, Sources, Principles*, trans. Bernard Auerbach and Melvin J. Sykes (Philadelphia: Jewish Publication Society, 1994), Vol 1: 414; Vol 2: 987.

<sup>68</sup> Observation was generally considered a far weaker and less stable authority than scholastic reasoning to premodern rabbis. This conclusion is drawn from the relative insignificance with which rabbis treated empirical authority, especially when contrasted with straight-forward rabbinic methodologies. Many rabbis did not necessarily consider it wrong to look to empirical evidence, especially in matters of judicial uncertainty, but it was not the first course of action and even when consulted, it was not always trusted. One explicit example of the direct articulation of the relative weakness of empirical methods to medieval rabbis is found in a commentary of Nahmanides (Rabbi Moses ben Nahman; 1194-1270): Nahmanides, *Hidushei ha-Ramban, Hulin* 42a. There Nahmanides asked why the sages of the Talmud did not resolve a particular issue by testing and experimenting with the matter. Nahmanides answered that experimentation is not reliable, whereas rabbinic methodologies are.

<sup>69</sup> The reliance upon testimony is further discussed in this Chapter.

empirical methods but rather the traditions of various communities as recorded.<sup>70</sup> Nonetheless, the rigidity of the law in the early modern period with the printing of a few important codes and their widespread acceptance throughout the Jewish world diminished the personal and more fluid nature of rabbinic works seen in preceding centuries.<sup>71</sup> Especially by Lampronti's time, most rabbinic authorities adhered to the methods stated above: reliance on a few key halakhic sources and their interpretations by other rabbis. To fully elucidate the contrast of Lampronti's approach, specific comparisons to other contemporary rabbinic interpretations is made in the final section of this chapter.

As we saw in particular in the examples of the "walls have ears" and the prolapsed uterus case discussed in Chapters 2 and 4, Lampronti's embrace of empirical methods is both unambiguous and pervasive. Lampronti accorded authority to his own and others' observations, he attempted to test circumstances to confirm the truth, and he attributed an increased value to "the science of dissection."

Like Vallisneri, Lampronti often wrote about his senses. Lampronti frequently wrote that anyone with keen eyes would see or one can see with one's own eyes. He clearly trusted the power of human sight and the ability of people to discern truth. He also frequently tested

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<sup>70</sup> Historians have argued that custom was held in high regard by medieval scholars, who assumed that practiced norms either reflected lost ancient traditions or at least genuine communal efforts to fulfill the commandments. The authority rabbis attributed to custom was thus not in the authority of observable practice, but the authority of the norms of the people and their genuine devotion to the law. Israel Ta-Shma discussed the comparison between custom and folk practice and drew an analogy between custom and oral law: Israel Ta-Shma, *Minhag ashkenaz ha-kadmon* (Jerusalem: Hebrew University Magnes Press, 1992), 35-42. For more on the role of custom in halakhah see: Elon, *Jewish Law: History, Sources, Principles*, Vol 2., 880-994; Haim Tchernowitz, *History of Hebrew Law* (Hebrew), (New York: 1945), Vol. 1, 144-150; For more on the role of custom in the *Paḥad Yiṣḥak* specifically see: David Malkiel, "The Burden of the Past in the Eighteenth century: Authority, Custom and Innovation in the Paḥad Yiṣḥak," *Jewish Law Annual* 16 (2006): 118-132.

<sup>71</sup> A comprehensive study of halakhah in the early modern period remains a desideratum. The studies of Elhanan Reiner are significant for framing the major premises of the discussion, but are not comprehensive. See especially: Elhanan Reiner, "The Ashkenazi Elite at the Beginning of the Modern Era: Manuscript versus Printed Book", in *Jews in Early Modern Poland* (Polin, Studies in Polish Jewry, X) ed. Gershon Hundert, London 1997, 85-98. The forthcoming dissertation of Tamara Morsel-Eisenberg will help fill this void.

premises and sought confirmation of his work in public forums. Though there is some internal precedent for the authority of observation within the legal system, especially in the form of witness testimony and custom, Lampronti's use of observational and descriptive methods, especially given his education and his exposure to the scholarly scientific communities giving the methods credence, is evidence of the influence of the new science on his halakhic scholarship.

Unsurprisingly the transition to empirical study was not immediate for Lampronti, just as it was not for his counterparts, such as Vallisneri. Close analysis of three examples from Lampronti's work shows that he, unlike many of his central and eastern European rabbinic contemporaries as discussed in the final portion of this chapter, believed in the power and efficacy of the empirical method. Lampronti did not, however, straightforwardly abandon textual analysis for empiricism. His approach more accurately represents an integration of the two. Precisely how Lampronti integrated and weighed empirical and textual authorities is the subject of the next section.

Lampronti's approach is exemplified by three cases found in the *Paḥad Yiẓḥak*: the first concerns a boy born in the seventh month of pregnancy, the second is a discussion of menstruation, and the third is Lampronti's consideration of the question of a bird without a heart. Each of these examples was selected from a reading of the entire fourteen printed volumes of the *Paḥad Yiẓḥak*.<sup>72</sup> They were chosen not because they are the only or the best examples of his use of empiricism, rather because they offer interesting juxtapositions of textual and empirical authorities.

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<sup>72</sup> These are not the only examples of his use of empirical methods. Many of the other cases are listed in Chapter 2.

## Boy Born in the Seventh Month of Pregnancy

The first important example of Lampronti's juxtaposition of textual and empirical sources of authority is found under the subject heading "*ben shivah*," referring to a boy born in the seventh month of pregnancy.<sup>73</sup> Prior to Lampronti's comments on the topic, the rabbinic and ancient scientific traditions concerning the viability of infants was as follows.

The Talmud in Shabbat 135b states that a child born in the eighth gestational month is considered "like a stone;" in other words, not viable.<sup>74</sup> Therefore, one should not violate the Sabbath to care for the infant. A child born in the *seventh* gestational month is, however, considered viable and the laws of Sabbath can be violated on its account. The increased viability of seventh-month infants over those born in the eighth month is perplexing to a contemporary view, in which a child's chances of healthy survival increase with the number of gestational months. In the period in which the Talmud was composed, however, that was not believed to be the case. Ancient medical authorities considered eighth-month infants, specifically, to be inviable. Hippocrates, for example, wrote: "The child born viable at seven months is born in phase, and lives, and has the correct synchrony and precise numerical relationship to seven-day periods. A child born at eight months never survives. At nine months and ten days a child is born and lives..."<sup>75</sup> Galen, Aristotle, and the medical authorities who followed them were also of this

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<sup>73</sup> Isaac Lampronti, *Paḥad Yizḥak*, Vol. 1b, p. 38v, s.v. "*ben shivah*" (Venice, 1750); Paris, Bibliothèque Nationale de France, Ms. Hebrew 471, f. 121v-122r (manuscript original).

<sup>74</sup> B.T. *Shabbat* 135b.

<sup>75</sup> Hippocrates, *Fleshes*, Chapter 19. Hippocrates also devoted a short treatise to eighth month infants titled "Eight Month's Child." There he wrote again that eighth month babies do not survive because it is a period of maternal disease.

opinion.<sup>76</sup> The Talmud too explains the difference in viability as being a result of two different gestational paths, one of seven months and one of nine. If a child was born in the seventh month it was on the seven month path and born in its proper time. If a child was born in the eighth month, however, it was on the nine month path and did not reach full term. Therefore, it was not considered viable.<sup>77</sup>

Subsequent Jewish law accepted this view of the questionable viability of infants born in the eighth month, and the following passage from the *Shulḥan ‘arukh*, quoted by Lampronti, summarizes the laws on the matter:

One who is born in the seventh month – we circumcise him on Shabbat even if he has not grown hair and nails (*Barait’a de-Shabbat* 135b, in accordance with *Yevamot* 80a). But one who is born in the eighth month, we do not circumcise him on Shabbat, unless he has grown hair and nails. And this is the rule for one where there is a doubt whether he was born in the seventh or eighth months – we do not circumcise him on Shabbat unless he has grown hair and nails (*Beit Yosef* according to the opinion of the *Rif*, the *Rosh*, and *Rambam*). And there are those of the opinion [this is the opinion of the *Rem’a*] that we do circumcise him [on Shabbat, even without hair and nails] since there is uncertainty as to whether he was born in the seventh month, but we do not violate Shabbat for other matters (*Semag* and also the *Rif* and the *Rosh*). And in my view that is the law.<sup>78</sup>

According to the *Shulḥan ‘arukh*, if the circumcision of a boy born in the seventh month of pregnancy falls on the Sabbath, one should violate the Sabbath in order to perform the circumcision in its proper time on that day. This should be done even if the infant has not grown hair and nails (in other words, it does not matter whether a certain developmental stage has been reached). If the boy is born in the eighth month of pregnancy, however, unless he has grown hair

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<sup>76</sup> Julius Preuss, *Biblical and Talmudic Medicine*, trans. Fred Rosner (Oxford, Rowman and Littlefield Publishers, 2004) Chapter 14, Section 14.

<sup>77</sup> B.T. *Yevamot* 80a-b.

<sup>78</sup> Lampronti, *Paḥad Yiṣḥak*, s.v. “*ben shivah*.” This entire section is quoted from: *Shulḥan ‘arukh, Yoreh de’ah, siman 266, se’if 11*. See Appendix C, Text 1 for a full transcription and translation of this passage.

and nails, one should not violate the Sabbath in order to circumcise him in the proper time on the eighth day. The same holds true if one is not certain whether the child was born in the seventh or eighth month of pregnancy. The laws of the Sabbath should not be violated for the child (he should not be circumcised on the Sabbath), unless the child has already grown hair and nails.

Interestingly, Lampronti did not comment specifically on the viability of seventh and eighth month infants but instead quoted a different case he found in a commentary written by his older Italian contemporary Gur Aryeh Levi Finzi. Finzi wrote:

I found a text concerning an incident that happened in Mantua in which twins were born and there was uncertainty as to whether they were born in the seventh or eighth months, and one of them died, and the one who lived was not circumcised even during the week, until 30 days had passed, even though the infant had already grown hair and nails. The reason for this was that twins draw sustenance from each other and it is dangerous until 30 days have passed. See the *Rif, Ran*, chapter 19 of *Shabbat* page 155b, and the *Shiltei giborim* there, comment 1.<sup>79</sup>

Finzi here argued that in the case of twins born in either the seventh or eighth month of pregnancy, if one survived and the other died, the laws of Sabbath should not be violated to save the living twin because the baby cannot survive without its twin. The reason Finzi gave is that twins draw sustenance from each other and for 30 days post-birth one twin is at great risk of dying without the other. So not only did Finzi accept that in the seventh or eighth month there is uncertainty as to whether the child will survive, he argued that without the twin a child born prematurely is much less likely to survive.

Lampronti then responded to Finzi as follows:

This incident that just I mentioned, we do not worry about it at all here in Ferrara, that we should push off the commandment of circumcision from its proper time. This is because, after I ask forgiveness from his honor, the reason found in that text does not hold up. The

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<sup>79</sup> Lampronti, *Paḥad Yiẓḥak*, s.v. “*ben shivah*.” This section is quoted from Finzi: Gur Aryeh Levi Finzi, *Shulḥan ‘arukh, Yoreh de’ah (glosses)* (Mantua, 1721), *siman* 266, comment 3.

scholars of dissection know that twins do not draw from each other, rather each one has its own placenta, its own pumping and non-pumping arteries, and veins, and arteries that bring water that are called *vasa lymphatica*, and these emerge from the uterine placenta, some from this place and some from another place, which are as far away from each other as east from west. And what he [Finzi] said about the text that he found concerning this incident – we do not attribute any significance to it, because he did not see and did not know of this incident [first hand], he merely found the text. And even the sages of Mantua that came before him, as well as those who are still alive, did not know and had not heard of that case and do not practice according to it.<sup>80</sup>

Lampronti gave two reasons for why he did not adopt Finzi's interpretation.

First, Finzi's explanation did not hold up to contemporary medical knowledge.

Lampronti detailed the anatomical reason why twins do not draw sustenance from each other and why, therefore, the death of one has no bearing on the health of the other.

Second, Lampronti was more willing to dismiss Finzi's opinion because Finzi based it on a written text rather than on firsthand experience. Lampronti then further supported his conclusion by telling of two practical cases in Ferrara where the rabbis did not rule in accordance with Finzi.

Lampronti's distrust of knowledge solely rooted in texts and not confirmed by reality shows he distinguished between different types of sources and, in this case, ascribed greater weight to the empirical source. Though he did not engage the fundamental question of the Talmud's position on infant viability, this case provides a good example of Lampronti's privileging of the knowledge of dissection over rabbinic textual authority unconfirmed in practice.

## **Menstrual Ailments**

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<sup>80</sup> Lampronti, *Paḥad Yiẓḥak*, s.v. "ben shivah."

The second case that illustrates Lampronti's juxtaposition of textual and empirical authority is found in his passage on *dam nidah*, menstrual blood.<sup>81</sup>

This case is distinct from the previous one in that it does not have practical legal ramifications and functions as more of an observational discourse. Lampronti, accordingly, began the passage with a translation of a quote from Pliny about the toxic qualities of menstrual blood:<sup>82</sup>

There is nothing more wondrous and amazing about women than their menstrual blood, for [contact with it] turns wine sour, [it causes] the fruit of the earth to become barren, [as well as] shoots to die and garden seeds to burn up. The fruit of trees falls off if the [menstruating] women happen to sit on them. The bright glimmer of mirrors becomes darkened from the glance of the menstruating woman, the sharpness of the iron is blunted, and the gleam of ivory dulled. Dogs become crazy and rabid if they happen to eat the blood of a menstruating woman and their bite is infected with a poison from which they cannot be cured.<sup>83</sup>

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<sup>81</sup> Isaac Lampronti, *Paḥad Yīẓḥak*, Vol. 2, p. 100r, s.v. “*dam nidah*” (Venice, 1750) (first printed edition); Paris, Bibliothèque Nationale de France, Ms. Hebrew 481, f. 266r (manuscript original).

<sup>82</sup> According to Richard Yeo, the ancient natural philosopher Pliny authored the most widely used reference work in the medieval and early modern periods, with 43 editions printed before 1536: Richard Yeo, *Encyclopedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001), 65. For the role of Pliny in the Renaissance see: Roger French, “Pliny and Renaissance Medicine,” in *Science in the Early Roman Empire: Pliny the Elder, his Sources and Influence*, eds. R. French and F. Greenaway (London, 1986), 252-281.

<sup>83</sup> Lampronti, *Paḥad Yīẓḥak*, Vol. 2, p. 100r, s.v. “*dam nidah*” (Venice, 1750); Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 481, f. 266r (manuscript original). See Appendix C, Text 2 for a full transcription and translation of this passage. The initial quote is Lampronti's Hebrew translation of Pliny Book 7, Chapter 15. The printed Hebrew text says Book 9, Chapter 15, but this is a misprint. The manuscript clearly reads 7 and in that chapter of Pliny, the correct citation can be found. There are only a few small differences between the Latin original and Lampronti's translation, namely the absence of the last few clauses about hives of bees, bronze and iron rusting, and a horrible smell filling the air. The structure of Lampronti's rendition is otherwise faithful to the Latin. Latin original: “sed nihil facile reperitur mulierum profluvio magis monstrificum. acescunt superventu musta, sterilescent contactae fruges, moriuntur insita, exuruntur hortorum germina, fructus arborum [quibus insidere] decidunt, speculorum fulgor adspectu ipso hebetatur, acies ferri praestringitur, eboris nitor, alvi apium moriuntur, aes etiam ac ferrum robigo protinus corripit odorque dirus aera, in rabiem aguntur gustato eo canes atque insanabili veneno morsus inficitur.”

Translation by WHS Jones: “But nothing could easily be found that is more remarkable than the monthly flux of women. Contact with it turns new wine sour, crops touched by it become barren, grafts die, seeds in gardens are dried up, the fruit of trees falls off, the bright surface of mirrors in which it is merely reflected is dimmed, the edge of steel and the gleam of ivory are dulled, hives of bees die, even bronze and iron are at once seized by rust, and a horrible smell fills the air; to taste it drives dogs mad and infects their bites with an incurable poison.”

Pliny's view of the negative ramifications of female menstruation were frequently drawn on and cited in medieval and early modern Europe. The three main sources attributed to the anxieties over menstruation were Leviticus, Pliny, and Aristotle. Only Pliny and Aristotle, however, speak of the perniciousness of the blood itself.<sup>84</sup>

Lampronti started with this old and popular trope but then he juxtaposed it with more contemporary medical sources:

The previously mentioned scholar [Pliny] returned to these words in Book 28, Chapter 7. And all the iniquities attributed to this blood were absolved, and in agreement with him were Fallopio, Rodericus Ma-Castro [Rodrigo de Castro], Guglielmo Balogno [Guillaume de Baillou], and Daniel Sennert and others, as one can see in their books.<sup>85</sup>

In this case, Lampronti drew upon his medical textbooks in similar fashion to the texts he relied upon and discussed in the previous chapter. He mentioned the works of Gabriele Fallopio (d. 1562), a Paduan anatomist known for his anatomical studies of the reproductive organs, especially his identification of the uterine tubes.<sup>86</sup> Also, Rodrigo de Castro (d. 1627), a *converso* physician who wrote an important two-volume gynecological work, *De universa mulierum*

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<sup>84</sup> Cathy McClive, *Menstruation and Procreation in Early Modern France* (Burlington, VT: Ashgate, 2015), 31-35. Monica Green argues that Pliny's negative views of menstruation were commonly reiterated. See Monica Green, "Flowers, Poison and Men: Menstruation in Medieval Europe," in *Menstruation: A Cultural History*, eds. Andrew Shail and Gillian Howie (Basingstoke: Palgrave, 2005), 58-9.

<sup>85</sup> Lampronti, *Paḥad Yiẓḥak*, Vol. 2, p. 100r, s.v. "dam nidah" (Venice, 1750); Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 481, f. 266r (manuscript original). The printed text says Chapter 6, but the manuscript says Chapter 7. In Chapter 7, Pliny discusses the therapeutic use of saliva. Elsewhere in Book 28, however, he discusses the positive benefits of menstruation. For example, Book 28, Chapter 10 says: "Many kinds of illness are cleared up by the first sexual intercourse, or by the first menstruation; if they do not, they become chronic, especially epilepsy." And in Book 28, Chapter 23 Pliny mentions that women are powerful and hailstorms are driven away by menstrual blood.

<sup>86</sup> Fallopio's collected works have been published in *Opera Omnia* (Venice, 1584; 2 Volumes, Frankfurt, 1600; 3 Volumes, Venice, 1606) and *Observationes anatomicae* (1561; most accessible in 1964 reproduction: Gabriella Righi Riva e Pericle de Pietro eds., *Observationes anatomicae/ Gabriele Fallopio* (Modena 1964)). For a biographical study of Fallopio see: Giuseppe Favaro, *Gabrielle Falloppia Modenese (MDXXIII-MDLXU)* (Modena, 1928).

*medicina*, which was printed throughout Europe in the seventeenth century.<sup>87</sup> Guillaume de Baillou (d. 1616) was an influential French physician whose treatise on gynecology was published in 1643 after his death and was widely circulated.<sup>88</sup> Lastly, Daniel Sennert, a prominent physician chiefly known for his desire to reform ‘chymistry’, was discussed in the previous chapter regarding another citation of his work.<sup>89</sup> Though not explicitly cited, the specific passage from Sennert to which Lampronti must have been referring here is found in his work *Practicae medicinae*, which specifically covers female illnesses. In Book 4, Section II, Part 2 Sennert addressed a question as to whether menstrual blood is negative in its quantity or quality and answered that it only offends in quantity, and that there is nothing inherently bad or toxic about the blood itself.<sup>90</sup>

There were two main explanations for menstruation in the seventeenth century. First, either it purified the blood of females or removed from their body an excess of blood. This explanation was based on Hippocratic medicine, which understood women to be of colder

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<sup>87</sup> Rodrigo de Castro, *De universa mulierum medicina*, 2 vols, (Hamburg and Cologne: Officina Frobeniana at Philip de Ohr’s printing press, 1603–1604). For more on de Castro see: Jon Arrizabalaga, “Medical Ideals in the Sephardic Diaspora: Rodrigo de Castro’s Portrait of the Perfect Physician in early Seventeenth-Century Hamburg,” *Medical History Supplement* 29 (2009): 107-124.

<sup>88</sup> I searched the following medical bibliographies and resources and Guillaume de Baillou is the only name that seems to possibly match the Italian version transliterated into Hebrew by Lampronti as seen in the text: James Ricci, *The Genealogy of Gynaecology: History of the Development of Gynaecology Throughout the Ages* (Philadelphia: The Blakiston Company, 1950); Wellcome Historical Medical Library, *A Catalogue of Printed Books in the Wellcome Historical Medical Library*, (London: Wellcome Historical Medical Library, 1962); Leslie T. Morton and Robert J. Moore, *A Bibliography of Medical and Biomedical Biography* (Brookfield, VT: Gower, 1989); Alain Besson ed., *Thornton’s Medical Books, Libraries and Collectors: A Study of Bibliography and the Book Trade in Relation to the Medical Sciences* (Vermont: Gower, 1990). The exact work Lampronti may have referenced is: Guillaume de Baillou, *De Virginum et Mulierum Morbis liber, in quo multa ad mentem Hippocratis explicantur* (Paris, 1643). For a note on Guillaume de Baillou’s role in the development of gynecology see: Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of Sixteenth-Century Compendium* (Burlington, VT: Ashgate, 2007), 16.

<sup>89</sup> For an overview of Sennert’s work and scholarship on Sennert see relevant footnote in previous chapter.

<sup>90</sup> Sennert did qualify his statement about offending in quantity somewhat by saying that if the blood is mixed with bad humors then it will take on strange qualities, but otherwise in the normal course of events it only offends in quantity. See: Daniel Sennert, *Practicae medicinae*, Book 4, Section II, Part 2. For a seventeenth-century English translation of this passage, see: Daniel Sennert, *Practical Physick* (London, 1664), 68.

disposition than men, and unable to sweat out impurities, as could men. Thus, women needed menstruation to purge their bodies of toxins. The second explanation, based on Galen's works, held that blood built up in the body when the excess was not used to either nurture a child in the womb or nurse the child. Thus if a woman was neither pregnant nor breastfeeding she would menstruate to rid herself of excess blood.<sup>91</sup> Sennert drew on both of these theories and argued that there are negative effects of menstruation, but the blood itself is not toxic. None of the other medical authorities Lampronti cited seem to have made statements about the magical or toxic qualities of menstrual blood itself.<sup>92</sup> They do, however, talk about female illnesses, some of which are closely related to menstruation, either caused by it or by its absence.

In this case, Lampronti juxtaposed an ancient source about the negative ramifications with more positive contemporary sources.<sup>93</sup> Afterwards, however, he took an interesting course -- he inserted observational evidence:

In spite of this, the instances that we see every day teach us how many sicknesses come to women who do not have a menstrual flow and also how many come to those who do at the time of their flow. And every day we have seen with our eyes and our ears have heard that the men and women who eat the blood by way of a *philtre* [magic potion] no longer have a memory, a bitter darkness [i.e. melancholy] controls them, they become mad, and

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<sup>91</sup> For more on these theories and their interpretations in the seventeenth and eighteenth centuries see: Cathy McClive, *Menstruation and Procreation in Early Modern France* (Burlington, VT: Ashgate, 2015), 61-97. For more on medieval gynecology see: Monica H. Green, *Women's Healthcare in the Medieval West* (Burlington, VT: Ashgate, 2000). For more on the role of gynecological texts in the early modern period see: Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium* (Burlington, VT: Ashgate, 2007).

<sup>92</sup> The conclusion concerning their position on menstruation was drawn from an investigation of secondary literature concerning their general approaches on gynecology and readings of select relevant portions of their original works. Unfortunately, a thorough reading of all the works attributed to these authors could not be conducted within the boundaries of this study.

<sup>93</sup> Interestingly Vallisneri framed his work on generation as an imagined conversation between Pliny and Malpighi - this juxtaposition and framing is very similar to Lampronti's in this passage. See: Dooley, *Science, Politics, and Society*, 25.

their madness waxes and wanes according to the phases of the moon, and others become lepers.<sup>94</sup>

Despite the medical scholars' attempts to purify menstrual blood of its iniquities, practical everyday experience, said Lampronti, shows the ailments that stem from menstruation.

According to Lampronti, "our eyes have seen and our ears have heard" this to be the case, a frequent trope throughout his works used to emphasize the authority of an argument. In this case, however, his observations gave credence to the seemingly folk practice of eating menstrual blood for magical purposes.<sup>95</sup>

After discussing the ailments stemming from menstruation, Lampronti moved on to its cure:

The cure for this sickness can be accomplished in many ways that should be performed by experts in wisdom, knowledge, and understanding as is written in medical books: One *drama*<sup>96</sup> of pearls thin like dust with water of *melissa fillo*; One to two *scrupolo*<sup>97</sup> of *trochisci viperni*; The *Conciliator* mentions only one remedy, the *belzoar*; And also very effective is the seed of the *cavolo* and the stomach of the rabbit; Very helpful is the *theriaca*, two *dracmas* with *fumaria* water. The sick person's drink should be boiled wine with *melissa* herb or wine in which the previously mentioned herb has been steeped. Above all, he should increase the washing of his body, always in warm water with boiled herbs in it.<sup>98</sup>

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<sup>94</sup> Lampronti, *Paḥad Yiẓḥak*, s.v. "dam nidah." The first phrase in this quote I translated as "in spite of this," but it could also be read as "with all this." The phrase in the original is "v'im kol ze," which Lampronti used in other places in his work as both "in spite of this" and "with all this." The meaning is usually context specific.

<sup>95</sup> There were various magical practices and medicinal qualities attributed to drinking menstrual blood. For example, in the sixteenth century, Isaac Luria wrote a myth about demonic forces drinking the menstrual blood of the spirit of God: *Etz Hayyim, Shaar* 35, Chapter 3. David Biale, *Blood and Belief: The Circulation of a Symbol Between Jews and Christians* (Berkeley: University of California Press, 2007) 92. Witches during this period were also often accused of drinking blood for either nefarious or medicinal purposes. Biale, 101.

<sup>96</sup> *Drama/dracma* is a measurement equal to 1/16 of an ounce.

<sup>97</sup> *Scrupolo* is a measurement equal to 1/3 dram.

<sup>98</sup> Lampronti, *Paḥad Yiẓḥak*, s.v. "dam nidah."

Here Lampronti resorted to practical medical cures, some used for centuries, some newly popular in his time, all discussed in the contemporary medical works Lampronti explicitly cited elsewhere in the *Paḥad Yiẓḥak*. Extracts of pearls, for example, is mentioned by Giambattista Morgagni in one of the consultation letters he wrote to Lampronti.<sup>99</sup> *Melissa officinalis* (lemon balm) was a widely used medicinal herb, often prepared with water. Nicholas Lemery (d. 1715) discussed *melissa* water specifically in his pharmacological work, *Farmacopea Universale*.<sup>100</sup> *Trochisci viperni* is a preparation of viper meat, discussed in another Italian pharmacological work Lampronti discusses elsewhere, the *Antidotario Romano*.<sup>101</sup> Morgagni also mentioned the use of viper frequently in his consultations and even discussed it specifically with reference to menstrual ailments.<sup>102</sup> The bezoar stone (a small mass found in the stomach of animals), long considered an antidote to poison, still had relevance in the eighteenth century as a short article on the bezoar in the 1743 edition of the *Giornale de'letterati* attests.<sup>103</sup> Morgagni also mentioned a substance containing the bezoar stone in his exchange with Lampronti.<sup>104</sup> The seed of the *cavolo* (cabbage) is mentioned by Nicholas Lemery.<sup>105</sup> *Fumaria* water, made from the medicinal herb *Fumaria officinalis*, is discussed by both Lemery and Morgagni.<sup>106</sup> And the stomach of the

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<sup>99</sup> See: Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)* (Boston: The Francis A. Countway Library of Medicine, 1984), p. 155, see footnote 555 p. 389.

<sup>100</sup> See: Lemery, *Farmacopea Universale* (Venice, 1720), p. 391. I reference this text because I have seen Lampronti mention it specifically on other occasions in the *Paḥad Yiẓḥak*.

<sup>101</sup> *Antidotario Romano* (Rome, 1624), 108.

<sup>102</sup> See: Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)* (Boston: The Francis A. Countway Library of Medicine, 1984), 73-4.

<sup>103</sup> See: *Giornale de'letterati: Giornale de'letterati, Della Pietra Belzoar, Articolo XXII*, (Rome, 1743), 274-5.

<sup>104</sup> See: *The Clinical Consultations of Giambattista Morgagni*, p. 155, see footnote 555, 389.

<sup>105</sup> Lemery, *Farmacopea*, 161.

<sup>106</sup> In Lemery, *Farmacopea* and Morgagni, *Consultations*.

rabbit and theriaca are cures with definite medieval roots, though apparently still in use in the eighteenth century.<sup>107</sup> Thus Lampronti drew upon a wide range of *materia medica* resonant with his time.

In this passage Lampronti relied upon a variety of sources and methods, namely: ancient textual sources, more contemporary medical texts, observational knowledge, and practical medicinal cures. All seem to have authority to Lampronti, and he accordingly drew on them to varying degrees. This case presents a good example of the difficulties of teasing out and constructing a definitive hierarchy of authority to which Lampronti ascribed. His approach in this passage is not strictly textual or empirical, traditional or progressive. He cited all different types of sources, including possibly even popular magic and superstitions. It is also important to note again, however, the difference between this case and the first one -- this passage is not strictly halakhic. There is no judicial ruling at stake. Thus the order in which Lampronti presents the different types of sources is less important than the fact that he integrated them in this fashion altogether. It is also impossible to definitely determine a hierarchy of authority (unless explicitly stated) in a case where a final statement of the law is not rendered.

### **Fowl Without a Heart**

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<sup>107</sup> The stomach of the rabbit is mentioned in a medieval Hebrew translation of Galen's *Book on the Womb*. See Ron Barkai, *A History of Jewish Gynaecological Texts in the Middle Ages* (Leiden: Brill, 1998), 174. Theriaca was one of the most common ancient and medieval medicinal cures, often considered a universal cure-all. See Barkai, 221.

The third example of Lampronti's integration of empirical and textual analyses is found in his passage on *nital ha-lev* (removal of the heart), which concerns the legal status of a bird in whose body a heart could not be located immediately after slaughter.<sup>108</sup>

Lampronti's entry on the subject begins with the law from the *Shulḥan 'arukh* that states: whether an organ is removed by hand or on account of sickness, the animal is considered a *terefah* (not kosher for consumption).<sup>109</sup> After the brief citation of the *Shulḥan 'arukh*, Lampronti wrote that the issue of a peacock without a heart came before the *yeshiva* and they ruled it a *terefah* even though the pipes of the heart were present (thus indicating that the heart, too, was there at one time). The reason given is that according to Maimonides, the pipes are not considered the heart itself. The law is if any of the organs of an animal are found to be punctured upon slaughtering, the animal is considered *pasul* (not kosher); the same is true if any of the organs are missing. The implication of this law is that an animal can indeed live without a heart. For if it cannot live without a heart, and the heart is found to be missing, the absence must have occurred in the process of slaughter; it does not reflect an ailment.<sup>110</sup> Jewish law permits consumption of only those animals that are fully healthy before slaughter. Lampronti thus stated that the law here is that if the heart is missing, it must be so due to ailment, and therefore the animal is not kosher.

Lampronti then proceeded to say that even though “logic makes this matter seem impossible, since no creature can live without a heart, nonetheless the spirit of God speaks

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<sup>108</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 6, 58r-58v, s.v. “*nital ha-lev*” (Lyck, 1864) (printed edition); Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 528, 145r (manuscript original). See Appendix C, Text 3 for a full transcription and translation of this passage.

<sup>109</sup> *Shulḥan 'arukh*, *Yoreh de'ah*: *siman mem*, *se'if heh*.

<sup>110</sup> Lampronti, *Paḥad Yiṣḥak*, s.v. “*nital ha-lev*.”

through the sages of blessed memory and they do not contradict reality.”<sup>111</sup> This is an important qualification that is at odds with other statements Lampronti made about contemporary science such as those found in his passage on lice discussed in Chapter 4.<sup>112</sup> This is perhaps part apologetic, and part false piety. Or like Vallisneri, Lampronti believed himself to be devout and such proclamations were part of his complex worldview.

Nonetheless, after this statement Lampronti framed the discussion in an interesting way. He turned to experience as an authority from the case of a woman who observed a non-Jew castrating a rooster to turn it into a capon:<sup>113</sup>

And according to the rule that is written: regardless of whether [the absence of the organ occurred] by the hands of man or on account of sickness, this and that are proven through experience: I saw it in the writings of the great Rabbi Del Bene, that the wife of R. Del Bene, the daughter of the rabbi, the author of the *Be'er 'Esek*, thus the daughter and wife of a *haver*, saw with her eyes in Lugo a gentile castrating a rooster to turn it into a capon and the heart was pulled out along with the testicles. And in spite of this the capon did not die. And [this is because] any creature like this, even if it cannot live for 12 months, can live for an hour, a day, or a month without a heart. And also on account of illness it disintegrates and is destroyed little by little.<sup>114</sup>

The eyewitness observed that despite the removal of the heart, the capon did not die. According to Lampronti, this woman is a reliable authority because she is both the daughter and the wife of rabbis.<sup>115</sup> Lampronti introduced the case by saying that his argument is proven through

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<sup>111</sup> Lampronti, *Pahad Yiṣḥak*, s.v. “*nital ha-lev*.”

<sup>112</sup> In his passage on lice for example (*Pahad Yiṣḥak*, s.v. “*ẓeidah*.”) Lampronti explicitly said that the sages of the Talmud would have changed their minds if they had access to the science current in Lampronti’s time.

<sup>113</sup> A capon is a castrated rooster and is considered a delicacy because the hormonal and behavioral differences resulting from the castration make the meat more tender.

<sup>114</sup> Lampronti, *Pahad Yiṣḥak*, Vol. 6, 58r-58v, s.v. “*nital ha-lev*” (Lyck, 1864) (printed edition); Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 528, 145r (manuscript original).

<sup>115</sup> The rabbi explicitly mentioned here is Shabbtai Be’er Fonte. He is referred to by the title of his work: *Be'er 'Esek* (Venice, 1674).

experience, although he did not cite his own firsthand experience, but relied instead on a case from the writings of Rabbi Del Bene. He used “experience” here as a rhetorical tool to give the evidence greater weight.<sup>116</sup>

Lampronti then continued with a different approach. After an additional apology (“even though the words of our rabbis do not need support...”<sup>117</sup>), he nevertheless drew upon a contemporary historical text written by an Italian Jesuit priest, popular among Italian early Enlightenment figures:

We found and saw in the book *Mappamondo Istorico* written by the priest Foresti, see there Book 2, page 84v, and these are the words translated from Italian into Hebrew: ‘And also the Caesar, on the day of his death by the hands of his enemies (the conspirators) while offering two cows, said they both did not have a heart. And also of the sacrifice, Natus Ceasar explained that it was missing both a heart and a liver.’ See there.<sup>118</sup>

The content of this citation is not as important as the text from which Lampronti copied it: the *Mappamondo Istorico*, first printed in 1690 in Parma, a popular non-Jewish historical work of his time.<sup>119</sup> Despite Lampronti’s belief in empirical research, he was obviously not averse to supporting his interpretation with a story drawn from the work of a Catholic priest.

Another textual source Lampronti quoted was a passage from the *Goren Nakhon*, a sixteenth-century collection of three classic philosophical texts, by way of a work by

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<sup>116</sup> Lampronti’s rhetorical use of experience in this passage may have strengthened his argument specifically with his fellow Italian rabbis who, like Lampronti, were also trained as physicians.

<sup>117</sup> Lampronti, *Pahad Yizhak*, s.v. “nital ha-lev.”

<sup>118</sup> Lampronti, *Pahad Yizhak*, s.v. “nital ha-lev.”

<sup>119</sup> The Venetian printer Girolamo Albrizzi reprinted the *Mappamondo Istorico* in 1715 as the first part of a more comprehensive universal history; the later volumes of the collection were written by Apostolo Zeno, one of the founding editors of the *Giornale de’ Letterati d’Italia*, Domenico Suarez, and Silvio Grande. See: Brendan Dooley, *Science, Politics, and Society in Eighteenth-Century Italy* (Chicago: University of Chicago Press, 1986), 20.

Lampronti's fellow Italian rabbi, Gur Aryeh Levi Finzi.<sup>120</sup> In the *Goren Nakhon* Finzi found the following story:

And Alexander heard from Aristotle his mentor that worry shrinks a person's heart and destroys it, and he wanted to establish the truth of the matter so he took a type of animal that resembled a human in its nature and imprisoned it for several days in darkness and commanded it be given enough food for it to survive, and afterwards he took it out and slaughtered it and found the heart destroyed and disintegrated.<sup>121</sup>

Finzi argued that though people mocked the sages for saying an animal can live without a heart, the authority of Aristotle, filtered through the sixteenth-century publication of Solomon Ibn Gabirol's philosophical text, proved the matter. Thus, here Lampronti's textual evidence has gone far afield: A story told by Aristotle, retold by Alexander, copied in a contemporary rabbinic text from a medieval text. Nevertheless, he was citing what appeared to be empirical work, albeit of others.

In his last statement on the issue, Lampronti drew upon the responsa of Rabbi Zevi Hirsch Ashkenazi of Amsterdam, known as the Hakham Zevi (1656-1718). The Hakham Zevi wrote about a very similar case that came before him of a chicken without a heart.<sup>122</sup> In Zevi's case, there was a cat conspicuously present, who Hakham Zevi argued must have eaten the heart, despite the denials of the woman who slaughtered the chicken. Zevi argued that if a creature cannot live without a heart, as logic dictated, the chicken must have had one when it was slaughtered, so the animal is kosher. Lampronti responded as follows:

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<sup>120</sup> The *Goren nakhon* contains: *Tikun midot ha-nefesh* by Solomon Ibn Gabirol, *Sefer musrei ha-filosofim*, and the *Sefer ha-tapuah* attributed to Aristotle. The volume was edited by Joseph Ashkenazi of Padua and printed in 1562 in Riva di Trento.

<sup>121</sup> Lampronti, *Pahad Yizhak*, s.v. "nital ha-lev." This passage quotes Finzi (Gur Aryeh Levi Finzi, *Shulhan 'arukh, Yoreh de'ah (Glosses)* (Mantua, 1721), Section 40, Comment 3) who quotes the *Goren nakhon* (Ibn Gabirol's *Tikun midot ha-nefesh: Goren nakhon, helek 3, sha'ar 2* (Riva di Trento, 1562), 13v. ).

<sup>122</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712) #74, 76, 77, 78.

And in the responsa of the great Rabbi Zevi of Amsterdam #74, 76, 77, 78 I saw that he struggled to prove that it is impossible to find an animal or bird that can live without a heart, see there his proofs, but they are not irrefutable and experience proves this.<sup>123</sup>

The framing here is significant: Lampronti argued that *experience* first and foremost refutes Hakham Zevi's position, but he did not mean his own first hand experience. Lampronti could defend his reliance on mostly textually-based proofs because texts could function as a record of individual and collective experience, and for Lampronti that kind of experience could trump the authority of rabbinic textual analyses standing alone.

The word "*nisayon*" (experience) is not often employed authoritatively in this manner in halakhic texts.<sup>124</sup> Lampronti's unusual framing of and trust in the experience of others is another indication of the influence of the new scientific philosophy we have seen him integrate with his halakhic scholarship. Though he did not treat this case with complete contemporary scientific methodologies -- he did not, for example, conduct his own experiments that are controlled, repeated, and implemented with the help of scientific instruments -- the authority of observation and experience nonetheless made its way into his decision making process.

These three examples show that Lampronti's empiricism was embedded in his textual analysis and sometimes surfaced in unusual ways. The *ben shivah* case illustrated that he distinguished between text-based and empirical authority and at times rejected rabbinic opinions that did not match empirical understandings; *dam nidah* showed he integrated different types of sources in his analysis; *nital ha-lev* elucidated the importance of the rhetoric of experience to

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<sup>123</sup> Lampronti, *Paḥad Yizḥak*, s.v. "*nital ha-lev*."

<sup>124</sup> The contrast between Lampronti's and Zevi's approaches is addressed in the next section of this chapter. The significance of Lampronti's use of the word "*nisayon*" is also discussed in the next section through an examination of the polemical use of the word by contemporary central European rabbis, Jonathan Eybeschütz and Jacob Emden.

Lampronti. The next section of this chapter explores how Lampronti's methods compare to those of his central European rabbinic counterparts.

### **Contemporary Jewish Comparisons**

The best way to understand the novelty of Lampronti's more empirically-inclined ways is to situate him in a broader rabbinic context. The *nital ha-lev* case presents an ideal starting point from which to draw direct comparisons to prominent central European rabbis.

The case was not only discussed at great length by Hakham Zevi but by other central European rabbinic authorities, including the prominent Rabbi Jonathan Eybeschütz (1690-1764). An analysis of their two respective approaches to the issue greatly elucidates Lampronti's methods and gives insight into four typologies of early modern rabbinic approaches to scientific matters: First, rabbis would consider ancient and medieval understandings of the natural world only as they appeared in halakhic sources. Second, some rabbis would seek the expert opinion of contemporary physicians, although they preferred those opinions be rooted in the older scientific sources of Galen and Aristotle, which were the same scientific sources and methods sanctioned and viewed as authoritative by some ancient and medieval rabbis. Third is Lampronti's approach, according to which truth could be derived by contemporary empirical methods and found in the conclusions of contemporary medical authorities. Lastly, was the most traditional, conservative view by which some scholars either rejected the value of 'science' altogether for rabbinic scholarship or believed understandings of the natural world should be strictly compartmentalized and never directly intersect with rabbinic teachings.

As Lampronti directly engaged and rejected the opinion of Hakham Zevi in the *nital ha-lev* case, the following examination begins with an analysis of Zevi's approach. Hakham Zevi's responsa on the subject cover 15 pages in print and begin with a detailed description of the question submitted to him.<sup>125</sup> The case concerned a woman who slaughtered a chicken and found its heart missing. While the chicken was being slaughtered a cat was conspicuously present, circling the scene. Despite the woman's protestations that she had vigilantly watched the chicken and knew that the heart did not fall to the ground for the cat to eat, Hakham Zevi argued the chicken's heart had made its way to the cat's stomach. His supposition was based on the logic that if no animal can live for any amount of time without a heart, and if the chicken was alive immediately before its slaughter, then it must have had a heart at death. Therefore the chicken was kosher and not a *terefah*. Zevi's proof texts for the position that no being can live without a heart were derived from a range of Jewish sources including the *Zohar*, Rashi Maimonides, Ibn Ezra, the *Kuzari*, *Sha'ar ha-Shamayim*, and *Shvilei Emunah*.<sup>126</sup> None of these sources are directly medical or non-Jewish. The *Sha'ar ha-Shamayim* and *Shvilei Emunah*, both medieval rabbinic treatises, come the closest to being scientific texts as they contain both scientific and theological statements, but they are nonetheless primarily philosophical in

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<sup>125</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712), 67v-74v (responsa #74, 76, 77, 78).

<sup>126</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712), 73r-v. Most of these sources were discussed previously. The *Zohar* is a foundational work of Jewish mysticism that first appeared in Spain in the thirteenth century. Rashi (Solomon Isaacides; 1040-1105) was a medieval French rabbi who composed highly influential commentaries on the Bible and Talmud. Maimonides (1135-1204) was a prominent Jewish jurist, philosopher and physician. Abraham ibn Ezra (1089-1167) was a Spanish Jewish philosopher who wrote an influential commentary on the Bible. The *Kuzari* (completed around 1140) is an influential medieval work composed by the Spanish philosopher, poet, and rabbi Judah ha-Levi. The *Sha'ar shamayim* is a late thirteenth-century work printed in Venice in 1547. It was composed by Gersom ben Solomon of Arles, a Provençal Jewish philosopher, considered the father of Gersonides. The treatise is divided into 3 parts: natural phenomena, astronomy, and metaphysics. *Shvilei 'emunah* is a medieval treatise compiled by Meir ibn Albadi, grandson of Asher ben Yehiel, around 1360. It contains sections of various older works especially the *Sha'ar shamayim*.

nature.<sup>127</sup> Based on these sources, Zevi advanced two primary arguments to support his conclusion.

The first is mystical or spiritual: according to tradition the heart is the source of all life so there is no life in its absence. As Hakham Zevi stated: according to the *Zohar*, everything is dependent on the heart; Isaac Luria said the essence of the being is in the heart; and Sa'adiah Gaon stated that the soul is in the heart.<sup>128</sup> According to Zevi, even moralistic texts about loving God with all one's heart show the fundamental importance of the heart to life.<sup>129</sup>

Zevi's second primary argument concerns the function of the heart as the source of breath. Zevi posited that the heart is connected to the lungs, and therefore, there could be no breath without a heart. Zevi's position is contrary to contemporary scientific evidence as William Harvey had shown a century earlier the heart's role in the circulation of the blood and other anatomical discoveries had clearly demonstrated the heart was not the source of breath.<sup>130</sup> Zevi also did not even directly cite medieval scientific texts. Instead he supported his position entirely through interpretation of medieval rabbinic sources. Zevi's main proof text for the importance of the heart, for example, was from Maimonides who relied on the opinion of Aristotle for whom the root of life was in the heart.<sup>131</sup> Zevi also cited Rashi, the Kuzari, and Ibn

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<sup>127</sup> For more on the *Sha'ar shamayim* see: James T. Robinson, "Gershom ben Solomon's *Sh'ar Ha-Shamayim*: Its Sources and use of Sources," in *The Medieval Hebrew Encyclopedia of Science and Philosophy*, ed. Steve Harvey (Boston: Kluwer Academic Publishers, 2000), 248-274. For more on *Shevilei Emunah* see: Resianne Fontaine, "An Unexpected Source of Meir Aldabi's *Shevilei Emunah*," *Zutot* 2004 (2007): 98-102.

<sup>128</sup> He cited specifically the *Zohar hadash* (printed in Venice), page 9r, Sa'adiah Ga'on, *ma'amar vav*, and did not provide a specific citation for Luria.

<sup>129</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712), 73r-v.

<sup>130</sup> Lampronti in fact criticized Rashi for incorrectly understanding the function of the heart as connected to the breath. (See Chapter 4.)

<sup>131</sup> Zevi cited: Maimonides, *Moreh nevukhim, helek 1, perek tet "lamed and lamed" tet*.

Ezra, who all wrote in varying ways that breathing comes from the heart.<sup>132</sup> The closest Hakham Zevi got to direct medical discourse is his discussion of a case in the *Sha'ar shamayim* concerning a monkey whose heart was removed and lived for 12 hours. Zevi explained that the *Sha'ar Shamayim* operated with the position of Galen, who believed the root of life is in the brain.<sup>133</sup>

Zevi's use of these works is significant because unlike his other rabbinic colleagues, such as Rabbi Moses Rothenburg, who turned only to the halakhic tradition for an answer to the question (the majority rabbinic opinion as codified in the *Shulḥan 'arukh*), Zevi was compelled to look to other Jewish sources for the solution to a conundrum that seemed to him to be illogical.<sup>134</sup> As Zevi believed that logically a chicken cannot live without a heart, there must be room within the rabbinic tradition that speaks to the essence of the heart. Nonetheless Zevi turned only to Jewish medieval rabbinic, philosophical, and mystical texts. He did not directly inquire beyond the realm of Jewish works (Aristotle and Galen are only mentioned with respect to the medieval rabbinic sources in which Zevi encountered those theories) and showed no concern with testing real world circumstances. The ancient and medieval Jewish texts were for Zevi authoritative in and of themselves for rendering a legal judgment.<sup>135</sup>

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<sup>132</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712), 73r. For one statement concerning Rashi's view of the connection between breathing and the heart see: Rashi B.T. *Yoma* 85a, s.v. *hakhi garsinan*.

<sup>133</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712), 73r.

<sup>134</sup> For more on this see: Joshua Teplitsky, "Between Court Jew and Jewish Court: David Oppenheim, the Prague rabbinate, and eighteenth-century Jewish political culture" (PhD diss., New York University, 2012), 150-9.

<sup>135</sup> Interestingly, Zevi did apparently value and seek out non-Jewish knowledge. His son, Rabbi Jacob Emden (who will be discussed later in this section), commented in his autobiography that his father read secular works in his "free time." See Jacob Emden, *Megilat sefer*, ed. D. Kahana (Warsaw, 1897), 11; 16-17, cited in Jacob Schacter, "Rabbi Jacob Emden: Life and Major Works" (PhD diss., Harvard University, 1988), 587-8.

Lampronti's approach was distinctly different. For Lampronti, the way to a conclusion was based on experience – “*nisayon*” – so he had to reject Zevi's method because Zevi's sources/proofs did not hold up to “experience.” This distinction is significant because even though Lampronti did not directly discuss empirical medical findings,<sup>136</sup> his drawing out of experiences from the textual sources shows a fundamentally different approach to the law than Zevi's. Lampronti integrated a variety of texts, first citing a case in which a bird was found to not have a heart, then relying on a non-Jewish historical text that testified to the possibility of an animal existing without a heart, and only lastly looking to contemporary rabbinic colleagues who cited philosophical texts.

Though Lampronti and Zevi were not the only important central European rabbis addressing the *nital ha-lev* case, Lampronti explicitly juxtaposed his approach with that of Zevi alone. Most of these other rabbis followed a more standard rabbinic approach: they rejected Zevi's position because the most important halakhic sources, namely the *Shulhan 'arukh*, unambiguously stated the law. To these men, the answer was simple. The *Shulhan 'arukh* explicitly states that whether the absence of the heart occurs on account of illness or human hands, the animal is considered a *terefah*. In this case, therefore, the animal is a *terefah*. Significantly, Rabbi Jonathan Eybeschütz reached the same conclusion but via a crucially different method -- he consulted the opinion of physicians.<sup>137</sup>

Like Lampronti and contrary to Zevi, Eybeschütz believed the animal should be considered a *terefah*. Eybeschütz argued that the heart must have been present in the chicken

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<sup>136</sup> He mentioned only briefly that medically speaking the heart could be deformed beyond the point of recognition and did not supply non-Jewish medical texts to support this position as he did in other passages in his work.

<sup>137</sup> There were significant political dynamics involved in this dispute. For more on this aspect of the controversial question, see: Joshua Teplitsky, “Between Court Jew and Jewish Court,” 150-9.

but deformed beyond the point of recognition. His responsum begins with a halakhic discussion of the issues, stating that Maimonides's opinion -- that the absence of a heart does not render an animal *terefah* -- is a minority opinion and the majority of rabbis including Tosafot, Rashb'a, Ran, and Rosh concluded the animal a *terefah*.<sup>138</sup> Eybeschütz then explained that though rabbinic law typically does not turn to the natural sciences for answers, especially in matters of *terefot* (and cites the Rashb'a specifically on this matter), the exclusion of scientific evidence occurs only when there is unanimity among the rabbis on the issue at hand.<sup>139</sup> According to Eybeschütz this is not such a case because Maimonides held a minority opinion against all others. So Eybeschütz argued that in a case where eyewitnesses say there was no heart, (witnesses are important to Eybeschütz because Zevi sought to discredit them), we trust that the witnesses were correct in that they did not see a normal heart, which to Eybeschütz meant the heart had in fact been deformed beyond the point of recognition.<sup>140</sup> Eybeschütz's reluctance to consult an outside medical opinion and the careful explanation of the exceptions in this case are telling. It emphasizes the unusual nature of the practice of consulting an external, non-rabbinic source in rendering a matter of Jewish law, as well as the reluctance to deviate from the norm (of not consulting non-Jewish sources) without some protestation.

After his apologetic, Eybeschütz's halakhic analysis included the responses of the physicians in Halle with whom he corresponded. The physicians told Eybeschütz that from a

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<sup>138</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4. Eybeschütz provided citations to sources written by these leading medieval rabbis. The Tosafot, as previously explained, are a group of rabbis in France and Germany in the twelfth through fourteenth centuries who focused their efforts on careful dialectical readings of the Talmud. The Rashb'a (Rabbi Solomon Ben Adret; 1235-1310) was a prolific Spanish halakhist, who authored many responsa. The Ran (Rabbi Nisim of Girona; 1320-1376) was a Spanish talmudist. The Rosh (Asher ben Yehiel; d. 1327) was a prominent rabbi best known for his compilation of Jewish law.

<sup>139</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4.

<sup>140</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4.

medical standpoint it was not possible for a heart to disappear entirely on account of illness. It was, however, possible for the heart to be deformed through disease. The medical opinion is worth quoting here at some length:

In regard to the first question, we have to state beforehand that on no account is it possible, from the medical point of view, that a heart could have disappeared through illness. It might happen that the heart itself is affected by some disease. It is also true that the heart is sometimes extremely tender and weak. Sometimes new growths can be found on it which are similar to polypus. The surface of the heart can melt, or have a scar as if burned by fire. This arises because of the blood absorbed in the arteries and veins of the body. Sometimes on the surface of the heart small blisters can be found, but in all these cases, the heart itself is fixed in the breast as firmly as a nail in the wall, and does not move from its place. Moreover, it can never melt or waste away completely. A creature attacked by such a heart disease can live until the illness reaches the stage where movement ceases completely; when this stage is reached the animal must certainly die. From this it is now clear that if it happened that the heart was removed and completely destroyed, the creature could not live even for one moment, as it is impossible for any creature to live if it has been deprived of its heart by force. It will die immediately or a short while after, because the blood must come out quickly and flow abundantly like a bubbling stream.<sup>141</sup>

The physicians also made an additional point about another organ functioning as a heart:

In regard to the second question, we have to premise the following rule: it is by nature impossible for any creature to live without a heart, or at least without an organ with the function of the heart, in other words with a cavity, veins, and arteries (blood vessels) for the movement of the blood and its circulation. If therefore another organ exists of the same pattern and shape, with two ventricles, two auricles and two veins and arteries suitable for the movement of the blood, as already mentioned, the creature can live a certain time, even though the shape of this organ is not akin to the shape of the heart and it is found in a different position in the chest - higher or lower.<sup>142</sup>

Eybeschütz took a medical stance on this issue and integrated anatomical knowledge into the halakhic discourse, though the opinion is not one derived through his own medical knowledge or

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<sup>141</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4. Translation is by: H. Jacob Zimmels, *Magicians, Theologians, and Doctors: Studies in Folk Medicine and Folklore as Reflected in the Rabbinical Responsa* (New Jersey: Jason Aronson, 1997), 40-1.

<sup>142</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4. Translation is by: H. Jacob Zimmels, *Magicians, Theologians, and Doctors: Studies in Folk Medicine and Folklore as Reflected in the Rabbinical Responsa* (New Jersey: Jason Aronson, 1997), 41.

even rhetorically framed as based on experience. While he relied upon the scientific opinion of third parties, he was apologetic for that outside consultation. Further, he had harsh words regarding the methods of contemporary science and the role of experience:

The foundation of the natural scientists is built upon experience. One day they agree one way, and then when men come to see the opposite, even if they are far from agreement, they assert a new principle. And thus always, now based upon experience, they have fully turned away from the doctrines of Galen, Aristotle and so forth, and they have chosen new doctrines and foundations.<sup>143</sup>

Eybeschütz made an important distinction and qualification concerning the use of medical knowledge derived through physicians' expertise. While he valued medicine in cases of rabbinic uncertainty, he ultimately trusted more the older science of Galen and Aristotle and was suspicious of conclusions derived through empirical methods. By contrast, Lampronti's opinion did not rely on medical information as overtly as did Eybeschütz's, but Lampronti nonetheless valued and trusted empirical evidence unlike Eybeschütz, and Lampronti readily rested ultimate authority on experience and observation. Lampronti trusted textual authority, but he also believed that truth was derived through practice and testing. Eybeschütz emphatically opposed that path, as he wrote:

You should not take any notice of the later doctors...they have become foolish and stupid in their knowledge. They think that anything they have not achieved by their fancy is impossible. But really they understand nature as little as a dog 'that licks from the sea.' Similarly, they have contradicted the views of the ancient scholars, but unjustly. This can be proved by their deeds: they are unable to cure a minor disease as easily as the ancient

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<sup>143</sup> Jonathan Eybeschütz, *Kreti u-pleti*, 40:4.

doctors a severe illness, so that it became necessary to hide the ‘Book of Remedies’<sup>144</sup> since the people did not trust in God any longer.<sup>145</sup>

Eybeschütz found ancient medicine inherently superior to contemporary methods and conclusions. He consulted outside medical expertise in the particular case of *nital ha-lev* only because it was a matter of rabbinic uncertainty. In another rabbinic legal case in which Eybeschütz sought the opinion of physicians he explicitly relied upon *Galenic* science in his interpretation.<sup>146</sup> Eybeschütz’s polemic against *contemporary* science stands in contrast to Lampronti’s approach.

Eybeschütz’s position is significant, nonetheless, because he was among the rare central European rabbinic authorities to reach beyond rabbinic texts altogether, albeit with serious qualifications.<sup>147</sup> It is possible that the audience to whom he wrote was not receptive to the new scientific methods, and thus Eybeschütz needed to couch his use of their authority with layers of apologetics and polemic. Eybeschütz never officially studied in a university context and was not a practicing physician, as was Lampronti. Eybeschütz’s cultural context was also different from Lampronti’s as Eybeschütz lacked a robust network of like-minded rabbi/physicians. Perhaps

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<sup>144</sup> The *Book of Remedies* refers to a talmudic passage that states that King Hezekiyahu, hid a certain “book of remedies.” See B.T. *Pesaḥim* 56a. Nahmanides explained that this book was a compendium of medicinal cures that King Solomon learned through divine inspiration and recorded. See Nahmanides, Introduction to Genesis.

<sup>145</sup> Jonathan Eybeschütz, *Bene ’ahuvah*, II, on *Hil. ’ishut*, XV, 6, p. 47b. Translation is quoted from: H. Jacob Zimmels, *Magicians, Theologians, and Doctors: Studies in Folk Medicine and Folklore as Reflected in the Rabbinical Responsa* (New Jersey: Jason Aronson, 1997), 23.

<sup>146</sup> For more on this case, which concerned a controversy over breast milk, see: Joshua Teplitsky, “Between Court Jew and Jewish Court: David Oppenheim, the Prague rabbinite, and eighteenth-century Jewish political culture” (PhD diss., New York University, 2012), 144-150.

<sup>147</sup> For more on this see: David E. Fishman, "Rabbi Moshe Isserles and the Study of Science Among Polish Rabbis," *Science in Context* 10.4 (1997): 571-588; Joseph Davis, "Ashkenazic Rationalism and Midrashic Natural History: Responses to the New Science in the Works of Rabbi Yom Tov Lipmann Heller (1578–1654)," *Science in Context* 10.04 (1997): 605-626; David Ruderman, *Jewish Thought and Scientific Discovery in Early Modern Europe* (New Haven: Yale University Press, 1995).

with a better support system, Eybeschütz might not have expressed such harsh words against the contemporary physicians. His invective also emphasizes the controversial nature of relying upon non-Jewish authority; if such consultation was normal, apologetics would be unnecessary. Eybeschütz's approach thus represents external recognition of the changes underway. The transformation was no longer merely an academic matter confined to the university, but part of a broader, and more pervasive mentality that reached rabbis with no medical training.<sup>148</sup>

Further evidence of the widespread recognition of the new empirical methodologies and the harsh rejections of them can be seen in contemporary Rabbi Jacob Emden's (1697-1776) *'Igeret bikoret*,<sup>149</sup> where he wrote:

But the physicians are not firm in their knowledge of sickness and health, in their judgment between what is possible and impossible. Rather, they make use of experience alone. They use neither logical proofs nor verified tradition. They abide by neither their portion nor inheritance. Instead, their strength lies only in the mouth and the eye, in assumption and hypothesis, and [as a result] they will err with even the smallest mistake. The experiments will also mislead ten times as much, with suspicious similarities ten times more, thus they have turned their heart away and blamed the ancients...they destroyed their [the ancients'] fundamental principles and trampled on them with their legs... They rebelled against and scorned Aristotle; they rejected Galen and no longer believe his words. They chose new paths not imagined by their fathers. They have divided into many factions and camps. And all the time they reinvent their reasoning and their beliefs are diverse and strange.<sup>150</sup>

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<sup>148</sup> Maoz Kahana makes the point that despite the scholarship in the history of science that has emphasized that no radical transformation (the scientific revolution) took place, echoes of change appear in spheres wholly separate from medical discourse. Even if that transformation was slow and uneven, the non-Jewish academic culture was changing and the rabbis knew it. See: Maoz Kahana, "The Scientific Revolution and the Encoding of Sources of Knowledge: Medicine, Halakhah, and Alchemy in Hamburg-Altona, 1736," [Hebrew] *Tarbiẓ Vol 82: Issue 1* (2013): 165-212.

<sup>149</sup> Rabbi Jacob Emden was the son of the Hakham Zevi and a prominent talmudist in his own right. For more on Emden see: Jacob Joseph Schacter, "Rabbi Jacob Emden: Life and Major Works" (PhD diss., Harvard University, 1988).

<sup>150</sup> Jacob Emden, *'Igeret bikoret* (Zhitomir, 1868), 47-8. Maoz Kahana discusses this same passage: Maoz Kahana, "The Scientific Revolution and the Encoding of Sources of Knowledge: Medicine, Halakhah, and Alchemy in Hamburg-Altona, 1736," [Hebrew] *Tarbiẓ Vol 82: Issue 1* (2013): 181-2.

Like Eybeschütz, Emden criticized contemporary physicians for veering from the traditional path and for placing trust in their experiences and observations in place of the science of Aristotle and Galen.<sup>151</sup> Eybeschütz's and Emden's descriptions of contemporary physicians is significant. They both use the word "*nisayon*" experience, the same Hebrew word used rhetorically by Lampronti in the *nital ha-lev* passage to strengthen his argument. Eybeschütz wrote: "The foundation of the natural scientists is built upon experience." Emden wrote: "They [the physicians] make use of experience alone." While they disparaged experience, Lampronti called upon it to prove his point regarding the bird's heart: "see there his proofs, but they are not irrefutable and experience proves this." The polemical use of this word combined with its unusual appearance in such fashion in halakhic analysis emphasizes that Lampronti intended "experience" in an authoritative sense similar to one gaining credence in the scholarly scientific communities of which he was a part.

This comparative analysis has highlighted that Lampronti's approach was unusual. The majority of rabbis in central Europe did not have medical training and remained largely unaware or purposefully disconnected from the natural sciences. In their scholarship, they used rabbinic sources alone or, at most, ancient and medieval scientific knowledge as found in Hebrew philosophical texts. Scholars have shown that astronomy was the only scientific endeavor in which Polish rabbis directly engaged, and even there, with few exceptions, they did not conduct their own observations or adopt the work of contemporary observers such as Copernicus or Tycho Brahe. These rabbis instead relied upon older treatises that made their way to them via

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<sup>151</sup> For more on Emden's approach to secular knowledge in general see: Jacob J. Schacter, "Rabbi Jacob Emden: Life and Major Works," (PhD diss., Harvard University, 1988), 505.

translation.<sup>152</sup> None of the major eastern or central European rabbis were also physicians.<sup>153</sup> Eybeschütz was among an exceptional few who sought correspondence with physicians despite not having himself been trained in the discipline.<sup>154</sup> And even he was critical of the new methods he perceived to be taking hold and uprooting traditional medical authority.<sup>155</sup> Though Lampronti did not contend with fundamental questions concerning the origins of the Earth as did his prominent non-Jewish counterpart Vallisneri, Lampronti, like Vallisneri, trusted the authority of experience and observations (both his own and others) and sought to integrate that authority with his textual analysis. This method stands in contrast to those employed by his rabbinic colleagues elsewhere in Europe. Lampronti's approach was shaped by his time at the University of Padua and his practice of medicine -- experiences not shared by his rabbinic colleagues elsewhere in Europe.

## Conclusions

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<sup>152</sup> David Gans (1541-1613) is the primary exception as he engaged contemporary astronomy: he made his own observations through telescopes and was familiar with the work of Copernicus and Tycho Brahe. Gans's work, however, remained only in manuscript until long after his death in 1743. The rabbinic establishment either ignored or remained unaware of his work as they neither cited nor alluded to it in their scholarship. See: David E. Fishman, "Rabbi Moshe Isserles and the Study of Science Among Polish Rabbis," *Science in Context* 10.4 (1997): 584.

<sup>153</sup> David Fishman argues that the rabbis who engaged in astronomy treated astronomy much as they did their rabbinic scholarship, with literary and dialectical observations. They did not employ empirical methods in either course of study. These rabbis also read astronomical treatises exclusively in Hebrew translation, not in Latin or other European Languages. See: David E. Fishman, "Rabbi Moshe Isserles and the Study of Science Among Polish Rabbis," *Science in Context* 10.4 (1997): 581-84.

<sup>154</sup> Eybeschütz also displayed an interest in alchemy. See Maoz Kahana, "An Esoteric Path to Modernity: Rabbi Jacob Emden's Alchemical Quest," *Journal of Modern Jewish Studies* 12:2 (2013): 253-275.

<sup>155</sup> Maoz Kahana, "The Scientific Revolution and the Encoding of Sources of Knowledge: Medicine, Halakhah, and Alchemy in Hamburg-Altona, 1736," [Hebrew] *Tarbiẕ, Vol 82: Issue 1* (2013): 165-212. According to Kahana, the only model for contemporary rabbinic embrace of empirical scientific methods came from a *kloyz* (house of study) headed by Rabbi Samson the Pious (d. 1737). This group of rabbis were largely isolated from the rabbinic establishment and therefore had more freedom for innovation.

Lampronti took a view similar to Vallisneri's, that moderns confirm the ancients, and his work, as we have seen, embraced a multiplicity and complexity of approaches, as he fundamentally believed in and applied empirical methods to his interpretation of ancient sources. This dynamic is not unusual in the broader non-Jewish context, but rather a product of the time. We have seen three different approaches to integrating science and Jewish law; it is important when considering the intersections between scientific authority and halakhah to consider what type of scientific methods and sources are being relied upon and how they were used authoritatively. This comparative analysis highlights the difference between Lampronti's approach and those of his central European rabbinic counterparts. His emphasis on practice and observation, especially of anatomical and medical procedures, was unprecedented in the rabbinic legal corpus.

## CHAPTER 6: Jewish Texts in an Age of Periodicals and Encyclopedias

The historian of medieval Europe, Lynn Thorndike, once wrote, “Encyclopedias are perhaps the most important monuments of the history of science and of civilization.”<sup>1</sup> This chapter expands upon the critical significance of encyclopedias and periodicals for scientific culture and the influence of these textual forms for the development of Lampronti’s work. Lampronti not only adopted the alphabetical structure of encyclopedias for the *Paḥad Yiẓḥak* and integrated contemporary non-Jewish medical sources and empirical methods in his rabbinic scholarship, he also incorporated other elements of contemporary encyclopedic compilations, such as illustrative diagrams and cross-references. Additionally, prior to his work on the *Paḥad Yiẓḥak*, Lampronti initiated another new genre of rabbinic material: the first periodical of rabbinic law, the *Bikurei* series.

Examined in this chapter are both the structural and epistemological similarities between Lampronti’s works and contemporary encyclopedias and periodicals. In the eighteenth century, encyclopedias and journals were scholarly instruments of community building -- a means of connecting scholars and making knowledge, specifically new discoveries about nature, available to readerships beyond the scholarly elite. Lampronti’s works embraced the potential of these genres.

In what follows, the preconditions that gave rise to these new genres are discussed first. Next, the features of the most significant works of the period and the circumstances that prompted their production are explained. A comparison of Lampronti’s *Bikurei kaẓir* and *Paḥad*

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<sup>1</sup> Lynn Thorndike, “The *Encyclopédie* and the History of Science,” *Isis* 6 (1924): 361.

*Yizhak* to certain non-Jewish periodicals and encyclopedias follows, exploring the ways in which Lampronti's works embraced the same underlying epistemologies of the new textual forms.

### **Preconditions for Eighteenth-Century Encyclopedias and Periodicals**

Lampronti's works did not come to fruition in an historical vacuum. He was stimulated and aided by the intellectual and technological advances of his time and place. The revolution in the dissemination of knowledge due to mechanical printing, the exchange of ideas in the Republic of Letters, and the determination of new facts established by scientific discovery are all part of the context in which Lampronti flourished.

### **Proliferation of Printed Texts**

The introduction of moveable type in Europe in the fifteenth century ushered in a new era of unprecedented abundance in written material. The technology provided the circumstances for the relatively inexpensive reproduction of written texts and also spurred authors to write new works.<sup>2</sup> Within a relatively short period of time and especially after the first century of print, the number of written works in circulation proliferated. The democratization of knowledge commenced with increased access to printed texts, but as more and lengthier works were

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<sup>2</sup> The significance of the introduction of moveable type in Europe was first advanced by Elizabeth Eisenstein in her seminal two-volume work, *The Printing Press as an Agent of Change*: Elizabeth Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe* (Cambridge: Cambridge University Press, 1979). Though some scholars criticized Eisenstein for ignoring the continuities between manuscript and print culture and for attributing too radical a role to the technology itself, her work also inspired a slew of studies that examined the cultural implications of print technology and its impact on how it affected the democratization of knowledge. For more on these debates see: Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998); Eisenstein and Johns, "AHR Forum: How Revolutionary was the Print Revolution?" 84-128. This study accepts arguments from both sides: Print was not the only factor that made knowledge more accessible; changes in writing style and the increased availability of paper also contributed to the proliferation of more affordable books. Additionally, attempts to make knowledge more accessible to a wider audience pre-dated the emergence of moveable print in Europe, and even after print, the cultural ramifications took centuries to fully take root. Nonetheless, the technology of print and the adaptations of authors of their texts to new audiences facilitated the major transformation in knowledge production and dissemination that marks the early modern period.

produced the harder it became to navigate the sea of words. For even the most scholarly individuals it was cumbersome to digest, organize, and use in a meaningful way all of the knowledge being circulated. For anyone else, it was impossible. In response came new works that organized and presented information in ways intended to aid its users.<sup>3</sup> The modern encyclopedia and periodical emerged in part to assume that function.<sup>4</sup>

### **Republic of Letters**

Another important intellectual transformation of the early modern period was the development of robust scholarly communities across geographic and religious boundaries, often referred to as the “Republic of Letters.”<sup>5</sup> Though its ideal did not always match reality, citizens of the Republic of Letters considered themselves part of an egalitarian community in which individuals could participate regardless of place of origin or religion. There was no formal barrier to entry: All it took was access to pen and paper and contacts with scholars to exchange correspondence.

Indebted to both the introduction of print and the development of the postal system, the Republic of Letters had its origin in the Renaissance, and flourished as a dominant aspect of European culture in the eighteenth century. A division is often drawn, however, between the Republic of the first half of the century and that of the second. In the late seventeenth and early eighteenth centuries the community was characterized by an unorganized number of participants

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<sup>3</sup> Ann Blair’s work best addresses the early modern problem of information overload: Ann Blair, *Too Much to Know: Managing Scholarly Information Before the Modern Age* (New Haven: Yale University Press, 2010).

<sup>4</sup> I use the terminology “modern encyclopedia” merely to differentiate these works from the classical and Renaissance encyclopedias of centuries prior. Richard Yeo explains the emergence of eighteenth-century encyclopedias in part in response to the problem of abundance: Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001).

<sup>5</sup> The best starting point for scholarship on the Republic of Letters is a short essay by Anthony Grafton: Anthony Grafton, "A Sketch Map of a Lost Continent: The Republic of Letters" in his *Worlds Made by Words: Scholarship and Community in the Modern West* (Cambridge, MA.: Harvard University Press 2010), 9-34.

who exchanged letters, consumed new media, and had a heightened sense of the importance of decorous conduct, or “*politesse*.”<sup>6</sup> The early Republic unlike the Enlightenment culture of the latter half of the eighteenth century thrived due to the sharing of writings among scholars.<sup>7</sup> In this community, the circulation of letters created a sense of camaraderie and fueled an intellectual exchange but no formal reform efforts. The establishment of the letter as the dominant form of writing in the eighteenth century as well as the primary media of an interactive reading public were significant factors in the emergence of new literary genres in the period.<sup>8</sup>

The Republic of the second half of the eighteenth century, by contrast, revolved around a distinct group of people who met face-to-face and who shared common values. The salon was one setting in which the Republic of Letters was manifest and the *salonnière* a facilitator of Enlightenment culture.<sup>9</sup>

### **Scientific Discovery**

After print and the Republic of Letters, the third important precipitating factor for the development of new genres in the eighteenth century emerged specifically from scientific

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<sup>6</sup> This concept is explained by Anne Goldgar, *Impolite Learning: Conduct and Community in the Republic of Letters, 1680-1750* (New Haven: Yale University Press, 1995), 236-7.

<sup>7</sup> For more on the significance of letter writing in the early modern period see: Lisa Jardine, *Erasmus, Man of Letters: The Construction of Charisma in Print* (Princeton: Princeton University Press, 1993); Richard Kirwan ed., *Scholarly Self-Fashioning and Community in the Early Modern University* (Burlington: Ashgate, 2013); Diana G. Barnes, *Epistolary Community in Print, 1580–1664* (Burlington: Ashgate, 2013); James Daybell, *The Material Letter in Early Modern England: Manuscript Letters and the Culture and Practices of Letter-Writing, 1512-1635* (Basingstoke: Palgrave Macmillan, 2012); Jeanine de Landtsheer and Henk Nellen eds., *Between Scylla and Charybdis: Learned Letter Writers Navigating the Reefs of Religious and Political Controversy in Early Modern Europe* (Leiden and Boston: Brill, 2011); Constance M. Furey, *Erasmus, Contarini, and the Religious Republic of Letters* (Cambridge: Cambridge University Press, 2006).

<sup>8</sup> Dena Goodman, *The Republic of Letters: A Cultural History of the French Enlightenment* (New York: Cornell University Press, 1994), 137.

<sup>9</sup> For more on this see: Dena Goodman, *The Republic of Letters*.

communities.<sup>10</sup> Ever more individuals, especially in scientific societies and universities, observed and recorded natural phenomena.

Botanical gardens and anatomy theaters became important sites for the discovery of new scientific knowledge.<sup>11</sup> Observations were carefully recorded, classified, and eventually printed. In the late sixteenth and early seventeenth centuries, hundreds of new plant descriptions were published.<sup>12</sup> Collecting natural objects was also part of the spirit of the age and cabinets of curiosities containing natural artifacts such as fossils became another site of expanding knowledge of nature.<sup>13</sup> Voyages of discovery uncovered new worlds, with new fauna, climates, and animals to be recorded and categorized.<sup>14</sup> Even skilled craftsmen and artisan shops became loci of knowledge production and spurred the recording of how-to-manuals of specific trades.<sup>15</sup>

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<sup>10</sup> For more on the importance of the Republic of Letters specifically in scientific communities see: Dirk van Miert ed., *Communicating Observations in Early Modern Letters (1500–1675): Epistolography and Epistemology in the Age of the Scientific Revolution* (London: The Warburg Institute, 2013); Adam Mosley, *Bearing the Heavens: Tycho Brahe and the Astronomical Community of the Late Sixteenth Century* (Cambridge: Cambridge University Press, 2007), Chapter 1, "Tycho Brahe and the Republic of Letters"; Ian Maclean, "The Medical Republic of Letters before the Thirty Years' War," *Intellectual History Review* 18:1 (2008), 15-30; Brian Ogilvie, "How to Write a Letter: Humanist Correspondence Manuals and the Late Renaissance Community of Naturalists," *Jahrbuch für europäische Wissenskultur/Yearbook for European Culture of Science* 6 (2011), 13-38.

<sup>11</sup> As discussed in Chapter 3. For an overview see also: Paula Findlen, "Anatomy Theaters, Botanical Gardens, and Natural History Collections," in *The Cambridge History of Science: Volume 3, Early Modern Science*, eds. Katharine Park and Lorraine Daston (Cambridge: Cambridge University Press, 2006), 272-289.

<sup>12</sup> See Brian Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006).

<sup>13</sup> See Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994). The importance of collecting to Vallisneri was discussed in the previous chapter.

<sup>14</sup> See: Harold Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007); Pamela H. Smith and Paula Findlen eds., *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe* (New York: Routledge, 2002).

<sup>15</sup> Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2004); Pamela H. Smith, "Making and Knowing in a Sixteenth-Century Goldsmith's Workshop," in *The Mindful Hand: Inquiry and Invention between the Late Renaissance and Early Industrialization*, eds. Lissa Roberts, Simon Schaffer, and Peter Dear (Amsterdam, 2007), 20–37; Pamela H. Smith, "Why Write a Book? From Lived Experience to the Written Word in Early Modern Europe," *Bulletin of the German Historical Institute*, 47 (Fall 2010): 25-50; Pamela O. Long, *Artisans/Practitioners and the Rise of the New Sciences, 1400-1600* (Corvallis, OR: Oregon State University Press, 2011).

The new sites of scientific investigations and methods of study produced more knowledge about the natural world.<sup>16</sup> As scientific practices became more focused on natural phenomena seen, observed, and tested, the body of knowledge grew exponentially and new ways and methods to record, organize, and contain it became necessary.<sup>17</sup>

### **New European Genres**

The periodical and encyclopedia arose as the primary genres to meet the new scholarly circumstances fostered by print, the Republic of Letters, and scientific discoveries. They became the vehicles for collecting, organizing, and disseminating the abundance of scholarly information being produced. Accordingly, this section describes the development and significance of periodicals and encyclopedias based on secondary scholarship, especially the works of historians Rhoda Rappaport, Brendan Dooley, and Richard Yeo.

#### **Periodicals in Seventeenth- and Eighteenth-Century Europe**

The late seventeenth and early eighteenth centuries witnessed the emergence and proliferation of periodical publications. In 1718, the editors of *Europe savante* estimated that more than 50 journals had been published on at least one occasion and subsequently discontinued since the emergence of periodical publications in the middle of the seventeenth century, and this

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<sup>16</sup> For more on the significance of facts see: Lorraine Daston, "The Factual Sensibility," *Isis* 79:3 (1988): 452-467; Lorraine Daston, "Baconian Facts, Academic Civility, and the Prehistory of Objectivity" in *Rethinking Objectivity* ed. Allan Megill (Durham: Duke University Press, 1994); Lorraine Daston, "Marvelous Facts and Miraculous Evidence in Early Modern Europe," *Critical Inquiry* 18 (1991): 93-124.

<sup>17</sup> In her article, "The Empire of Observation," Daston wrote about the acute challenge of containing observations, especially by the eighteenth century. Writing in margins of other works, as Katharine Park explained was the common practice in the medieval period, no longer sufficed. See Lorraine Daston, "The Empire of Observation: 1600-1800," in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 88; 100.

number did not include those successful journals that were still being published,<sup>18</sup> while a twentieth century study identified 330 journals published in seven countries between 1665 and 1730.<sup>19</sup> The number of scientific and medical periodicals, in particular, increased rapidly in the eighteenth century. According to one list, 10 medical titles were produced in the seventeenth century and 422 in the eighteenth.<sup>20</sup>

The early periodicals were primarily compilations of book reviews, exemplified by the popularly reproduced and copied first one, the 1665 *Journal des savants* of Denis de Sallo. Sallo directed his work to the world of learning and scholarship, especially the sciences. He explicitly intended to provide a more formal and organized means for intellectuals to exchange information and stay aware of new scholarly works published throughout Europe.<sup>21</sup> Though its primary content was the book review, original articles appeared occasionally in the *Journal des savants*, and in its early years it promised to include information concerning scientific experiments, decisions of courts and universities, and eulogies of scholars.<sup>22</sup> Journals of reviews were important because they provided a means to keep scholars aware of developments in the broader intellectual community, as books themselves were expensive and often difficult to acquire.

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<sup>18</sup> *Europe savante* (January 1718), v. Rappaport, 10. A long discussion of existing journals was also included in the preface to the *Giornale de' letterati d'Italia*, written by Scipione Maffei.

<sup>19</sup> Sherman B. Barnes, "The Scientific Journal, 1665-1730," *Scientific Monthly* 38 (1934): 257.

<sup>20</sup> Fielding H. Garrison, "The Medical and Scientific Periodicals of the 17th and 18th Centuries, With a Revised Catalogue and Check-List," *Bull. Inst. Hist. Med.*, 2, (1934): 285-343. David Kronick published an extension and corrections to that list: David Kronick, "The Fielding H. Garrison List of Medical and Scientific Seriodicals of the 17th and 18th Centuries Addenda and Corrigenda," *Bull Hist. Med.*, 32 (1958) 456-74; Leslie T. Morton, "The Growth of Medical Periodical Literature" in *Thornton's Medical Books, Libraries and Collectors: A Study of Bibliography and the Book Trade in Relation to the Medical Sciences* [Third edition], ed. Alain Besson (Vermont: Gower, 1990), 222. Also see David Kronick, *A History of Scientific and Technical Periodicals: The Origins and Development of the Scientific and Technological Press, 1665-1790* [Second Edition] (Metuchen, NJ: Scarecrow Press, 1976).

<sup>21</sup> Rhoda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997), 7.

<sup>22</sup> Rappaport, 8. Sallo's journal ended up focusing primarily on book reviews.

Sallo's journal endured for a long time and was considered among the best of the journals at conveying to readers the thesis, content, and organization of the books reviewed.<sup>23</sup> Edward Gibbon writing about the *Journal des Savants* in 1763, said of it, "The father of the rest, it is still their superior."<sup>24</sup>

The influence of Sallo's publication is seen most prominently in the numerous adaptations of his model by scholars throughout Europe. Pierre Bayle, for example, explicitly credited Sallo when he launched his *Nouvelles de la république des lettres* in 1684.<sup>25</sup> In Amsterdam alone in the following years three new periodicals, edited by Jean Le Clerc, appeared: *Bibliothèque universelle et historique* (1686), *Bibliothèque choisie* (1703), *Bibliothèque ancienne et moderne* (1714).<sup>26</sup> These efforts also spurred new publications based on national literatures. The *Giornale de' letterati d'Italia* (1710) was one example, as were the series of *Bibliothèques: angloise* (1717), *britannique* (1733), *germanique* (1720), and *italique* (1728).<sup>27</sup> Each journal was largely shaped by the interests and access of its editorial committee. Bayle's journal, for example, emphasized French and Latin works, mostly those published in the Netherlands, and paid little notice to the sciences; Jean LeClerc devoted many of his publications to English philosophy; the *Bibliothèque germanique*, edited by Protestant pastors, focused on

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<sup>23</sup> Rappaport, 16.

<sup>24</sup> Quoted from Rappaport, 16.

<sup>25</sup> Rappaport, 9.

<sup>26</sup> Rappaport, 10.

<sup>27</sup> The *Giornale de' letterati d'Italia* will be explained at greater length later in this section.

theology and history; and the *Giornale de letterati d'Italia* gave large note to the sciences due to the active participation of Antonio Vallisneri.<sup>28</sup>

In addition to book review journals, specialized scholarly periodicals published by academic societies also began to emerge. One of the most prominent works in this category was the *Philosophical Transactions of the Royal Society*. The foundation of the Royal Society of London in 1662 established the city as a center of scientific development, and the subsequent publication of the *Philosophical Transactions of the Royal Society* served as an important vehicle of communicating and evaluating new experiments and discoveries among scholars.<sup>29</sup> Henry Oldenburg encouraged foreign correspondents to communicate with the London Society and explained that the Society was more interested in receiving reports of observations and experiments than in metaphysical or theological speculation.<sup>30</sup> The Society's statutes of 1663 explicitly said that Fellows should report on "matter of fact" and to separate such findings from any "conjecture, concerning the causes of the phaenomena."<sup>31</sup> The Society also saw its role as a collective body with which to test and verify experiments. For example, its members attempted to repeat experiments published by Nicolaus Steno.<sup>32</sup> Many other significant experiments of the period were reported in the *Transactions* and tested by other scholars.

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<sup>28</sup> Rappaport, 12-3.

<sup>29</sup> Rappaport, 20. For more on the Royal Society see Michael Hunter, *Establishing the New Science: the Experience of the Early Royal Society* (Wolfeboro, N.H.: Boydell Press, 1989).

<sup>30</sup> The most useful source for understanding the importance of the *Transactions* are the *Transactions* themselves and Henry Oldenburg's personal letters. For Oldenburg's letters see: *The Correspondence of Henry Oldenburg*, ed. A. Rupert Hall and M. Boas Hall (Madison: University of Wisconsin Press, 1965-86).

<sup>31</sup> Quoted from Rappaport, 21. The statues are found in *Record of the Royal Society* (London, 1912), 119. For more on the ideology of the early Royal Society see Hunter, *Establishing the New Science*, 45-71.

<sup>32</sup> Rappaport, 22.

Elsewhere in Europe, scientific societies also published their proceedings, thus establishing regional centers of correspondence. In France, the Paris Academy published first the *Memoires de l'Academie des Sciences* in 1692 and 1693, followed by the *Histoire et Mémoires* from 1699 until well into the eighteenth century. In Italy, however, published society proceedings were rarer and more transient,<sup>33</sup> as the societies showed little interest in publishing their proceedings. Instead, Italy saw the growth of general journal publications, such as the *Giornale de' letterati d'Italia*, in which scientific material was the focus.<sup>34</sup>

As the *Giornale de' letterati d'Italia* was the most successful Italian periodical, and close connections can be drawn between its participants and members of Lampronti's Jewish circle, a more detailed explanation of its establishment and contents follows.<sup>35</sup> The *Giornale de' letterati d'Italia* was launched in Venice in 1710 by a trio of well-respected editors: Antonio Vallisneri, Apostolo Zeno, and Scipione Mafei. Following on the heels of a few brief Italian attempts, these scholars sought to bring to Italy a journal similar to those that had achieved success on the other side of the Alps -- France and the Netherlands in particular.<sup>36</sup> These three scholars were well-

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<sup>33</sup> Dooley, 37-40.

<sup>34</sup> Dooley, *Science and Society*, 37-40; 45. The *Giornale* was the most successful attempt, but a number of other Italian journals came and went in the seventeenth century, including: the *Giornale de' letterati*, first published in Rome in 1668; *Giornale de' letterati* published first in Parma from 1686 until 1690 and later in Modena from 1692 to 1697; *Galleria di Minerva*, printed in Venice from 1696 until 1706. For a complete list of Italian journals and their years of publication see Dooley, 40.

<sup>35</sup> See Chapters 3 and 5 for more on the connections between Lampronti's Jewish circle in Padua and Vallisneri and the *Giornale*. According to Dooley, censorship was not the primary reason for the failed attempts at Italian periodicals, as other historians have argued, but rather the lack of institutional support for the endeavors and the vicissitudes of the print industry. The *Journal des savants* was associated with the Royal Academy of Sciences and the *Philosophical Transactions* supported by the Royal Society. The Italian societies expressed relatively little interest in the publication of proceedings. The reason for the *Giornale's* success was that it found the way to be profitable without institutional support, which ultimately required selling periodicals via subscriptions. Dooley, 45-50.

<sup>36</sup> In contrast to the European successes of the *Journal des savants* and the *Philosophical Transactions*, most of the Italian attempts mentioned in the preceding note were fleeting.

suited to the endeavor. Antonio Vallisneri was one of the most renowned and innovative scientific scholars of his period, with important social and professional relationships.<sup>37</sup> Apostolo Zeno was also a highly respected scholar and poet, whose edition and continuation of Antonio Forresti's *Mapamondo Istorico* became one of the most popular works of the period.<sup>38</sup> Scipione Maffei was a scholar of antiquities, avid collector of manuscripts and archeological findings, and prolific author of both plays and treatises. Vallisneri, Zeno, and Maffei met for the first time in 1709 and laid out a program to bring the latest developments in the Italian world of letters to the broader reading public in both Italy and beyond.<sup>39</sup>

The *Giornale de' letterati d'Italia* was the first European journal to bear a geographical distinction in its title and its accompanying focus on Italian material distinguished it from its other Italian and European counterparts.<sup>40</sup> In medicine and science especially, the *Giornale* editors emphasized the Italian heritage of their scientific tradition. Vallisneri and Marchetti considered themselves the scholarly heirs of Marcello Malpighi, Realdo Colombo, and Giovanni Borelli more than of Descartes or Newton.<sup>41</sup> The *Giornale* editors revered the ancient medical

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<sup>37</sup> See Chapter 5.

<sup>38</sup> Lampronti's citation of this work was discussed in Chapter 5.

<sup>39</sup> Accordingly, they drew on the Renaissance word *letterati* in the title of the publication: Dooley, 36.

<sup>40</sup> The Modena/Parma *Giornale* included approximately 10 percent foreign material, whereas the Venice *Giornale* sought a more nationally-based approach. The Venice *Giornale* also included more eulogies of noteworthy scholars than did their transalpine counterparts. The *Giornale* also transformed the book review from a summary of contents to a platform for broader commentary. For example, the *Giornale* editors promoted national language in their praise for Giusto Fontanini's *Dell'eloquenza italiana*. Muratori's *Del governo della peste* (1714), a treatise on government sanitary regulations, became a vehicle for the denunciation of superstition. While Muratori's *Della perfetta poesia* (1706) was used to explore the *Giornale* editors' ideas on poetry. The editors also devoted space to correcting factual errors concerning Italian books made in French, German, and Dutch journals. See Dooley, 63-5, 68.

<sup>41</sup> Marcello Malpighi, Realdo Colombo, and Giovanni Borelli were all important Italian men of science mentioned previously. Dooley rejects the theory that Italian science declined in the post-Galilean period, only to find resurgence with the importation of transalpine science, specifically the works of Descartes and Newton. A thorough study of the *Giornale* shows that the editors were not committed to Newtonianism; in fact, articles concerning Newton rarely appeared in the *Giornale*. During the first half of the eighteenth century Italian scientists were more concerned with human generation and building upon the work of Marcello Malpighi. See Dooley, 68; 110.

authorities and frequently spoke of their importance, while also advancing new scientific programs. Indeed the largest share (more than 30 percent) of journal articles were devoted to scientific matters, mathematics, medicine, geography, and natural history.<sup>42</sup> The subjects of these articles included the cataloguing of new insects, zoological studies explaining the anatomy of the ostrich for example, recipes for new medicinal cures, construction of a giant sundial, the history of the earth, the origins of springs, the nature of space and origins of gravitational pull, and the effects of super heating different materials. Giovanni Poleni's treatise on the motion of water received due attention and Giambattista Morgagni contributed his pathological findings to the *Giornale* before he published them in his path breaking work *De Sedibus*.<sup>43</sup>

The *Giornale* was also thorough, consistent, and up-to-date with its review of scientific material. New articles were under editorial review for less than a year before appearing in print and book reviews appeared less than three years after a book's publication. Approximately 40 percent of the articles were original contributions.<sup>44</sup> The journal also supplemented the scientific articles with copper plate engravings, which were especially important as they provided visual images to accompany written material.<sup>45</sup> The *Giornale* was thus successful in evaluating new scientific experiments and presenting previously unknown theories, findings, and ideas to a

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<sup>42</sup> Dooley detailed this distribution in a useful pie chart: Dooley, 66. The second largest subject matter covered was history and antiquities, at 23.6 percent. The third was grammar, rhetoric, poetry, and lexicography at 18.4 percent. And the fourth largest was bibliography at 15.8 percent. The remaining 11.6 percent of topics included philosophy, law, theology, sacred and moral sciences, arts, and trades. Like most of the journals of the period, the *Giornale* largely tried to stay outside of political commentary. The *Journal des savants*, for example, was explicitly prohibited by its printing privilege to compete with political publications, namely the *Paris Gazette*. See Dooley, 85.

<sup>43</sup> Dooley details these studies: Dooley, 98-106; He discusses Morgagni specifically on page 105 and Poleni on p. 99-101.

<sup>44</sup> Dooley, 120.

<sup>45</sup> Dooley, 106.

broad public forum, most importantly the scholarly community.<sup>46</sup> Like the *Philosophical Transactions*, the *Giornale* also served as a vital public forum for the verification of scientific observations and experiments. Morgagni and Vallisneri both published articles on path-breaking studies first in the *Giornale*, which could then be replicated and confirmed by others in the scholarly community.

The *Giornale* revolutionized scholarly research and communication by establishing a collective public forum in which knowledge could be established and the public informed of ongoing intellectual activities. Indeed historians have argued that this is where the significance of the genre lies. According to Anne Goldgar, journals were “a community effort” that represented the scholarly collaboration epitomized by the Republic of Letters.<sup>47</sup> Periodicals also played an important role in the development of a later phenomenon famously articulated by Jürgen Habermas as the “public sphere.”<sup>48</sup> Habermas regarded the development of institutions, such as reading clubs, cafes, salons, and Freemason lodges, and means of communications, such

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<sup>46</sup> Though the primary aim of the *Giornale* was to introduce Europeans to scientific developments in Italy, Italian scientists used the journal to publicize their own work, help publication sales, announce new experiments and discoveries, and review new works. See Dooley 126, 128.

<sup>47</sup> Goldgar, 90.

<sup>48</sup> Jürgen Habermas, *The Structural Transformation of the Public Sphere*, trans. Thomas Burger with Frederick Lawrence (Cambridge: MIT Press, 1989). The differences between the Republic of Letters of the first half of the eighteenth century and the Habermasian public sphere that emerged in the late eighteenth century are explained by Anne Goldgar: Anne Goldgar, *Impolite Learning: Conduct and Community in the Republic of Letters, 1680-1750* (New Haven: Yale University Press, 1995), 5-6. See also Dena Goodman for a full discussion of the significance of the eighteenth century Republic of Letters: Dena Goodman, *The Republic of Letters: A Cultural History of the French Enlightenment*, (New York: Cornell University Press, 1994). For other comments on the eighteenth-century public sphere see: Margaret C. Jacob, "The Mental Landscape of the Public Sphere: A European Perspective," *Eighteenth-Century Studies* 28 (1994): 95-113; Anthony J. La Vopa, "Conceiving a Public: Ideas and Society in Eighteenth-Century Europe," *The Journal of Modern History* 64 (1992): 79-116; Dena Goodman, "Public Sphere and Private Life: Toward a Synthesis of Current Historiographical Approaches to the Old Regime," *History and Theory* 31 (1992): 1-20; Roger Chartier, "The Public Sphere and Public Opinion," in *The Cultural Origins of the French Revolution*, trans. Lydia G. Cochrane (Durham: Duke University Press, 1991), 20-37; Hans Erich Bödeker, "Journals and Public Opinion: The Politicization of the German Enlightenment in the Second Half of the Eighteenth Century," in *The Transformation of Political Culture: England and Germany in the Eighteenth Century*, ed. Eckhart Hellmuth (New York: Oxford University Press, 1990), 423-34.

as journals and newspapers, as essential to the formation of public opinion. Periodicals, in principle at least, excluded no one, whereas scholarly letters were necessarily limited to those among whom they were exchanged and circulated; journals therefore served an important function in the dissemination and establishment of scientific concepts in public spaces.<sup>49</sup> For new scientific methods and concepts specifically, Steven Shapin and Simon Schaffer's work on the *Philosophical Transactions of the Royal Society* shows that periodicals functioned as a means of consensus building; in Shapin and Schaffer's words, periodicals constituted a "literary technology."<sup>50</sup> In order for a matter to be established as a fact it had to be witnessed in practice by more than one person and in theory by all. The periodical was the means by which discoveries and observations were transmitted to those in a position to study, reproduce, and, therefore, establish them as true knowledge. They encouraged, in the words of historian Lorraine Daston, "collective empiricism."<sup>51</sup> The public element of the journal, and as we will see the

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<sup>49</sup> Paul Wood pointed out Habermas's account excludes the significance of scientific discourse in the formation of the public sphere: Paul Wood, "Science, the Universities, and the Public Sphere in Eighteenth-Century Scotland," *History of Universities* 14 (1994): 99-135. For more the significance of the public in the development of science in the eighteenth century see: Thomas Broman, "The Habermasian Public Sphere and 'Science in the Enlightenment'" *History of Science*, 36, 2 (1998): 123-149; Larry Stewart, *The Rise of Public Science: Rhetoric, Technology and Natural Philosophy in Newtonian Britain, 1660-1750* (New York: Cambridge University Press, 1992); Roy Porter, "Science, Provincial Culture and Public Opinion in Enlightenment England," *British Journal for Eighteenth-Century Studies* 3 (1980): 20-46; Steven Shapin, "The Audience for Science in Eighteenth-Century Edinburgh," *History of Science* 12 (1974): 95-121; Simon Schaffer, "Natural Philosophy and Public Spectacle in the Eighteenth Century," *History of Science* 21 (1983): 1-43; Jan Golinski, *Science as Public Culture: Chemistry and Enlightenment in Britain, 1760-1820* (New York: Cambridge University Press, 1992). For more on the significance of the growing public nature of science in the late decades of the seventeenth century see: Michael Hunter, "The Crown, the Public and the New Science," in *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain* by Michael Hunter (Woodbridge: Boydell Press, 2005): 151-166.

<sup>50</sup> Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985) 22-25. The significance of the broader role of the Royal Society in the public acceptability of the new science is explored by Michael Hunter: Michael Hunter, *Establishing the New Science: The Experience of the Early Royal Society* (Woodbridge: Boydell Press, 1989).

<sup>51</sup> Lorraine Daston, "The Empire of Observation: 1600-1800," in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 88. Another study of the significance of scholarly collaboration in the development of early modern science is Adam Mosley, *Bearing the Heavens: Tycho Brahe and the Astronomical Community of the Late Sixteenth Century* (New York: Cambridge University Press, 2007).

encyclopedia also, was essential to the development of knowledge in this period. Though we know relatively little about circulation and readership of many of the journals -- who read them and whether they encouraged readers to buy or borrow the books reviewed -- historians have shown that the journal served to create new cultural spaces, means of sifting false belief from truth, and realms of transnational communication.<sup>52</sup>

### **The New Encyclopedia**

Compilers of encyclopedias responded to similar circumstances and challenges by offering another forum for scholarly and public consumption of knowledge. As explained in Chapter 1, the encyclopedia, originally conceived as a summary of all knowledge, is an old genre with roots dating back to the ancient period. In the seventeenth century, a new genre called a dictionary or encyclopedia of arts and sciences intended to both summarize old knowledge and account for new discovery, emerged. It did not merely summarize the curriculum of the educated elite, but compiled facts and ideas both old and contemporary. The encyclopedias of the seventeenth and eighteenth centuries were also intended to be accessible to a broader public so as to support conversation and communication beyond a small cadre of scholars. Accordingly, the primary break between the old and new styles of encyclopedia was the replacement of systematic or thematic arrangement with alphabetical order, which allowed for insertion of new information without undermining the established relationships between subjects and disciplines.<sup>53</sup>

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<sup>52</sup> Rappaport, 12. See: Carlo Capra, Giuseppe Ricuperati and Valerio Castronovo, *La Stampa italiana dal cinquecento all'ottocento* (Bari: Laterza, 1986), 79; and Jean-Michel Gardair, *Le "Giornale de' letterati" de Rome (1668-1681)* (Florence: L.S. Olschki, 1984), 11. For a sense, albeit inconclusive, of journal readership see Daniel Mornet's study of French sale catalogues: Daniel Mornet, "Les Enseignements des bibliothèques privées (1750-1780)," *Revue d'Histoire littéraire de la France* XVII (1910), 453. Anne Goldgar also discusses journal readership: Goldgar, 60-69.

<sup>53</sup> See Chapter 1.

The first of the new alphabetical works were historical and biographical dictionaries, which began to appear about 20 years prior to dictionaries of arts and sciences. First among them was Louis Moréri's *Grand Dictionnaire Historique*. Published originally in Lyon in 1674 and later in 1681 in an expanded edition, the work is usually regarded as the first to present a range of subjects in alphabetical order, though the contents were primarily limited to history, biography, genealogy, and geography. The editors of a 1694 English translation titled, "*The Great Historical Dictionary*," advertised it as follows:

This dictionary being a Perfect Extract, and the very Quintessence of what was writ on these Subjects before him; and he has laid them up in such Obvious Repositories, as they may be come at by anyone who understands the Alphabet.<sup>54</sup>

Moréri's work served as a model for Pierre Bayle's more famous *Dictionnaire Historique et Critique*, first published in two volumes in 1697. Originally Bayle critiqued Moréri's work, but Bayle later expanded his own historical, theological, and philosophical commentary through his dictionary's biographical entries.<sup>55</sup> As discussed above, Bayle also launched a periodical, thus experimenting and innovating with both sorts of publications.

A model for the use of alphabetical order was dictionaries. Both language dictionaries as we know them, i.e., translating words from one language to another, and so-called "hard-word" dictionaries, which explained difficult words often derived from other languages, utilized alphabetical organization. The hard-word dictionaries in particular are considered forerunners of the dictionaries of arts and sciences because they were not limited to word translations, but rather incorporated extended explanations, illustrations, and in some instance whole excerpts from

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<sup>54</sup> Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001), 17.

<sup>55</sup> Yeo, 18.

technical dictionaries to elucidate entries. As these works began to more thoroughly discuss words and subjects, they began to evolve into encyclopedias of the arts and sciences. As Leibniz observed in 1704, “One cannot explain words without making incursions into the sciences themselves, as is evident from dictionaries; and, conversely, one cannot present a science without at the same time defining its terms.”<sup>56</sup> Thomas Blount’s 1656 *Glossographia*, for example, advertised that it included specialized words used by theologians and surgeons, along with “terms of many Sciences.”<sup>57</sup> And John Harris’s 1704 *Lexicon Technicum*, a popular early dictionary of arts and sciences, explicitly stated his debt to lexicons and technical dictionaries and described the difference between his work and those as one of aim: he sought to explain “not only the Terms of Art, but the Arts Themselves.”<sup>58</sup> Dictionaries of arts and sciences professed to explain subjects and their relationships.<sup>59</sup>

A closer look at one of the most influential of the new encyclopedias, the *Cyclopaedia* by Ephraim Chambers, who was considered the “Great Father of the Encyclopedial enter-prize,” helps to better elucidate the contours of the genre and what differentiated it from its predecessors.<sup>60</sup>

Chambers’s own statements published with his work in the “Proposals” issued in January 1726, the “Preface” to the first edition of 1728, and the “Advertisement” included in the 1738 second edition provide the best sources for understanding the goals and nature of the project.

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<sup>56</sup> Yeo, 20.

<sup>57</sup> Yeo, 18-21. Even within these works, however, alphabetical order was often used in conjunction with thematic arrangements, sometimes as a secondary method of organization.

<sup>58</sup> Yeo, 22. Harris was a member of the Royal Society, which emphasizes that scientific affiliation and outlook encouraged production of these new genres. See Yeo, 20.

<sup>59</sup> Commonplace books were also important precursors for the new genre. See Yeo, 101-119.

<sup>60</sup> Yeo, 123.

Chambers dedicated the *Cyclopedia* to England's King George II and described it as a "Survey of the Republic of Learning."<sup>61</sup> The intended audience for the work was stated to be both scholars and non-scholars, ideally encompassing the reading public as a whole.<sup>62</sup> Chambers intended the *Cyclopedia* to serve the function of a library without what he considered to be their weaknesses. In his opinion, libraries were necessary to access knowledge but they could also be used for vain purposes, specifically as an opportunity to display acquisitions. Instead, the *Cyclopedia* would "answer all the Purposes of a Library, except Parade and Incumbrance"; it would therefore be more useful "than any, I had almost said all, of the Books, extant."<sup>63</sup> With the second edition of his work in 1738, Chambers expanded his goals. Instead of merely replacing a library, he intended for his *Cyclopedia* to replace the function of a society or academy. In his words, the *Cyclopedia* would, "abundantly indemnify us [in Britain] against the Want of what other Countries are so fond of, Royal, Imperial, Caesarian, and Ducal Academies, Palatine Societies and the like: Splendid names, pompous Titles, but rarely productive of Fruits answerable thereto!" Chambers then modestly added that his work would be "the best Book in the Universe."<sup>64</sup>

Chambers sought to accomplish the goals of creating a single work that would serve the functions of a library and learned society and make all other books unnecessary by covering in a comprehensive manner both the existing body of knowledge among the educated in the arts and sciences as well as new and updated scholarship and discoveries. The hallmark of this new type

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<sup>61</sup> Quoted from Yeo, 46.

<sup>62</sup> Yeo, 46.

<sup>63</sup> Yeo, 121.

<sup>64</sup> Yeo, 122.

of book, which made possible the inclusion of both the old and new in scholarship, was the implementation of alphabetical order combined with a system of cross-references, charts, and diagrams to maintain the established relationships between subjects and disciplines. The combination of these two factors -- the replacement of the old order with alphabetization without abandoning systematic structures -- fundamentally sets this work apart from its predecessors. These two features came to define the encyclopedias that followed and marked the new contours of the genre.

The alphabetical structure and its significance have been explained at length previously in this study.<sup>65</sup> Not yet examined, however, is the importance of other tools of knowledge management used in combination with alphabetization in the new encyclopedic works. Of the nature of the *Cyclopaedia* Chambers specifically wrote:

The Character of this Work is to be a Dictionary, and System at the same time. It consists of an infinite Number of Articles, which may either be consider'd separately, as so many distinct *Parts* of Knowledge; or collectively, as constituting a *Body* thereof.<sup>66</sup>

Chambers stated that he chose alphabetical order to facilitate this function as systematic order would be too unwieldy.<sup>67</sup> In contrast to Harris's *Lexicon Technicum* in particular as well as other alphabetical dictionaries, Chambers employed tools to help him maintain systemization in tandem with the alphabetical structure.<sup>68</sup>

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<sup>65</sup> See Chapter 1.

<sup>66</sup> Quoted from Yeo, 128.

<sup>67</sup> In the words of Chambers, "Instead of the Natural Order, wherein the vast Assemblage would be unwieldy, and the Complication of numerous Parts make each difficult to come at and conceive; they are here presented *singly*, and in the familiar Order of the *Alphabet*...their natural Order and dependence is here pointed out, and how and where they join to each other. Each Head is pursu'd into the Borders [of] the neighbouring ones; where the Pursuit is resum'd, and carried on by a Chain of References to [ot]hers; where the Pursuit is resum'd, and carried on by a Chain of References to [ot]hers; and thence in an orderly Progression to the rest." Quoted from Yeo, 129.

<sup>68</sup> Yeo, 132.

One tool by which Chambers preserved the coherence of the disciplines was through visual maps of knowledge, or “knowledge trees.” Knowledge trees were commonly employed in medieval and Renaissance works, functioning as diagrams but also decorated to look like trees complete with verdant branches. Chambers’s diagrams assumed the function of these earlier works but were more abstract; they were constructed of geometric shapes, lines, circles, and squares and did not resemble trees found in nature.<sup>69</sup> They presented connections and relationships between art and science disciplines clearly, so Chambers called his primary illustration a “View of Knowledge.”<sup>70</sup> In this scheme, the body of knowledge was separated into two main categories -- “Natural and Scientifical” or “Artificial and Technical” -- and under each of these were multiple subdivisions.<sup>71</sup>

A single diagram or “tree,” no matter how detailed, could not sufficiently illustrate all of the connections between individual entries, so Chambers employed a second tool to identify the relationships between subjects: cross-references. Though used in only about half of Chambers’s articles, they proved a useful mechanism for informing the reader of the connectedness of what otherwise would appear to be stand-alone, discrete subjects. In Chambers’s words:

So that by a course of references, from generals to particulars; from premises, to conclusions; from cause to effect; and vice versa, i.e. from more, to less complex, and from less, to more; a communication might be opened up between the several parts of the work; and the several articles be, in some measure, replaced in their natural order of science, out of which the alphabetical order had removed them.<sup>72</sup>

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<sup>69</sup> Yeo, 132. Interestingly the *Encyclopédie* returned to the medieval model of knowledge trees drawn in the appearance of a full tree.

<sup>70</sup> Yeo, 133, Figure 19.

<sup>71</sup> This diagram is further explained further and compared to one of Lampronti’s diagrams later in this chapter.

<sup>72</sup> Yeo, 167.

Cross-references became commonplace and material in subsequent encyclopedic works and were considered one of their hallmarks. They were an especially fundamental means by which these texts could encompass both old and new knowledge under an alphabetical scheme while connecting one to the other.

If Chambers's *Cyclopaedia* is often considered the first of the modern encyclopedic genre then the subsequent French *Encyclopédie* of Diderot and d'Alembert is the most famous. According to the 1745 prospectus for it, the *Encyclopédie* began as a translation of Chambers's work,<sup>73</sup> a testament to his influence. By this time, the *Cyclopaedia* had been printed in five editions of two folio volumes each. The 1745 proposal for the *Encyclopédie* described the new translation as encompassing four folio volumes. The printer offered an editing contract to Diderot and d'Alembert, who solicited help from a network of men of letters as they themselves began work on the translation. By creating an authorial team, they reflected the ideas of the age and of the genre. It was a departure from the single author model of Chambers and others, and an act of homage to the ideals of the Republic of Letters -- the collective and collaborative nature of scholarship.

Diderot and d'Alembert explicitly stated their debt to Chambers, specifically for the ability of his work to register advances made in the 'arts and sciences,' whereas his predecessors works were less equipped to do so. They praised Chambers's use of alphabetization while maintaining the old systems:

He well understood the value of encyclopedic arrangement, that is to say the chain by which one can descend without interruption from the first principles of an art or science

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<sup>73</sup> Yeo, 125.

all the way down to its remotest consequences back up to its first principles...to circumnavigate the literary world without losing our way.<sup>74</sup>

Diderot and d'Alembert also acknowledged Chambers's pioneering use of knowledge trees and cross-references, which they used as well.<sup>75</sup>

The English and French volumes were also joined by Italian ones. Gianfrancesco Pivati (1689-1764), a contemporary of Lampronti who shared multiple decades as well as educational experiences with his Jewish counterpart, produced one significant product called the *Nuovo Dizionario*. Pivati was born in Padua in 1689 and studied law as well as medicine there. He was a member of the Academy of Science of Bologna and also worked as an archivist at the University of Padua and a censor for books published in the Republic of Venice.<sup>76</sup> His *Dizionario* was the most extensive Italian encyclopedic work of its time. It was preceded by Vincenzo Maria Coronelli's publication of the first Italian encyclopedia in alphabetical format in 1701, the *Biblioteca universale sacro-profana, antico-moderna*. Coronelli's project proposed an ultimate printing of an ambitious 45 volumes, though only seven made it to the presses. Pivati's work was printed in full in 10 folio volumes, on a subscription basis.<sup>77</sup>

Although Pivati intended his dictionary to cover all aspects of human knowledge, it did not reach that ambitious goal. It does not, for example, include biography, and there is little discussion of the arts such as literature and music. The emphasis is on the physical sciences,

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<sup>74</sup> Yeo, 126.

<sup>75</sup> These tools were also used by Lampronti, as discussed in the latter part of this Chapter.

<sup>76</sup> Silvano Garolfalo, *L'enciclopedismo Italiano: Gianfrancesco Pivati* (Ravenna: Longo Editore, 1980), 23-4.

<sup>77</sup> On a subscription list at the end of Volume 10 Giambattista Morgagni's name is listed. See Silvano Garolfalo, "Gianfrancesco Pivati's *Nuovo dizionario*," in *Notable Encyclopaedias of the 17<sup>th</sup> and 18<sup>th</sup> Century: Nine Predecessors of the Encyclopédie*, in *Studies on Voltaire and the Eighteenth Century*, vol. 194 ed. Frank A. Kafker (Oxford: The Voltaire Foundation, 1981), 198.

natural history, and anthropology. There are a large number of illustrations, especially in anthropological articles on faraway peoples and cultures. Articles concerning anatomy, biology, geometry, and architecture also include images, although not in the same abundance. Pivati based a number of his illustrations on the *Philosophical Transactions* of the Royal Society of London and the *Histoire del l'Academie Royale des Sciences* of Paris, including an illustration of Boyle's pneumatic machine.

Historians have described Pivati's work as "a truly scientific encyclopedia...remarkably rich in information and accurate for its time;" "superior to previous ones for its completeness, organization, and erudition...ample and precise, in accord with the knowledge of the period."<sup>78</sup> His enthusiasm in treating the sciences is seen in his entries on physics ('*Fisica*'), the world ('*Mondo*'), and smallpox ('*Vaiuolo*'), among others.<sup>79</sup> The *Nuovo Dizionario* was not only a significant vehicle for spreading the knowledge and awareness of natural sciences, it also helped establish an Italian-specific model of the genre.

The foregoing description of the major late seventeenth- and early eighteenth-century European periodical and encyclopedic works and the characteristics underlying them, especially the Italian examples, establishes the context and milieu out of which the novelty of Lampronti's work can be fully understood and appreciated.

### **Lampronti's New Halakhic Genres**

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<sup>78</sup> Silvano Garofalo, "Gianfrancesco Pivati's *Nuovo dizionario*," 199.

<sup>79</sup> Garofalo, 215.

This section evaluates the extent to which Lampronti adopted or internalized elements of the new genres.<sup>80</sup> Specific comparisons are made between Lampronti's works and contemporary periodicals and encyclopedias, with attention to their underlying epistemologies.

### *Bikurei kazir*

Most of this study has been devoted to Lampronti's *magnum opus*, the grand encyclopedic work that occupied him for the majority of his lifetime, the *Paḥad Yiẓḥak*. Before Lampronti embarked on that project, however, he experimented with another new literary form gaining popularity throughout Europe in general and in Italy in particular during that time. In 1715 Lampronti launched the first periodical of rabbinic law, titled *Bikurei kazir* (First Fruits of the Harvest).<sup>81</sup> As with the *Paḥad Yiẓḥak*, the format and structure of this novel endeavor significantly departed from the organization of halakhic material in the years prior. Indeed Lampronti's was the first attempt to serialize halakhic literature in periodical format. Though the content of the work remained rabbinic, the fundamental structure and idea behind journals -- the wider publication of ongoing scholarly discussions and the facilitation of collaboration -- were shared with the *Bikurei kazir* series.

Lampronti framed his periodical series around rabbinic questions and answers, similar to the many responsa included in the *Paḥad Yiẓḥak* discussed previously in this study. In each issue

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<sup>80</sup> This section examines elements other than alphabetical order. See Chapter 1 for alphabetical order.

<sup>81</sup> There is one possible precedent for the serialization of rabbinic literature, the *Peri 'ez ḥayim* of Amsterdam. It is often cited as the first halakhic periodical, but its regular monthly print runs began in 1728, 13 years after Lampronti's publication. A similar responsa collection under the same name, however, does appear in print starting in 1691. Unlike Lampronti's periodical in which many rabbis respond to the same question, the *Peri 'ez ḥayim* presents a compilation of responsa written by different rabbis, with the questions answered by only one rabbi each. For reference to the *Peri 'ez ḥayim* as the first rabbinic periodical see: Ariel Bar-Levav, "Amsterdam and the Inception of the Jewish Republic of Letters," in *The Dutch Intersection: Jews and the Netherlands in Modern History*, ed. Yosef Kaplan (Leiden: Brill, 2008), 235. For a mention of the erroneous association of the *Peri Etz Hayyim* as the first halakhic periodical see: Elisheva Carlebach, *The Pursuit of Heresy: Rabbi Moses Hagiz and the Sabbatian Controversies* (New York: Columbia University Press, 1994), 272.

of Lampronti's journal, a single question was posed and then answered through a series of short essays written by different scholars. A longer answer was usually written by one rabbi followed by shorter endorsements and responses of other scholars, called *haskamot* (approbations). An explanation of the contents, dating, and respondents in each of the three printed issues further elucidates the nature of the project and the public and collaborative presentation of rabbinic decisions it fostered.

The first issue of the periodical, printed in 1715, covered a legal question on the custom of Ashkenazic Jews regarding the matter of *nesi'at kapaim* (raising of the hands during the priestly blessing) during *ne' ilah* (ending service) of Yom Kippur.<sup>82</sup> Rabbi Jacob Daniel Olmo (of Ferrara) wrote the first essay and Lampronti the first endorsement.<sup>83</sup> Short opinions written by numerous rabbis then follow: Judah Briel (Mantua), rabbis of Rome (Isaac Castelnovo, Tranquillo [Menahem] Corcos, and Sabbatai Pontecorvo), Menasheh Gentili (Verona), Isaac Cantarini (Padua), Joseph Fiammetta (Ancona), Samson Morpurgo (Ancona), Sabbatai Elhanan Recanati (Ferrara), Abraham Segre (Casale), Yoel Pincherle (Alessandria), rabbis of Venice (Salomon Nizza, Refael Silva, Jacob Aboab, Samuel David Ottolenghi), and Samuel Ovadia Levi of Safed, and Joseph Borgo (Ferrara).<sup>84</sup> The discussion of the issue spanned eight folio pages (Olmo's initial essay is five folio pages) and covered a review of rabbinic discourse on the matter

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<sup>82</sup> Isaac Lampronti, *Rei'shit bikurei kazir* (Venice, 1715). The question is on page 2r.

<sup>83</sup> Lampronti, *Rei'shit bikurei kazir*, 2r-5v.

<sup>84</sup> Lampronti, *Rei'shit bikurei kazir*, 5v-8v. With the exception of the last endorsement by Joseph Borgo, all the *haskamot* for this issue are dated before the month of *kislev* in 1714. *Kislev* would have corresponded with approximately November of 1714 on the Gregorian calendar. Borgo wrote his endorsement in *shevat* (approximately January of 1715): Lampronti, *Rei'shit bikurei kazir*, 9r [labeled 18r]. I have also seen two printed editions of the *Rei'shit bikurei kazir*; one with Borgo's endorsement and one without, which indicates that a print run may have been initiated before Borgo submitted his endorsement.

and the customs in various communities.<sup>85</sup> The primary concern was that if the *ne'ilah* prayer service continued into the night then *nesi'at kapaim* would be performed at an uncustomary hour. The rabbis ruled that the service was permitted even at an unusual time so long as the prayer leader kept the service moving quickly and did not prolong it with lengthy tunes.

The second issue of the periodical, titled *Tosefet bikurei kazir*, and also printed in 1715, proceeds similarly with a short essay at the beginning followed by a number of endorsements.<sup>86</sup> The issue covers 17 folio pages in total, eight of which include the question and first essay and nine of which cover the other rabbinical opinions.<sup>87</sup> Pinhas Hay Anau wrote the essay while endorsements were submitted by Lampronti, Briel, Cantarini, Samuel Ha-Levi of Safed, Moses Ze'ev of Mezeritch (Polish emissary), Joseph Borgo, Sabbatai Elhanan Recanati, Samson Morpugo, Menahem Minis Ha-Levi Laser of Voronezh in the Polish Commonwealth, Abraham Segre, Jacob Aboab (Venice), Samuel David Ottolenghi, and Azriel Pincherle.<sup>88</sup> The subject was the tune of the *Birkat Kohanim* prayer, a contentious issue at the time that sparked rabbinic debate and a polemical work of Zahalon.<sup>89</sup>

The final issue of the periodical, titled *Itur bikurei kazir*, covered a question about a butcher who found a flaw in his knife and swore never to slaughter again.<sup>90</sup> This time Lampronti's

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<sup>85</sup> The question covers page 2r; the first essay covers pages 2r-5r; the endorsements cover pages 5r-9r.

<sup>86</sup> Isaac Lampronti, *Tosefet bikurei kazir* (Venice, 1715).

<sup>87</sup> The question covers pages 2r-2v; the first essay covers pages 2v-8r; the endorsements cover pages 8r-17v.

<sup>88</sup> All the *haskamot* were received before *adar bet* of 1715. Sonne argues that a letter of Lampronti's indicates that by the 8th of *adar bet* (approximately March), the periodical had already been brought to print. See Sonne, 93.

<sup>89</sup> Zahalon published his work, *Meziṣ u-meliṣ* in the same year: Mordekhai Zahalon, *Meziṣ u-meliṣ* (Venice, 1715). For more on this see Sonne, 80-1; 95.

<sup>90</sup> Isaac Lampronti, *Itur bikurei kazir* (Venice, 1715).

student Isaac Norzi wrote the initial essay.<sup>91</sup> Lampronti again wrote the first endorsement, which was followed by those of Briel, Cantarini, Morpurgo, Abraham Segre, Azaria Yoel Pincherle, Menahem Minis Ha-Levi Laser of Voronezh, Moshe Ze'ev of Mezeritch, Shmuel Ha-Levi the emissary of Safed, Rafael Shlomo of Finale, Sabbati Elhanan Recanati, and Jacob Aboab.<sup>92</sup> This issue covered nine folio pages, four of which include the initial question and answer.<sup>93</sup>

Lampronti intended to continue publishing issues under the name *'Itur bikurei kazir*, as at the end of the third issue he explicitly stated that the next publication would also be called *'Itur bikurei kazir* and would be numbered, appropriately, as Issue 2, with the following issues numbered 3, 4, and so forth.<sup>94</sup> Though the title page of each of the issues produced specifies only the year in which the journal was published, 5475 of the Hebrew calendar (1714-1715), the dating of the *haskamot* shows that the issues were written and published approximately three months apart. The *haskamot* of the first issue were all written before *kislev*, the second before *adar bet*, and the third around *iyar*.<sup>95</sup> Borgo's endorsement for the first volume was written in *shevat*, after the publication was issued, and it was printed later. The text of Borgo's endorsement does not explain the delay. Isaiah Sonne argued that Borgo wavered in giving his endorsement, but acquiesced once he saw other rabbinic support.<sup>96</sup>

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<sup>91</sup> Lampronti, *'Itur bikurei kazir*, 2v-4v.

<sup>92</sup> All the *haskamot* were written before *iyar* 1715, thus confirming that this third issue was printed after the previous two. *Iyar* would have been approximately May of 1715.

<sup>93</sup> The question covers pages 2r-2v; the first essay covers pages 2v-4v; the *haskamot* cover pages 4v-9r.

<sup>94</sup> Despite Lampronti's intentions, only three issues of the journal were ever published.

<sup>95</sup> Again, approximately November of 1714, March of 1715, and May of 1715.

<sup>96</sup> Sonne, 80.

Some historians have argued that the rabbinic periodical was intended by Lampronti to provide a forum in which he could train his students in the art of penning rabbinic essays.<sup>97</sup> According to this view, the issues were primarily pedagogical exercises that happened to be printed.<sup>98</sup> Upon consideration of both the significance of innovating a new structural presentation for halakhic literature and examination of the scholarly periodicals that proliferated towards the end of the seventeenth and the beginning of the eighteenth centuries, there is additional significance and meaning behind Lampronti's project than it being merely a teaching tool.

The primary goals of the editors of the periodicals of the time were to keep the reading public aware of developments in the world of learning and for scientific periodicals specifically to establish truth in a collaborative, public space. Lampronti's periodical embraced both those values. Though its substance (the *Bikurei kaẓir* was limited to matters of internal rabbinic scholarship) was markedly different from works such as the *Journal des Savants*, the *Philosophical Transactions*, and the *Giornale de letterati d'Italia*, the *Bikurei kaẓir* shared the public and collaborative elements of these other publications, which elements were new to halakhic literature.

Medieval responsa were typically framed around a single halakhic question and one rabbi's answer. With increased scholarly communication and circulation of letters in the early

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<sup>97</sup> Sonne, 80; 95.

<sup>98</sup> There is internal support for this argument in the *Bikurei kaẓir* as the first essays were all written by Lampronti's students in the *Talmud Torah* of Ferrara, and at the end of the final publication Lampronti stated his intent for subsequent issues saying that the essays are written by his students "who had not reached their time," seeming to say that this was in part a pedagogical exercise. See Lampronti, *Itur bikurei kaẓir*, 9r. There is also other manuscript evidence of Lampronti's efforts to train his students in rabbinic writing in the form of translating his homilies. In those documents one can see the efforts his students went through to learn the art of rabbinic writing. See London, British Library, Ms. Add. 26895.

modern period, responsa began to expand to include multiple rabbinic opinions to the proffered questions.<sup>99</sup> These essays were still, however, mostly printed in volumes containing only responsa written by a single rabbi and reflected the personal collections of a given scholar.<sup>100</sup> Lampronti's presentation of multiple scholarly opinions in a single concise and serialized format upended the previous model.<sup>101</sup> The individual's opinion was not presented alone but as a part of a group. The result is the appearance of an open conversation with multiple nodes; scholarly information was shared by a group of individuals to be assessed by the reading public at large. In the terms of Shapin and Schaffer's description of the *Philosophical Transactions*, the *Bikurei kazir* functioned as a "technology" for the establishment of information in a collaborative space.<sup>102</sup> Single individuals could record scholarship, but the collective record or a society of scholars, published for consumption by, in theory at least, the entire reading public, provided a means of verifying the knowledge. The publication of multiple rabbinic opinions on a given issue at a time in the *Bikurei* series thus established more open and public scholarly conversations. In theory at least, the model could serve to make the reading public aware of the latest rabbinic discussions.

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<sup>99</sup> The expansion of the number of respondents to single questions was not unique to rabbinic responsa literature in this period. Legal questions and *consilia* were also organized by single individuals in the medieval period whereas by the early modern era, the networks expanded to include multiple respondents: See Gianna Pomata, "Observation Rising: Birth of an Epistemic Genre, 1500-1650," in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 53.

<sup>100</sup> There are a few other works during Lampronti's time that similarly collected contemporary responsa written by multiple authors including: Samson Morpurgo, *Shemesh zedakah* (Venice, 1753) and *Peri 'ez hayim* (Amsterdam, 1728).

<sup>101</sup> Again, Lampronti's works are not the only example of works containing the responsa of many rabbis, but his are the most extensive.

<sup>102</sup> Lorraine Daston also argued that periodicals helped to foster "virtual communities of observers." See Lorraine Daston, "The Empire of Observation: 1600-1800," in *Histories of Scientific Observation*, eds. Lorraine Daston and Elizabeth Lunbeck (Chicago: University of Chicago Press, 2011), 81; 87.

Despite his valiant efforts and the significance of the endeavor, Lampronti's periodical could not sustain publication. Historians have argued that the reason for its failure was that it provoked rabbinic controversy.<sup>103</sup> In light of the comparisons made to contemporary periodicals and historian Brendan Dooley's analysis of the *Giornale de letterati d'Italia*, it is also likely that the endeavor was too expensive to sustain. Lacking institutional support and a robust subscription network, Lampronti's *Bikurei* series faced the same uphill battle of the many failed Italian journals before him.<sup>104</sup> The short-lived nature of the attempt should not, however, diminish its significance. Lampronti did not just experiment with and initiate one new genre of rabbinic literature, he tried his hand at two of great significance for scholarly and scientific communities in the period.

### **The *Pahad Yizhak* Beyond its Alphabetical Structure**

Lampronti's appropriation of the encyclopedic genre goes beyond the organizational structure alone. The *Pahad Yizhak* internalized the other hallmarks of eighteenth-century encyclopedias: namely, maintaining systematic order in conjunction with alphabetization and the embrace of the collaborative intellectual model. This section will make specific comparisons between three other tools Lampronti employed and those used in contemporary encyclopedic works: diagrams, cross-references, and scholarly collaboration.

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<sup>103</sup> Isaiah Sonne, "Foundation Stones for the History of Italian Jewry: Texts and Studies about the circle of Ramhal and R. I. Lampronti," (in Hebrew) *Horev* 5-6 (1939-1940): 80-1; 95. Sonne argues that Mordekhai Zahalon, another prominent rabbi in Ferrara during Lampronti's time, was upset that Lampronti did not ask for his endorsement of the first issue. He subsequently disagreed with the rabbinic opinions in the second issue and wrote his own polemical publication in response: Mordekhai Zahalon, *Meziq u-meliz* (Venice, 1715). According to Sonne, of Ferrara's main rabbis, only Rabbi Elhanan Recanati put his full support behind Lampronti, and Rabbi Borgo in a reluctant and delayed fashion. Zahalon and Sanguinetti, however, did not support Lampronti or the endeavor. Sonne argues that Zahalon even went so far as to pressure the Venetian rabbinate to withdraw their endorsement. I did not encounter any further evidence within Lampronti's works that supports Sonne's interpretation.

<sup>104</sup> The two arguments may also be linked insofar as continued financial backing would have been more difficult without complete rabbinic support for the project.

## *Diagrams and Charts*

Like the major non-Jewish encyclopedic works of his time, Lampronti made use of charts and diagrams in the *Paḥad Yiẓḥak*. He generally employed two types of diagrams: subject and pedagogical.

The subject diagrams illustrate relationships between subjects and sometimes look similar to the abstract ones Chambers created. Though illustrative diagrams were common in medieval and Renaissance works, their use in encyclopedias, in tandem with alphabetical order, was new to the eighteenth century.<sup>105</sup> As Lampronti's *Paḥad Yiẓḥak* is the first alphabetically organized halakhic work, it is also the first halakhic work to incorporate such diagrams with alphabetical order.<sup>106</sup>

One example of a subject tree in the *Paḥad Yiẓḥak* is found under the letter *tet* for *tum'ah* (impurity), where Lampronti illustrated the different categories of impurity and the connections between them. Included in Lampronti's manuscripts pages are two extra-large diagrams drawn across pages more than double the size of the others in the volume, each of which is folded into eight parts in order to align with the remaining pages.<sup>107</sup> One such chart covers the biblical prohibitions of *tum'ah* and the other the rabbinic. Each chart starts with a circle at the top in which the primary category is written, followed by carefully drawn branches that lead to other circles in which the subcategories are written. Stemming from the bottom of each circle are two vertical lines forming a column containing greater explanation or delineation of subcategories.

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<sup>105</sup> Yeo, 27-31.

<sup>106</sup> I have not encountered similar subject charts in other halakhic works. It is possible that subject charts specifically were unnecessary in a systematically organized work, as the relationships between subjects were spelled out in a text's structure and need not be illustrated.

<sup>107</sup> These charts can be found in Paris, Ms. Hebrew 496, biblical chart on f. 2r; rabbinic on f. 54r.

The chart of biblically mandated *tumah* has 11 branches and the rabbinic six. The result is an apprehensible presentation of the different types of impurities and their accompanying laws.<sup>108</sup> The top of the diagram states that the relationship between the subjects is organized according to the system used by Maimonides in the *Mishneh Torah*. This statement is significant because it offers an explicit recognition of the maintenance of systematic order.<sup>109</sup> It shows that Lampronti did not want to abandon previous systematization entirely; he wanted to visually show the connections, while also using alphabetical order. There is not a single *tum'ah* entry in the *Pahad Yizhak* that explains these relationships, all the relevant entries are spread throughout the work in their proper alphabetical place.<sup>110</sup> Thus, the chart helps the reader draw connections that would not be apparent from Lampronti's chosen primary organizational method alone. Lampronti, however, did not diagram all aspects of halakhah according to the systematic orders of the *Shulhan 'arukh* and the *Mishneh Torah*.<sup>111</sup> Nonetheless, Lampronti's use of various isolated subject charts shows he sought to employ systematic orders in conjunction with his alphabetical structure.

A similar purpose motivated Ephraim Chambers in his *Cyclopedia* and similarly encouraged Lampronti. As discussed above, Chambers organized the work alphabetically, but prefaced it with a tree comprehensively covering the whole of knowledge and showing the divisions and relationships between subjects. The specific comparison shows that Lampronti

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<sup>108</sup> See appendix for images of these diagrams.

<sup>109</sup> The chart, however, is not precisely organized according to Maimonides' order. It nonetheless offers a clear systematic presentation of the subjects not offered by Lampronti's alphabetical order alone.

<sup>110</sup> See Chapter 2.

<sup>111</sup> Perhaps that endeavor was too time consuming.

used this scholarly tool to the same end.<sup>112</sup> Though Lampronti did not diagram the relationships between all halakhic subjects to the same degree as Chambers did with all knowledge, he did map out discrete relationships within certain subject matters that would otherwise be self-evident in a systematically organized halakhic work. Visually, Lampronti's diagrams look more like Chambers's than those employed in earlier texts or even in the later *Encyclopédie*, which were more ornate and elaborate. Both Lampronti and Chambers used abstract models with simple shapes and lines separating and connecting subjects.<sup>113</sup>

The second type of diagram found in the *Paḥad Yiẓḥak* can be termed pedagogical. These charts, drawings and diagrams were meant to visually and clearly present information on a given issue as opposed to illustrating systematic relationships between subjects. These teaching tools took a variety of forms in Lampronti's work. Sometimes he copied decision trees that would visually lay out the possible scenarios of a legal conundrum.<sup>114</sup> Other times he would draw simple conversion tables that laid out, for example, the contemporary equivalents of weights and measures listed in the Talmud.<sup>115</sup> He wrote an extensive chart listing chapter by chapter all the

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<sup>112</sup> Chambers's diagram begins with a division of "knowledge" into either "natural and scientific" or "artificial and technical." From there the "natural" and "scientific" category is divided into either "sensible" or "rational." "Sensible" is defined as meteorology, hydrology, minerology, phytology, and zoology. Rational is divided into: "powers and properties of metaphysics" (ontology, pneumatology); "quantities thereof, called mathematics" (arithmetic, geometry, and statics, further subdivided into analytics, algebra, trigonometry, conics, and spherics); lastly, "relations thereof to our happiness, called religion" (ethics, or natural religion further divided into politics and law) and theology or revelation. The section on the "artificial" and "technical" categories of knowledge similarly divides into "internal" and "external," "real" and "symbolic" and so forth through categorization of the remaining disciplines including medicine, agriculture, commerce, and military. See Yeo, 135 for this diagram. Yeo also analyzes this diagram and compares it to the view of knowledge employed by Bacon and Diderot and d'Alembert.

<sup>113</sup> See appendix for images of these respective diagrams.

<sup>114</sup> See for example the chart on *moder hana'ah* found in Paris, *Bibliothèque Nationale de France*, Ms. 512, f. 104r. This actually was not Lampronti's original chart, but one he copied from a sixteenth-century Ottoman halakhic work, written by Tam ibn Yahya and published in Venice in 1622. See Tam ibn Yahya, '*Ohalei tam in Tum'at yesharim* (Venice, 1622), 109v.

<sup>115</sup> New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol, 34, f. 287r-287v.

rabbis in the Mishnah.<sup>116</sup> There are times where Lampronti worked out full mathematical equations on his manuscript pages.<sup>117</sup> The *Paḥad Yiṣḥak* also contains detailed diagrams to help illustrate specific concepts. One example of this is his unusual diagram of the *ḥoshen* (biblical priestly breastplate).<sup>118</sup> Among the regular manuscript pages is an oddly shaped and folded page.<sup>119</sup> It is constructed of many different sheets cut, sewn, and sealed with wax together to form the shape of the priestly breastplate. Each part of the *ḥoshen* is descriptively labeled. This diagram depicts in full form a rendering of the biblical description of the priestly garment.

The pedagogical entries, while not completely unprecedented in rabbinic literature (Lampronti copied diagrams from earlier works in a few instances), were unusual because he used so many, in different modes, and for a broad range of subjects. He certainly employed them to a much greater degree than other preceding or contemporary rabbis. The similarities between his application of visual resources to explain, illustrate, and define issues addressed in the *Paḥad Yiṣḥak* and the tools used by academic and scientific societies is thus of significance for the shaping of his religious study according to the methods of contemporary science.

### *Cross-References*

The *Paḥad Yiṣḥak* contains an elaborate system of cross-references in that the cross-references served a variety of purposes. The alphabetical structure was not meant to eliminate the established relationships between subjects, but to provide a neutral initial point of access.

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<sup>116</sup> New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol, 34, f. 170r-171v.

<sup>117</sup> For example in New York, Sotheby's, Valmadonna Collection, Ms. 18, Vol, 34, f. 287v Lampronti wrote out the multiplication necessary for finding the measurement of water in the *mikveh*.

<sup>118</sup> Paris, *Bibliothèque Nationale de France*, Ms. 476, f. 168r.

<sup>119</sup> It is not bound in the manuscript pages and does not appear to be in its proper place. It is found in the *gimmel* volume in between the entries “*gez'ah*” (trunk) and “*gezar din*” (ruling of law). It is not found in the printed editions of the text.

From there one would find a range of rabbinic opinions on the matter at issue and references to related subjects.

While some entries are not cross-referenced, it is more common to find at least one cross-reference, and in some instances more than 100 are found listed. Some entries are entirely referential, containing only cross-references to other entries without any new content included under the heading. A few examples of these references illustrates their function and use.

The *sheḥitah* (ritual slaughter) entries discussed in Chapter 2 provide a useful point for explaining how cross-references served on function within the *Paḥad Yiṣḥak*, specifically how they directed the user from the narrow to the broad or from the general to the specific. Instead of a short summary of the laws of *sheḥitah* under the letter shin are various topic headings related to *sheḥitah*, for example: “*sheḥitah ‘einaḥ zṛikha kavanah*” (*sheḥitah* does not need intention), to “*sheḥitah ‘eizeh zman u-be-‘eizeh makom*” (the time and place for proper slaughter), to “*sheḥitah be-beheimah davka*” (*sheḥitah* specifically with cattle), to “*sheḥitah be-yom tov*” (performing *sheḥitah* on a holiday), and so forth through the alphabet.<sup>120</sup> Following these headings is a lengthy list of cross-references in alphabetical order beginning with “*‘avel, ve-zaken, ve-na‘ar*” (a mourner, and an elderly person, and a young person) and “*‘ever min ha-ḥai ‘asur*” (eating the limb of a live animal is forbidden), proceeding to “*bedikat ha-sakin*” (checking the knife), “*goim ‘einam me-zuvim*” (gentiles are not commanded), and so forth comprising cross-references to all *sheḥitah* related entries, 127 references in all.<sup>121</sup> The referenced entries are found in various sections of the *Paḥad Yiṣḥak* according to their appropriate alphabetic place.

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<sup>120</sup> *Paḥad Yiṣḥak*, Vol 13, p.140v-151v, s.v. “*sheḥitah...*” (Berlin, 1886).

<sup>121</sup> *Paḥad Yiṣḥak*, Vol 13, p. 151r-v, s.v. “*sheḥitah ‘ayein*” (Berlin, 1886).

These include separate entries on each part of the *sheḥitah* process: *shehiyeh*, *derasah*, *ḥaladah*, *hagramah*, and *‘ikur*.<sup>122</sup> The extensive cross-references thus make the *Paḥad Yiṣḥak* useable as a comprehensive reference work. A single subject entry provides direction to broader and connected topics. The references also serve to maintain the systematic order of previous rabbinic works, as they acknowledge the relationships and connections between subjects. They also make the work useable as a comprehensive database for accessing information within the vast corpus of Jewish legal literature, something no rabbinic work prior was able to accomplish to the same extent.

An example of a straightforward entry with a single cross-reference is found in the first entry in the encyclopedia: *aleph aleph de-‘a’azerkhah*.<sup>123</sup> Here Lampronti first quoted the talmudic precept that one violates the Sabbath by writing two or more consecutive letters. He then explained that the question is whether one who writes the same letter twice, as in *aleph, aleph*, violates the Sabbath. Lampronti further discussed the debate in the Talmud and cited Maimonides’s ruling. At the end of the entry he cross-references *kotev u-moḥek* (writing and erasing). There one finds a more extended discussion and reference to other rabbinic sources on the broader concept of writing and erasing letters on the Sabbath. Thus, a single cross-reference serves to connect a single specific subject to broader discussions in rabbinic literature. If one wanted to know about the specific question of writing the letter *aleph* twice, one would find the answer in this section; however, if one wanted more extended discussion on the halakhic issues at play and other similar cases, one would find it by going to the referenced entry, *kotev u-*

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<sup>122</sup> *Paḥad Yiṣḥak*, Vol 13, p. 151r-v, s.v. “*sheḥitah ‘ayein*” (Berlin, 1886).

<sup>123</sup> The title of this entry is a reference to a passage in Isaiah 45:5. The entry concerns the halakhic implications of writing the same letter twice.

*mohek*.<sup>124</sup> Conversely, at the broader subject *kotev u'mohek*, there is an extended discourse of what constitutes writing and erasing on the Sabbath and what specific markings would constitute a violation of the laws, followed by references to 11 narrower but related issues, such as *aleph aleph de-'a'azerkhah*.

Some cross-references connect different ways of phrasing similar concepts or direct readers to the discussion of a subject for which the reader's topic word is not where the discussion is found. For example, the entry for *sha'atnez* (the biblical word for the forbidden mixing of fibers in garments) does not contain the applicable laws but only a cross-reference to another entry, *kil'ei begadim* (the word *kil'ayim* in rabbinic literature refers to the whole set of laws on forbidden mixtures) where there is a thorough discussion of different halakhic aspects and implications of the subject.<sup>125</sup> Thus Lampronti's alphabetical scheme assures that users of the *Paḥad Yiẓḥak* find their way to the information they seek even if they do not think about subjects in the same manner as Lampronti.

In the printed text the references appear at the end of entries and are separated by colons and semi-colons. Typically the references are printed differently than the main entry to help visually separate the references from the other content. In the Paris and Valmadonna manuscripts, however, the cross-references are listed in a single or double vertical columns. Each reference is flanked by sets of double dots on top of each word and on either side of the entire phrase.<sup>126</sup> This writing technique served to highlight and make the references visually and

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<sup>124</sup> *Paḥad Yiẓḥak*, Vol 5, 44r-v, s.v. “*kotev u-mohek*” (Reggio, 1813).

<sup>125</sup> Vol 13, p. 294v, s.v. “*sha'atnez*” (Berlin, 1886); Vol 5, p. 59r-60r, s.v. “*kil'ei begadim*” (Reggio, 1813).

<sup>126</sup> As mentioned in Chapter 1, this was a common manuscript writing technique used to highlight portions of the text.

readily apparent, thus facilitating their use. The references were also written in columns, and often a few blank pages followed each entry, so Lampronti or someone on his behalf could add references as they encountered them. In the HUC and JTS manuscripts, which represent a copy of the Paris manuscripts, the references are written on horizontal lines, but they are still separated by both spaces and double dots, thus making the references readily apparent and useful.<sup>127</sup>

Lampronti's cross-reference structure functioned in similar fashion to Chambers's *Cyclopedia*. The first entry of the *Cyclopedia*, for example, is the letter "A." The first line of that entry reads: "A vowel, and the first letter of the English, and most other alphabets. See Letter, and Alphabet." The entry thus provides a succinct explanation of the letter "A" with references to the broader subjects of "Letter" and "Alphabet" where extended discussions of each concept are found<sup>128</sup> Following the initial "A" entry are ones relating to other specific aspects of the letter, such as its history and different uses and meanings. Thus, there is an entry about the use of the letter A in the Julian calendar: "A is also used, in the Julian calendar, as the first of the seven dominical letters. See Dominical." That entry is followed by one on abbreviation: "A is also an abbreviature, used in divers arts, and with divers intentions. See Abbreviature." The next entry discusses its use by logicians: "A among logicians, is used to denote an universal affirmative proposition..." And so forth. The *Cyclopedia's* cross-references take the reader from narrower subject matter to broader ones, in the same way Lampronti employed cross-references in the *Paḥad Yiṣḥak*.<sup>129</sup>

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<sup>127</sup> It would have been difficult to add new references to these manuscripts, which accords with the analysis in Chapter 1 explaining that this manuscript edition was meant to be a template for the printed work.

<sup>128</sup> Ephraim Chambers, *Cyclopedia: or, an Universal Dictionary of Arts and Sciences* (London: J. and J. Knapton, J. Darby, D. Midwinter et al., 1728) 1.

<sup>129</sup> Ephraim Chambers, *Cyclopedia: or, an Universal Dictionary of Arts and Sciences* (London: J. and J. Knapton, J. Darby, D. Midwinter et al., 1728) 1.

## *Scholarly Collaboration*

Another significant feature of Lampronti's *Paḥad Yiṣḥak* that differentiated it from other preceding halakhic works but made it similar in another respect to its non-halakhic counterparts was the collective nature of the project, evidenced by an analysis of Lampronti's manuscripts and the extensive range of rabbinic opinions contained in the work. A close study of the manuscripts reveals that the work was not written by one individual as the writing is not entirely in the same hand. Quite obviously some sections of the text and emendations were written by others. And the inclusion of opinions and writings of other rabbis manifestly shows Lampronti's reliance on a group of scholars to compile his encyclopedia.

There are numerous examples of scripts in all three manuscript editions of the *Paḥad Yiṣḥak* that establish that persons other than Lampronti acted as scribes and contributors. For instance, in both the Paris and HUC manuscript sections on "*kelayot yo'aḏot*" (the kidney's counsel), there are editorial notations made in a much darker colored ink than that used for the surrounding writing and the writing additionally appears to be in a different hand than that used in the remaining passage. The shape and size of the letters are different than Lampronti's usual forms found throughout his writings. Significantly, one of these added sections includes a reference to and passage from the *Letters of Francesco Redi*. The addition of this citation shows that Lampronti was not solely responsible for the inclusion of and scientific sources and methods in his work.<sup>130</sup> Analyses of the HUC and JTS manuscripts also reveal that the second edition was

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<sup>130</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 504, f. 111r-112r. The word "*igrot*" in the first line, for example, was added in the Paris manuscript above an upper arrow symbol, in between the words "*sefer*" and "*Francesco*." Also later in the paragraph in the Paris manuscript the word "*kol*" is added in the same manner above an upper arrow symbol, and in the HUC manuscript it is integrated into the text. Some of the obvious editing, however, appears in both manuscript editions. For instance, an additional page reference to Redi's text was added to both manuscripts. Both say "see Francesco Redi Part 4, page 156 and 157," followed by an upper arrow above which "and page 191" is written. This addition appears in the same way, in the same ink, and same hand in both manuscripts.

copied by Lampronti as well as other scholars.<sup>131</sup> A paleographic analysis of specific sections indicates that parts were copied either by Lampronti or someone close to him, while other sections appear to be in a more obviously different hand.<sup>132</sup> The first volume of the HUC manuscripts, for example, looks mostly to be written by Lampronti himself. Towards the end of the volume, however, the script changes slightly. The letters are written at more of an angle and the flourishes are consistently more emphasized.<sup>133</sup> The letter *gimmel*, for instance, is finished with a much longer horizontal line than typically seen in Lampronti's script and in the previous pages. The shape of the letters remains the same, but it appears as though someone other than Lampronti copied over those sections.

There is also internal evidence within the manuscripts that they were passed between scholars before their publication. For instance, in Volume 520 of the Paris manuscripts on the first page of the bound volume is a hand-written note in Italian.<sup>134</sup> At the top is written “*Memoria*” (memory), signifying it was a note to be remembered,<sup>135</sup> and underneath is the following: “This volume *mem samekh* through *mem ayin* is in the hand of Rabbi Pesaro who was curious to read the rulings on “*ma'avir nahlat*.”<sup>136</sup> The note thus indicates that this single

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<sup>131</sup> See Chapter 1, which established that these manuscripts were copies of the first edition.

<sup>132</sup> I examined sections of the work according to the techniques outlined by Judith Olszowy-Schlanger in: Judith Olszowy-Schlanger, “*Petit guide de description des écritures hébraïques: identifier la main du scribe*” (Instrumenta BwB 1, 2013); Judith Olszowy-Schlanger, “Check List for Observation and Evaluation of Hebrew Script” (Instrumenta BwB 2, 2013). Specifically, I looked at where lines end on the page and small differences in individual letters such as sizes and flourishes.

<sup>133</sup> Cincinnati, Hebrew Union College, Ms. 132, f. 481-500.

<sup>134</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 520, f. 1r.

<sup>135</sup> This could also be translated as simply, “please note.”

<sup>136</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 520, f. 1r. Transcription of quoted portion: “*Memoria [-] che il tomo mem "ayin u-mem" samekh sono in mano del [...] R. Pesaro che fu curioso di legger il pesak di ma'avir nahlat con pregiudicio de yorshim.*” It is also possible to translate this as the volume is in the hand-writing of Rabbi Pesaro, but the manuscript volume appears to be written in Lampronti's hand.

volume of the collection of 120 in that manuscript edition was on loan to Rabbi Pesaro who wanted to consult a certain section in the text. Some of the approbations also refer to the text itself, indicating that their authors had access to the manuscript of the work, though it is possible only relevant portions of the text were circulated among scholars prior to print. The second edition of the manuscripts represents a full copy of the work and was likely created in order to circulate more manageable volumes among scholars. The manuscripts were shared and possibly added to and corrected by groups of scholars throughout Italy.

Lastly, the contributions of various individuals can be seen in some of the emendations that Lampronti himself later added to the text. For example there is a section in the Paris manuscripts that appears to be written at a different time from the surrounding content and reads in translation: “The great Rabbi Moses Israel emissary of Jerusalem, when he came to visit me in the *beit midrash* (study hall) in the year 5488, wrote to me the following....” Lampronti evidently added this line after Rabbi Moses’s visit, and presumably after Rabbi Moses saw the text and offered his corrections. Similarly, in another instance, Lampronti added the custom of Rabbi Isaac of Poland to an existing entry. The distinctly different ink color used indicates this portion was added after the original section had been written.<sup>137</sup> Lampronti himself continuously added to his work, but he also incorporated the opinions of other scholars, including emissaries and visitors from different lands.

The collective nature of the writing of this work makes it more similar to the *Encyclopédie*, one of the hallmarks of which was Diderot and D’Alembert’s solicitation of articles from numerous scholars. The breadth of eighteenth-century encyclopedias required the

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<sup>137</sup> Paris, *Bibliothèque Nationale de France*, Ms. Hebrew 512, f. 109r.

contributions and labor of groups of scholars. These works were essentially collaborative projects not only because of the inability of a single individual to produce a lengthy reference work within a reasonable time frame for publication, but also because the inclusion of the work, interpretations, and opinions of others was an important scholarly tool for bolstering authority of the text. The concurring opinions of many will outweigh the opinion of one. Similarly, in scientific communities especially during this time, experiments were often verified or disproved in public, collective spaces.

That the *Paḥad Yiẓḥak*'s content is conspicuously and fundamentally collective, encompassing the opinions of whole networks of scholars rather than that of a sole individual alone is conspicuous. Indeed, Lampronti included more than a thousand rabbinic letters (respona) in his work.

The letters are often included in Lampronti's entries and follow his discussion of earlier rabbinic writings on a given subject. Not every entry contains respona, while others contain numerous ones, such as those under the entry "*safek kidushin*," which cover over 50 folio pages in print.<sup>138</sup>

An examination of the respona included from the start of the encyclopedia (*aleph, aleph*) to consecutive letters *aleph, het, resh, yod* gives a better sense of the overall distribution of contemporary respona in the *Paḥad Yiẓḥak*.<sup>139</sup> In this section of the encyclopedia, which covers 50 folio pages in print, there are six entries that contain respona.<sup>140</sup> Two entries are rather short,

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<sup>138</sup> Vol 8, p. 76r-123r, s.v. "*safek kidushin*" (Lyck, 1866). The section covers 50 folio pages in print and 59 folios in the Paris Ms., Vol 533, f. 364r-423v. This section was discussed in the previous chapter as a materially significant example of the composition of the manuscripts.

<sup>139</sup> Vol 1a, p. 1r-50r (Venice, 1750).

<sup>140</sup> In the Paris manuscript this same section covers nearly four volumes.

covering less than a folio page each and involving only relatively simple questions asked by one individual and answered by one or two other rabbis.<sup>141</sup> The four longer sets of responsa cover between three and six folio pages each. In one case, there are four folio pages covering an extended discussion only between two individuals: Lampronti and Samson Morpurgo. This case records a conversation that developed between them, as Morpurgo first responded, then Lampronti, then Morpurgo again.<sup>142</sup> In another set of responsa that covers three folio pages, the questioner wrote an initial entry and then wrote a second time after receiving an answer from Jacob Daniel Olmo. After the second question, both Pinhas Hay Anau and Lampronti responded. The largest set of responsa, covering six folio pages, were written by 14 rabbis, all of whom were Lampronti's Italian rabbinic contemporaries and his copying of their responsa shows an extended conversation about a common subject that took place among these individuals.<sup>143</sup>

Close examination of both the manuscript and print editions of the *Paḥad Yizḥak* yielded identification of more than 100 Italian rabbinic contemporaries whose letters Lampronti included in the text, and were accordingly part of his epistolary network. Lampronti copied as little as one letter written by some of these individuals and as many as 20 or more by others. For example, one finds Samson Morpurgo's responsa in at least 23 different subject entries in the *Paḥad Yizḥak*. Lampronti copied Aviad Sar Shalom Basilea's letters on more than 16 different subjects;

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<sup>141</sup> Vol 1a, p. 5v-6r, s.v. "avel 'asur be-kol minei simḥah" (Venice, 1750); Vol 1a, p. 21v, s.v. "adonai 'eloheikheim 'emet" (Venice, 1750). Paris, *Bibliothèque Nationale de France*, Mss. Hebrew 458-461.

<sup>142</sup> Vol 1a, p. 9v-13r, s.v. "aveilot be-Purim" (Venice, 1750).

<sup>143</sup> In the order they appeared: Abraham Segre, Solomon DelVecchio, Isaiah Bassan, Joseph Piametta, Samson Morpuro, Lampronti, Johanan Giron, Judah Briel, Samuel David Ottolenghei, Benjamin Cohen, Jacob Aboab, Isaac Cantarini, Rafael Mipinali, and Abraham Samson Levi Povini. Vol 1a, p. 31v-37v, s.v. "ones noten 'arb'ah devarim ve-dinav" (Venice, 1750).

Sabbatai del Vecchio on 14; and Judah Briel on at least eight.<sup>144</sup> At times Lampronti copied letters from secondary collections, such as the *'Afar Ya 'akov* of Nethaniel Segre.<sup>145</sup> The majority of the letters, however, were either directly received by Lampronti or copied by him from the personal collections of colleagues and friends. Lampronti sometimes copied these letters in his own hand and sometimes inserted the original papers in his manuscript folio pages.<sup>146</sup> The letters, both copied and original, are a graphic record of the communication networks and exchange of knowledge Italian rabbis of the period shared.

Lampronti's rabbinic epistolary community (or republic of letters) was composed almost exclusively of Italian rabbis. Though Lampronti cited responsa written by central and eastern European rabbis, such as Yair Hayim Bachrach, Jacob Rzeszow, Zevi Hirsch b. Jacob Ashkenazi, and Ezekiel Landau, Lampronti usually copied their opinions second hand from already published responsa volumes. Extensive analysis of the *Paḥad Yiṣḥak* did not reveal a single instance of Lampronti personally corresponding with any of these individuals. Lampronti had access to their books and he engaged them; at times he cited and discussed their opinions at length and praised their authority. In one case, Lampronti copied a responsum of and issued a ruling according to Ezekiel Landau from his *Noda' bi-Yehudah*, to which Lampronti's Ferrara rabbinic counterparts responded that they only knew Landau by name and not personally, and therefore were reluctant to trust him as an authority. Despite not having met Landau personally,

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<sup>144</sup> These numbers are modest as I drew them from my own analysis of the printed text of the *Paḥad Yiṣḥak*. There are likely many more, especially when one takes into account all of the manuscript editions.

<sup>145</sup> Lampronti copied into the *Paḥad Yiṣḥak* 51 of the 84 responsa in the *'Afar Ya 'akov*. Lampronti clearly indicated when he copied from the *'Afar Ya 'akov* as in Paris, Ms. 467, f. 211, where Lampronti wrote at the top of the page that the following came from the *'Afar Ya 'akov*.

<sup>146</sup> See Chapter 1.

Lampronti reassured his Ferrara rabbinic colleagues that Landau was an authority upon whom they could rely.<sup>147</sup> In another case, Lampronti praised Yair Hayim Bachrach as an expert in halakhah and science. Lampronti may have needed to reassure his Italian contemporaries of Bachrach's authority as well.<sup>148</sup> Again, it appears Lampronti never met Bachrach and did not personally correspond with him.

Though analysis of much of the *Paḥad Yiṣḥak* did not yield evidence of Lampronti personally corresponding with any of the prominent central and eastern European rabbis of the period, there are a few instances in which Lampronti copied the opinions of Jews from the Land of Israel or Poland who made their way to Ferrara for one reason or another.<sup>149</sup> In one instance, Lampronti mentioned a letter Moses Israel of Jerusalem wrote him when he came to visit Ferrara.<sup>150</sup> In another instance, Lampronti cited a responsum of the same Rabbi Moses, who Lampronti noted was in Ferrara, specifically, on Purim 5488 (1728).<sup>151</sup> Lampronti additionally discussed the opinions and debates that ensued between him and other emissaries from Israel such as Abraham Isaac and Jacob Vilna of Jerusalem and Israel ha-Kohen of Hebron.<sup>152</sup> In one unusual case, Lampronti wrote about a certain Isachar Kohen of Zlatvy and the custom of his

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<sup>147</sup> Vol 3, p. 106v-110v, s.v. “*nishmat mimkomo be-dinei ḥol ha-mo‘ed*” (Venice, 1796).

<sup>148</sup> Vol 10, p. 4r-4v, s.v. “*pidyon bekhor*” (Lyck, 1871).

<sup>149</sup> For more on the phenomenon of these emissaries see: Matthias Lehmann, *Emissaries from the Holy Land: the Sephardic Diaspora and the Practice of pan-Judaism in the Eighteenth Century* (Stanford: Stanford University Press, 2014).

<sup>150</sup> Vol 9, p. 168r-v, s.v. “*‘aseh doḥeh ‘et lamed"tet*” (Lyck, 1868).

<sup>151</sup> Vol 12, p. 126v-129r, s.v. “*revak ‘eino melamed sofrim*” (Berlin, 1885). Also: Vol 5, p. 228r, s.v. “*met be-Shabbat*” (Leghorn, 1840).

<sup>152</sup> Vol 7, p. 77v-78v, s.v. “*nefilat ‘apaim*” (Lyck, 1864); Vol 14, p. 117v-125r, s.v. “*tefilin dinei seder*” (Berlin, 1887), specifically says “*pilpul bein rabanim ha-gedolim sheluḥei ḥevron ve-yerushalayim u-bein ha-ze‘ir ha-meḥaber.*”

hometown in the Polish Commonwealth.<sup>153</sup> In this responsum, Lampronti engaged both the eastern European custom as this individual had observed it as well as the rabbinic writings of Jacob Reischer and Moses Isserles. Aside from these cases, little evidence was found of Lampronti writing first hand testimony of the opinions of central and eastern European rabbis or copying original letters he exchanged with rabbis outside the Italian orbit.<sup>154</sup>

The responsa do not reveal a trans-geographic epistolary community, however, there was a distinct Italian rabbinic republic of letters and Lampronti's work presents the largest collection of such materials. The large number of letters shows the common practice and the social norm of letter-writing among Italian rabbis. Many of these individuals studied together at some point in one of the major Italian Jewish centers, Padua or Mantua, and maintained their relationships through written correspondence. The regionalism of rabbinic writing was not unique to Italy as the central and east European rabbis also maintained mostly geographically distinct epistolary communities. This is not to say, however, that ongoing correspondences were not maintained over long distances; indeed some of the most contentious rabbinic debates of the era played out over letters exchanged between rabbis throughout Europe.<sup>155</sup> Rather, regarding day-to-day halakhic questions, rabbis primarily corresponded and solicited opinions internally within their geographic region.<sup>156</sup> The majority of Lampronti's personal correspondences was not only confined to the Italian context, few reached outside northern Italy. And many encompassed the

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<sup>153</sup> Vol 6, p. 35r, s.v. "*mohel 'im yakhol li-shhot*" (Leghorn, 1840).

<sup>154</sup> An exception to this is found in the *Bikurei kazir*, which included endorsements from Polish emissaries.

<sup>155</sup> For more on this see: Elisheva Carlebach, *The Pursuit of Heresy: Rabbi Moses Hagiz and the Sabbatian Controversies* (New York: Columbia University Press, 1994).

<sup>156</sup> For more on central European rabbinic communication see: Josh Teplitsky, "Between Court Jew and Jewish Court: David Oppenheim, the Prague Rabbinate, and Eighteenth-Century Jewish Political Culture" (PhD diss., New York University, 2012).

scholarly community of individuals with both rabbinic and medical training. In one case, Lampronti identified letters he wrote specifically to his rabbi/physician colleagues:

Because the rabbi and physician Mordekhai Zahalon was at the time in Rovigo helping to heal some patients, I wrote him a letter on the matter, to establish the law for generations in Ferrara. I received in my hands his reply dated October 5, 5488 [1727]. I also wrote to the rabbi and doctor Samuel Barukh Borghi who had gone at the time to live in Finali di Modena to visit some patients, and I received his reply dated the fourth day of *hol ha-mo'ed Sukkot* 5488 [1727].<sup>157</sup>

In this instance, Lampronti specifically addressed his rabbinic colleagues to whom he sent a halakhic question, as both rabbi and physician, “*ha-rav ve-ha-rof'e*.” Lampronti also noted that he wrote to these individuals instead of presumably asking, in person, their opinions, because they were both, at the time, in different cities within Italy treating patients.

## Conclusions

Lampronti's halakhic works employed models popular during the period and internalized similar values. In scientific and academic communities in Europe in the eighteenth century knowledge was established in a collaborative space. It needed public verification and proof. The same communicative and collaborative models that fostered this notion of knowledge are also seen in the rabbinic works of Lampronti and his cohort -- the responsa often reveal wide-ranging discussions among many Italian rabbis (as opposed to the medieval model of one questioner and one answerer) and the printing of this material in both the encyclopedia and periodical opened these discussions to an even wider public forum. The novel technologies of communication and fresh modes of organizing and presenting knowledge employed by Lampronti are significant because they reflect original epistemologies and contemporary ways in which academically

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<sup>157</sup> Vol 6, p. 96r-v, s.v. “*milah she-l'o b-zemanah*” (Leghorn, 1840).

trained men thought about knowledge, and because they generated new approaches to and perspectives on knowledge systems. The major epistemological change in the eighteenth century were the new methods of establishing knowledge by gathering empirical information, presenting it in a public space, and gaining the verification and approbation of a coterie of scholars, and the reading public. Lampronti not only presented the halakhic corpus in previously unseen genres, he treated it in these new ways.

## Conclusion

This dissertation argued that Lampronti refashioned halakhah to the novel epistemologies of his period and did so without betraying the core values of his Jewish religious traditions. Lampronti neither jettisoned nor compartmentalized the rabbinic legal corpus and its traditional role as a practical guide to authoritative precepts. Rather, he comfortably and profoundly invested the halakhic system with new meaning and purpose more suited to his contemporary academic circumstances. Each chapter in isolation does not suffice to make the point. Together, however, Lampronti's use of alphabetical order as well as non-Jewish authority, adoption of heightened empiricism, illustrating with diagrams and cross-references, and valuing the collaborative intellectual model common in scientific communities emphasizes the influence of contemporary medical study on his rabbinic scholarship and his insight to use each in explication of the other.

Lampronti's innovations were ambitious and revolutionary with significant implications for the history of science, European history, and Jewish history, but his story is also one of a failed attempt. The *Paḥad Yiṣḥak*, while monumental in idea and execution, never earned widespread recognition from Jewish communities in Italy much less those elsewhere in Europe. In fact, the first manuscript edition was not printed in entirety until more than 100 years after his death.

The first and second volumes (covering letters *aleph* through *dalet*) of the work were printed by Lampronti in 1750 and 1753 in Venice, based upon the Paris/HUC/JTS manuscripts.<sup>1</sup>

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<sup>1</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Volume I (letters א and ב), (Venice, 1750); Isaac Lampronti, *Paḥad Yiṣḥak*, Volume II, part I (letters ג and ד), (Venice, 1753).

The next two volumes (covering letters *heh* through *tet*) were printed again in Venice, but forty years after Lampronti's death, in 1796.<sup>2</sup> In 1813, a press in Reggio put out the fifth volume (covering letters *yod* through *lamed*) and the sixth (covering the letter *mem*) appeared in Leghorn in 1840.<sup>3</sup> The *Mekizei Nirdamim* Society in Germany printed the volumes covering the remaining letters (based on the Paris manuscripts) during the second half of the nineteenth century.<sup>4</sup>

The manuscripts and first few printed volumes of the work were known within Italy during Lampronti's lifetime, as attested by the vast network of Italian rabbis who wrote

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<sup>2</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Volume II, Part II (letters ה through ט), (Venice, 1796); Isaac Lampronti, *Paḥad Yiṣḥak*, Volume III (letters ט through ש), (Venice, 1796).

<sup>3</sup> Isaac Lampronti, *Paḥad Yiṣḥak*, Volume IV (letters י through ל), (Reggio, 1813); Lampronti, *Paḥad Yiṣḥak*, Volume V (letter מ), (Leghorn, 1840). The latter volume contains additions to the text by Abraham Barukh Piperno, under the title “*Zekhor le-Abraham*.”

<sup>4</sup> *Mekizei Nirdamim* (Awakening the Slumbering) was a society dedicated to publishing old Hebrew books and manuscripts. It ran under the supervision of individuals throughout Europe and later Russia and America including: Rabbi Nathan Adler, Sir Moses Montefiore, and Joseph Zedner of London, Albert Cohn of Paris, S.D. Luzzatto of Padua, Michael Sachs of Berlin, Eliezer Lipman Silberman of Lyck, M. Straschun of Vilna, Abraham Berliner of Berlin, Moses Ehrenreich of Rome, Joseph Derenbourg and David Gunzburg of Paris, S.J. Halberstam of Bielitz, A. Harkavy of St. Petersburg, Marcus Jastrow of Philadelphia, David Kaufmann of Budapest, and Mattityahu Strashun of Vilna. See Jonathan Meir, “The Origins of Hevrat Medikze Nirdamim in Eastern Europe,” in *From the Depths of the Archive to the Bookshelf: 150th Anniversary of Mekizei Nirdamim Publishers* (Jerusalem, 2013), 33-45. Isaac Lampronti, *Paḥad Yiṣḥak*, Volume VI (letter נ), (Lyck: Mekizei Nirdamim, 1864); Lampronti, *Paḥad Yiṣḥak*, Volume VII (letter ס), (Lyck: Mekizei Nirdamim, 1866); Lampronti, *Paḥad Yiṣḥak*, Volume VIII (letter ש), (Lyck: Mekizei Nirdamim, 1869); Lampronti, *Paḥad Yiṣḥak*, Volume IX (letter שׁ), (Lyck: Mekizei Nirdamim, 1871); Lampronti, *Paḥad Yiṣḥak*, Volume X (letters שׂ and שׁ), (Lyck: Mekizei Nirdamim, 1874); Lampronti, *Paḥad Yiṣḥak*, Volume XI (letters שׂ and שׁ), (Lyck: Mekizei Nirdamim, 1885); Lampronti, *Paḥad Yiṣḥak*, Volume XII (letter שׂ), (Lyck: Mekizei Nirdamim, 1886); Lampronti, *Paḥad Yiṣḥak*, Volume XIII (letter ת), (Lyck: Mekizei Nirdamim, 1888). These volumes were printed from the Paris manuscripts exclusively, but include only the Hebrew and not the Italian sections. The Valmadonna manuscripts remain mostly unprinted. In Tel Aviv in 1935 the Valmadonna manuscripts covering the letters *aleph* and *bet* were printed: Isaac Lampronti, *Paḥad Yiṣḥak mehadurah batr'a* (Tel Aviv: Zevi Kanel, 1935). And in 1965 in Jerusalem this work was continued with the printing of the letters *gimmel* through *het* of the Valmadonna edition: Isaac Lampronti, *Paḥad Yiṣḥak mehadurah batr'a* (Jerusalem, 1965). In the 1960s, Mosad ha-Rav Kook in Jerusalem began a critical edition of the *Paḥad Yiṣḥak* covering the content of both the Paris and Valmadonna manuscripts. Letters *aleph* through *gimmel* were completed in 1985 before the endeavor was halted: Isaac Lampronti, *Paḥad Yiṣḥak* (Jerusalem: Mosad ha-Rav Kook, 1961-1985). The first and second editions of the manuscripts have thus been printed almost in their entirety, but the third remains mostly in manuscript alone.

endorsements for the work.<sup>5</sup> The first printed volumes also made their way to eastern Europe -- original volumes contain provenance stamps from various personal collections as well as the library of pre-World War II YIVO, but these volumes, even after all these years, appear little used.<sup>6</sup> Lampronti was mentioned by both Jewish and non-Jewish scholars in the late eighteenth century and widely discussed by Jewish scholars in the nineteenth century, some of whom were associated with the *Wissenschaft des Judentums* movement.<sup>7</sup> In the twentieth century, Lampronti's intellectual legacy endured as attested by memorabilia coins that were minted to

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<sup>5</sup> The approbations came from rabbis and Jewish communities throughout Italy including: rabbis of Venice, rabbis of Livorno, rabbis of Ancona, Rabbi Jacob Mendola of Mantua, rabbis of Modena, Rabbi Isaac Berakhiah Cantone of Torino, Rabbi Menahem Azariah Padova of Florence, rabbis of Reggio, rabbis of Verona, Rabbi Jacob Hazak of Padua, Rabbi Sabbatai Elhanan del Vecchio of Casale Monferrato, Rabbi Elihu Zuta of Alessandria, Rabbi Yedidyah Levi of Alessandria, Rabbi Isaiah Romanin of Pesaro, Rabbi Hayim Valtira of Finali, Rabbi Isaac Berakhiah da Fano of Lugo, Rabbi Isaac Modena of Lugo, Rabbi Abraham Samuel of Rovigo, Rabbi Abraham Segre of Casale. The printers of the *Pahad Yizhak* in 1746 also sent circulars to various Jewish communities announcing the work and including a sample to solicit subscriptions. In Mantua in 1747 twenty-two individuals placed orders, nineteen of whom ended up making the purchase in 1750. The community also ordered and purchased a copy for itself. See Shlomo Simonsohn, *History of the Jews in the Duchy of Mantua* (Jerusalem: Sivan Press, 1977), 453; J.C.A., filza 127 doc. 26; M.B. F126a, 4.9.1747. I thank David Malkiel for turning my attention to this source. There may be others like it in different Jewish communities in Italy.

<sup>6</sup> I examined original printed editions of the *Pahad Yizhak* at the Center for Jewish History, specifically YIVO and the American Sephardi Federation.

<sup>7</sup> Towards the end of the eighteenth century, a few decades after Lampronti's death, Italian Enlightenment Jewish physician Benedetto Frizzi mentioned Lampronti among other "Jewish Italian glories": Benedetto Frizzi, *Difesa contro gli attacchi fatti alla nazione ebrea* (Pavia, 1784) 58. For the significance of Frizzi in the Italian Jewish Enlightenment see: Lois C. Dubin, *Medicine as Enlightenment Cure: Benedetto Frizzi, "Physician to Eighteenth-Century Italian Jewish Society," Jewish History*, Vol. 26, No. 1/2 (May, 2012): 201-221. Lampronti is also mentioned in J.R. Saraval *Lettera Apologetica*, 1775. The Christian Hebraist Giovan Bernardo de Rossi mentioned Lampronti in his *Dizionario* (1802), 3. Lampronti is also mentioned in the non-Jewish journal *Il Sabatino*, on April 17, 1847, p.75. The following is a list of nineteenth-century Jewish discussions of Lampronti: Eliakim Carmoly, *Histoire* (1844), 238; H.Y.D. Azulay, *Shem ha-gedolim ha-shalem* (Vilna, 1853), n°324; Hananel Neppi and Mordekhai Ghironi, *Toledot gedolei Italia*, (1853), 131s; J. Zedner, *Catalogue* (1867), 421; Benedetto Levi, *Della vita e dell'opera di I.L.*, Padova (1869); Benedetto Levi, *Della vita e dell'opera di Isacco Lampronti* (Padua: Crescini, 1871); I.B. ha-Levy, "*Hosafot ve-earot le-sefer toledot Isaac Lampronti*," in *HaMagid*, 19 (1875): 69-70; Abraham Pesaro, *Appendice alle memorie storiche* (1878-80), 58; Abraham Pesaro, "*Cenni sulle confraternite della comunità israelitica di Ferrara*," in *Vessillo Israelitico*, 26 (1878): 249; P. Perreau, "*Notizie bibliografiche sugli ebrei di Ferrara*," in *Vessillo Israelitico*, 27 (1879), 141; Moritz Steinschneider, "*Letteratura italiana dei giudei*," in *Vessillo Israelitico*, 27 (1879); M. Sorani, "*Notizie biografiche*," in *Vessillo Israelitico*, 27 (1879): 212-13; M. Soave, "*Lettera XVI*," in *Vessillo Israelitico*, 28 (1880): 211; M. Mortara, *Indice*, 1886; R. Landau, *Geschichte der jüdischen Ärzte* (1895), 76; S. Wiener, *Mazkeret* (1897-98), 56, 73; M. Steinschneider, "*Die Italienische Litteratur der Juden*," in *MGWJ*, 45 (1900), 89; G. Jaré, "*Im ha-rava' haia baki ba-Talmud mi-sefer Pahad Yizhak*," in *Festschrift Berliner* (1902) 72-79; Margulies, *Ha-eshkol* (Krakau, 1905). I thank Asher Salah for the above citations. His work *Le république des lettres: rabbins, écrivains et médecins juifs en Italie au XVIIIe siècle* is a very useful resource for biographical and bibliographical information concerning eighteenth-century Italian rabbis: Asher Salah, *Le république des lettres: rabbins, écrivains et médecins juifs en Italie au XVIIIe siècle* (Leiden: Brill, 2007).

commemorate his life and work.<sup>8</sup> Finally, even in contemporary rabbinic discourse on halakhah and science, Lampronti is seen as one of the primary halakhic authorities who sanctioned the integration of contemporary science within Jewish law.<sup>9</sup>

Lampronti's work never gained widespread recognition or use, but interestingly it also was never the subject of controversy. Unlike the stir caused by Italian predecessor Azariah de' Rossi's *Me'or Einayim* (The Light of the Eyes), in which de' Rossi tried to reconcile the teachings of the Talmud with scientific and geographic discoveries of his time, the *Paḥad Yiṣḥak* was never considered outside the pale of legitimate Jewish discourse.<sup>10</sup> Like de' Rossi, Lampronti applied an extensive array of non-Jewish sources to his interpretations of rabbinic law, and in doing so, reached some unorthodox conclusions.<sup>11</sup> He argued that not everything in the Talmud and halakhic discourse was divinely inspired and therefore authoritative. And yet, de' Rossi was excoriated by rabbis for taking a similar stance; his work was viewed as heretical

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<sup>8</sup> These memorabilia pendants are in the Yeshiva University Museum collection at the Center for Jewish History.

<sup>9</sup> Lampronti is commonly mentioned in contemporary rabbinic discussions of science and Torah. The reception history included in this chapter is very abbreviated. I was unable to conduct a full study within the bounds of the dissertation, but the next stages of my research will include such work.

<sup>10</sup> I found no instances of opposition to Lampronti's work during his time or thereafter. As mentioned above, even contemporary halakhic authorities who take the most conservative positions regarding the adaptability of the halakhic tradition to scientific development still see Lampronti as a valid rabbinic authority. For more on de' Rossi see: Joanna Weinberg, *Azariah de' Rossi, The Light of the Eyes* (New Haven: Yale University Press, 2000).

<sup>11</sup> Joanna Weinberg provides a list of an impressive array of sources (more than 150 Jewish and 100 non-Jewish) de' Rossi cited in the *Me'or Einayim*: Weinberg, 727-741. These works cover rabbinic (talmudic and midrashic) and post-talmudic texts, the works of Ariseas, Philo, and Josephus; Christian writings; and ancient Greek and Latin authors.

and even banned in some Jewish communities.<sup>12</sup> Lampronti, by contrast, received no such vocal opposition from the rabbinic establishment.

One reason for this difference is the fundamental nature of Lampronti's work. The *Paḥad Yiẓḥak* was not a treatise intended to argue a specific position on religious and scientific matters, rather his work was one primarily of halakhah -- a legal resource informed by and containing scientific material. His opinions are buried in voluminous writings, and as we saw, sometimes difficult to uncover and unravel. This difference is significant. Lampronti did not seek to position himself outright in defense of either the rabbinic or scientific systems. In fact, he deliberately abjured opining on the most provocative issues of Jewish law. He was not subversive; his work was meant to enhance traditions of rabbinic scholarship and practice. Furthermore, each novel element of Lampronti's work had some precedent in the Jewish legal system. No one innovative aspect on its own was outside the bounds of traditional Jewish discourse.<sup>13</sup> Taken as a whole, as this study has argued, his work was indeed revolutionary, but it was not an attempt to radically undermine traditional rabbinic discourse.<sup>14</sup>

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<sup>12</sup> The controversy is summarized and discussed by Joanna Weinberg, Robert Bonfil, and Lester Segal: Weinberg, xlii-xliii; Robert Bonfil, "Some Reflections on the Place of Azariah de Rossi's *Meor Enayim* in the Cultural Milieu of Italian Renaissance Jewry," in *Jewish Thought in the Sixteenth Century*, ed. Bernard Dov Cooperman (Cambridge: Harvard University Press, 1983), 25-31; Lester Segal, *Historical Consciousness and Religious Tradition in Azariah de' Rossi's Me'or 'Einayim* (Philadelphia: Jewish Publication Society, 1989), 133-61. Bonfil argued that the opposition to the work within Italy was more limited than historians previously supposed. Segal comments on the opposition received especially from Joseph Karo and the Maharal of Prague. David Ruderman also mentions the Maharal of Prague's well known critique of de' Rossi: Ruderman, *Jewish Thought*, 80. For a discussion of de' Rossi in the context of a wider examination of Jewish attitudes to non-Jewish sources see: David Berger, *Cultures in Collision and Conversation: Essays in the Intellectual History of the Jews* (Boston: Academic Studies Press, 2011), 106-7.

<sup>13</sup> Specific precedents for each isolated innovation were mentioned throughout the dissertation.

<sup>14</sup> De' Rossi's work was also apologetic -- he devoted an entire chapter to defending his use of non-Jewish sources. He was aware his methods might not gain approval. See: Robert Bonfil, "Expression of the Unity of the People of Israel in Italy during the Renaissance" [Hebrew] *Sinai* 76 (1975): 40; Robert Bonfil, "Some Reflections on the Place of Azaria de' Rossi's *Meor Enayim* in the Cultural Milieu of Italian Renaissance Jewry," 23-48.

Lampronti's Italian Jewish heritage and tradition also played a part in the reception of his halakhic work. In the early modern period, halakhah developed primarily within geographically distinct regions. With a few exceptions, central and eastern European rabbis did not seriously treat Italian halakhic works. Had Lampronti's work been widely studied and carefully commented upon in different Jewish contexts, perhaps its reception would have been different. Furthermore, it was also part of an Italian Jewish tradition seen as more open and accommodating to non-Jewish culture.<sup>15</sup> Lampronti came from an illustrious line of Italian Jews who attempted to synthesize Jewish and non-Jewish works, including Azariah de' Rossi, Leone Modena, Simone Luzzatto, and Joseph Delmedigo.<sup>16</sup> He continued the long chain of efforts to harmonize two cultures, but he also confronted specific challenges new to the eighteenth century. For Lampronti, scientific knowledge was established through careful testing, observation, and the confirmation of other scholars. His Renaissance Jewish predecessors dabbled in two bodies of literature, Jewish and non-Jewish, and tried to synthesize and reconcile them, but the methods employed in both were ultimately the same. That was no longer the case for Lampronti and other similarly educated rabbi/physicians.

A final question of this study remains unanswered: To what extent may Lampronti's work be considered part of an Enlightenment or early Enlightenment venture? In the first decades of the eighteenth century an Italian national movement calling for economic, legal, and

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<sup>15</sup> For the fundamentals of this argument see especially: Lois C Dubin, "Trieste and Berlin: The Italian Role in the Cultural Politics of the Berlin Haskalah," in *Toward Modernity*, 189-224.

<sup>16</sup> David Ruderman's works in particular have explored the cultural integration advanced by sixteenth-century Italian Jewish intellectuals. For an overview of a number of figures see especially: David Ruderman and Giuseppe Veltri eds., *Cultural Intermediaries: Jewish Intellectuals in Early Modern Italy* (Philadelphia: University of Pennsylvania Press, 2004). Lampronti's embrace of the synthesis model stands in contrast to the "compartmentalization" seen among physicians with rabbinic training in Livorno in the eighteenth century. See in particular Bregoli, *Mediterranean Enlightenment*, 69-70.

administrative reforms among political and religious institutions emerged.<sup>17</sup> The *Giornale de' letterati d'Italia* was instrumental in these efforts as it brought together isolated individuals into a common enterprise, regularly disseminating both ideas and calls to action among the reading public.<sup>18</sup> The *Giornale* also inspired a series of reforms that led up to the development of a more sustained Enlightenment movement in the second half of the eighteenth century.<sup>19</sup>

Lampronti was never involved in social or civil reform movements and never actively engaged in formal Enlightenment efforts. Despite his embrace of the values of contemporary scientific culture and his adoption of the structures that later became important vehicles for the spread of the Enlightenment, his works were not self-consciously *Enlightenment* works. He sought no outright program for reforming either Jewish or Italian society. And the primary content of his texts was rabbinic. His goal was not to weaken or devalue halakhah, for he believed that adopting the structures and methods of the contemporary non-Jewish academic cultures would invest the rabbinic system with new meaning and make it ultimately more relevant and useful to Jews.

Lampronti also fits none of the primary models of the Jewish Enlightenment advanced by historians.<sup>20</sup> Shmuel Feiner would characterize him as an early Haskalah figure, but the lack of

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<sup>17</sup> Dooley, 177. For more on the development of nationalism in Italy see: Emiliana P. Noether, *Seeds of Italian Nationalism, 1700-1815* (New York: Columbia University Press, 1951).

<sup>18</sup> Dooley, 177.

<sup>19</sup> Periodicals and encyclopedias were widely used as vehicles to spread Enlightenment culture. The *Encyclopédie* of Diderot and d'Alembert, for example, is widely associated, and almost synonymous, with the Enlightenment. For others that was not the case. Vallisneri, who spearheaded the *Giornale* was not an Enlightenment figure and did not want to secularize society. See Cunningham, 190.

<sup>20</sup> For different models of Jewish Enlightenment see the works of David Sorkin and Francesca Bregoli as well as the collection of articles in *Towards Modernity: David Sorkin, Moses Mendelssohn and the Religious Enlightenment* (Berkeley: University of California Press, 1996); Francesca Bregoli, *Mediterranean Enlightenment: Livornese Jews, Tuscan Culture, and Eighteenth-Century Reform* (Stanford: Stanford University Press, 2014); Jacob Katz ed., *Toward Modernity: the European Jewish Model* (New Brunswick: Transaction Books, 1987).

formal engagement in reform efforts among the individuals Feiner classifies as such makes the categorization difficult.<sup>21</sup> Salo Baron, had he known Lampronti's work well, would have placed him as a later manifestation of the "Italian Haskalah."<sup>22</sup> Despite the problems with Baron's view, historians still consider the parallels between early modern Italian Jewish culture and the later Haskalah movement.<sup>23</sup> The significance of Lampronti's case for Jewish Enlightenment studies goes beyond even that approach.<sup>24</sup> Lampronti presented a model whereby the hermetic, casuistic system of Talmud study could be treated in a contemporary *academic* way. In doing so, he proved that the law, within bounds, was malleable. For later Jewish reformers who targeted specifically the intransigence of halakhah and the ignorance of the rabbinic establishment,

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<sup>21</sup> See Shmuel Feiner, *The Jewish Enlightenment*, trans. Chaya Naor (Philadelphia: University of Pennsylvania Press, 2002), 21-67. Feiner's categorization of Jacob Emden, for example, as a most extreme proto-Haskalah figure is problematic.

<sup>22</sup> As evidence for his argument that sixteenth-century Italian Jewish culture laid the foundations for and anticipated the later central European Haskalah, Baron argued that Italian rabbis wrote even their responsa in Italian. Lampronti is not mentioned in Baron's article, but if Baron saw the writing of responsa in Italian as evidence of Enlightenment, surely he would have seen the other creative remaking of the halakhic system as new and significant for the later Enlightenment as well. See Salo Baron, *SRH: First edition* (New York: 1937), vol. II, 205-212.

<sup>23</sup> Baron's extension of the sixteenth-century Italian Jewish Haskalah to the later central European Jewish Enlightenment is questionable and has accordingly received subsequent scholarly criticism. Isaac Barzilay argued that the differences outweighed the similarities between the Italian and Berlin Haskalahs: Isaac Barzilay, "The Italian and Berlin Haskalah (Parallels and Differences)," *Proceedings of the American Academy for Jewish Research*, Vol. 29 (1960-1961): 17-54. Adam Shear's more recent reevaluation of Barzilay's position, however, goes back to Baron's broad view by reassessing the parallels (though not causative ones) in his view: Adam Shear, "'The Italian and Berlin Haskalah': Isaac Barzilay Revisited" *Jahrbuch des Simon-Dubnow-Instituts* 6 (2007): 49-66. Robert Bonfil argued that Italian Jews served as models for the Haskalah in central Europe but they themselves were not *maskilim* (as they never defined themselves in opposition to tradition). According to Bonfil, Italian Jews never called for radical cultural remaking because their tradition already had more positive attitudes towards integrating sciences and classical philosophy into the school curriculum, emphasizing Bible and *aggadah* (Jewish lore) in addition to halakhah, appreciated the Hebrew language, and adopting local dress and outward modes of appearance. For more on the long tradition of Italian acculturation and its associations with the later Berlin Haskalah see: Lois C Dubin, "Trieste and Berlin: The Italian Role in the Cultural Politics of the Berlin Haskalah," in *Toward Modernity*, 189-224.

<sup>24</sup> Adam Shear noted that more investigation needs to be done into how *maskilim* viewed their Italian predecessors. Though there was not a "Renaissance Italian mystique" akin to the high regard with which medieval Sephardic scholars were held among *maskilim*, the Italian rabbis may have still served as a model. See Shear, "'The Italian and Berlin Haskalah': Isaac Barzilay Revisited," 65. It is my impression that the *maskilim* were unaware of Lampronti and his work, but I intend to look into this matter when I conduct a full reception history.

Lampronti's model might have offered a formidable challenge.<sup>25</sup> Nonetheless, his work never reached the widespread recognition required to present an alternate path to Jewish modernity.

As a curious addendum, the first manuscript edition of the *Paḥad Yiṣḥak* remains in the National Library of France today, purportedly because some saw and linked it to the broader Enlightenment. Benedetto Levi's biography of Lampronti claims that in the middle of the nineteenth century (a few decades before Levi wrote his work) Louis Phillipe was building up the national collections of the French library.<sup>26</sup> After hearing of a monumental encyclopedic project compiled by a Jew from Ferrara, Phillipe sent a representative to Ferrara to acquire the manuscript of the *Paḥad Yiṣḥak* from the Jewish community there. Perhaps because of the French tradition of encyclopedic writing, he wanted to include the Jewish attempt of the same period in the French National collections. To this day, the manuscripts remain there.<sup>27</sup>

Whether or not Lampronti's efforts can be seen as part of an *Enlightenment* movement, his works were undoubtedly informed by contemporary scientific genres, knowledge, and methods. The study of his work illuminates the wide reach of the new scientific culture of the university and its profound influence even within the most seemingly impermeable settings. University educated physicians served as important transmitters of the new philosophy and in turn transformed religious texts to fit novel means of establishing accurate knowledge. Rabbi/

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<sup>25</sup> For more on this aspect of the Haskalah see Feiner: Feiner, *The Jewish Enlightenment*, 235-6; 265-290.

<sup>26</sup> Benedetto Levi, *Sefer toldot ha-rav ha-gadol Yiṣḥak Lampronti* (Lyck: *Mikizei nirdamim*, 1871), 4v.

<sup>27</sup> I intend to search the archives of the *Bibliothèque Nationale* to confirm this story. Within the scope of my dissertation research I was able to establish that the manuscripts were indeed in possession of the Jewish community of Ferrara only until the middle of the nineteenth century when they were acquired by the National Library of France. The motivations as to why the French National Library wanted Lampronti's work specifically is, as of now, a matter of speculation.

physicians such as Lampronti were bearers of a complex dual-identity neither they nor the historian can separate.

## Bibliography

### Manuscripts

Cincinnati, Hebrew Union College, Ms. 132-135.

Jerusalem, National Library of Israel, Ms. Var. 222.

Jerusalem, Ben-Zvi Institute, Ms. 4008.

Jerusalem, Ben-Zvi Institute, Ms. 4032.

London, British Library, Ms. Add. 26895.

Mantua, Biblioteca Comunale, Ms. 1047.

New York, Sotheby's, Valmadonna Collection, Ms. 18.

New York, Jewish Theological Seminary, Ms. 9957.

New York, Sotheby's, Valmadonna Collection, Ms. 276.

Paris, Bibliotheque Nationale, Ms. Hebrew 458-577.

Parma, Biblioteca Comunale, *Medici Consulti di Giambattista Morgagni*.

### Archival Sources

Ferrara, *Archivio di Stato di Ferrara* [ASFe], matr. 1235; matr. 1378; matr. 1467; matr. 1474; matr. 1501; matr. 1560.

Ferrara, Archivio Storico Comunale di Ferrara [ASCFe], *Liber Iudeorum Defunctorum*.

Jerusalem, Central Archives for the History of the Jewish People [CAJP], IT/Fe 31; 46-48; 124B.

Padua, *Archivio Studio dell'Università di Padova, Collegio dei Filosofi e Medici*. [ASUPd], UN.AR 230-233; CO.V. 280-290

### Printed Primary Sources

Ashkenazi, Zevi. *She'elot u-teshuvot Ḥakham Zevi*. Amsterdam, 1712.

Basilea, Aviad Sar Shalom. *Emunat ḥakhamim*. Mantua, 1730.

Chambers, Ephraim. *Cyclopaedia: or, an Universal Dictionary of Arts and Sciences*, 2 vols., London: J and J. Knapton, J. Darby, D. Midwinter et al., 1728.

Coronelli, Vincenzo Marco. *Bibliotheca Universale Sacroprofana*. Venice, 1701-6.

Diderot, Denis and Jean Le Rond d'Alembert (eds.), *Encyclopedie, ou, Dictionnaire Raisonne des Sciences, des Arts et des Metiers*, 32 vols., (first published 1751-80).

Emden, Jacob. *Igeret bikoret*. Zhitomir, 1868.

Eybeschütz, Jonathan. *Kreti u-pleti*. 1736

Eybeschütz, Jonathan. *Bene 'ahuvah*. Prague, 1819.

*Giornale de' letterati d'Italia*. Venice, 1710-1740.

Lampronti, Isaac. *Paḥad Yiḥhak*. Volumes I - XIV, (printed between 1750 and 1888).

Lampronti, Isaac. *'Itur bikurei kaḥzir*. Venice, 1715.

Lampronti, Isaac. *Rei 'shit bikurei kaḥzir*. Venice, 1715.

Lampronti, Isaac. *Tosefet bikurei kaḥzir*. Venice, 1715.

Morpurgo, Samson. *Shemesh zedaka*. Venice, 1753.

Pivati, Francesco. *Nuovo Dizionario Scientifico e Curioso Sacroprofano*. Venice, 1746-51.

Vallisneri, Antonio. *De' corpi marini, che su' Monti si trovano, della loro orinine; e dello stato del Mondo avanti 'l Diluvio, nel Diluvio, e dopo il Diluvio: Lettere critiche*. Venice, 1721.

Zahalon, Mordehai. *Meḥiz u-meliḥ*. Venice, 1715.

## **Secondary Sources**

Adelmann, Howard. *Marcello Malpighi and the Evolution of Embryology*, 5 vols. Ithaca: Cornell University Press, 1966.

Angelini, Werther. *Gli Ebrei di Ferrara nel Settecento: I Coen e altri mercanti nel rapporto con le pubbliche autorità*. Urbino: Argalia, 1973.

- Antognazza, Maria Rosa. *Leibniz on the Trinity and the Incarnation: Reason and Revelation in the Seventeenth Century*. Translated by Gerald Parks. New Haven: Yale University Press, 2007.
- Arrizabalaga, Jon. "Medical Ideals in the Sephardic Diaspora: Rodrigo de Castro's Portrait of the Perfect Physician in early Seventeenth-Century Hamburg." *Medical History Supplement* 29 (2009): 107-124.
- Baldini, Ugo. "La scuola galileiana." In *Scienza e tecnica nella cultura e nella società dal Rinascimento a oggi, Storia d'Italia, Annali 3*, edited by Gianni Micheli. Turin: Einaudi, 1980.
- Baldini, Ugo. "L'attività scientifica del primo settecento." In *Storia d'Italia Annali 3 Scienza e tecnica nella cultura e nella società dal Rinascimento a oggi*, edited by Gianni Micheli. Turin: Einaudi, 1980.
- Barkai, Ron. *A History of Jewish Gynaecological Texts in the Middle Ages*. Leiden: Brill, 1998.
- Barker-Benfield, G.J. *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain*. Chicago: University of Chicago Press, 1992.
- Bar-Levav, Ariel. "Amsterdam and the Inception of the Jewish Republic of Letters." In *The Dutch Intersection: Jews and the Netherlands in Modern History*, edited by Yosef Kaplan. Leiden: Brill, 2008.
- Barnes, Diana G. *Epistolary Community in Print, 1580–1664*. Burlington: Ashgate, 2013.
- Barnes, Sherman B. "The Scientific Journal, 1665-1730." *Scientific Monthly* 38 (1934): 257.
- Baron, Salo. *SRH*: First edition. New York: 1937.
- Barycz, Henryk. "Metryka nacji polskiej w Uniwersytecie Padewskim (1592-1745)." In *Archiwum nacji polskiej w Uniwersytecie Padewskim, I*. Krakow, 1971.
- Barzilay, Isaac. "The Italian and Berlin Haskalah (Parallels and Differences)." *Proceedings of the American Academy for Jewish Research*, Vol. 29 (1960-1961): 17-54.
- Belloni, Luigi. "Il primo ventennio della microscopia (Galilei 1610-Harvey 1628) alla anatomia microscopica dell-insetto." *Clio medica*, 4, 1969: 179-190.
- Belloni, Luigi. "L'opera di Giambattista Morgagni dalla strutturazione meccanica dell'organismo vivente all'anatomia patologica." *Morgagni*, 4 (1971): 71-80.

- Belloni, Luigi. "De la théorie atomistico-mécaniste à l'anatomie subtile (de Borelli à Malpighi) et de l'anatomie subtile à l'anatomie pathologique (de Malpighi à Morgagni)." *Clio medica*, 6 (1971): 99-107.
- Benayahu, Meir. "Rabbi Yiṣḥak Lampronti ve-Rabbi Sabbatai Elhanan min ha-zekenim." In *Sinai Sefer ha-yovel*, edited by J.L. Maimon (Jerusalem, 1957-8), 491-503.
- Benayahu, Meir. "Rabbi Abram ha-Kohen mi-Zante u-lahakat ha-rofim ha-meshorerim be-Padova." *Ha-sifrut* 26 (1978): 108-40.
- Berger, David. "Judaism and General Culture in Medieval and Early Modern Times." In *Judaism's Encounter with Other Cultures: Rejection or Integration?* edited by Jacob J. Schacter, 21-116. Northvale, NJ: Jason Aronson, 1997.
- Berns, Andrew. *The Bible and Natural Philosophy in Renaissance Italy: Jewish and Christian Physicians in Search of Truth*. New York: Cambridge University Press, 2015.
- Bernstein, Simon. *Mi-shirei Yisra'el be-Italia*. Jerusalem: Darom, 1938.
- Besson, Alain ed., *Thornton's Medical Books, Libraries and Collectors: A Study of Bibliography and the Book Trade in Relation to the Medical Sciences*. Vermont: Gower, 1990.
- Biagioli, Mario. "Scientific Revolution, Social Bricolage, and Etiquette." In *The Scientific Revolution in National Context*, edited by Roy Porter and Mikulas Teich. Cambridge: Cambridge University Press, 1993.
- Biale, David. *Blood and Belief: The Circulation of a Symbol Between Jews and Christians*. Berkeley: University of California Press, 2007.
- Bilancioni, Guglielmo. *Giambattista Morgagni*. Rome: Formiggini, 1922.
- Blair, Ann. *Too Much to Know: Managing Scholarly Information Before the Modern Age*. New Haven: Yale University Press, 2010.
- Blenkinsopp, Joseph. *The Pentateuch*. New York: Doubleday, 1992.
- Blumenfeld, Ignaz ed., *Oẓar Neḥmad*. Wein, 1860.
- Bödeker, Hans Erich. "Journals and Public Opinion: The Politicization of the German Enlightenment in the Second Half of the Eighteenth Century." In *The Transformation of Political Culture: England and Germany in the Eighteenth Century*, edited Eckhart Hellmuth, 423-34. New York: Oxford University Press, 1990.

- Bonfil, Robert. "Expression of the Unity of the People of Israel in Italy during the Renaissance" (Hebrew). *Sinai* 76 (1975): 36-46.
- Bonfil, Robert. "Some Reflections on the Place of Azariah de Rossi's *Meor Enayim* in the Culutral Milieu of Italian Renaissance Jewry." In *Jewish Thought in the Sixteenth Century*, edited by Bernard Dov Cooperman, 25-31. Cambridge: Harvard University Press, 1983.
- Bonfil, Robert. *Rabbis and Jewish Communities in Renaissance Italy*. Oxford: Littman Library of Jewish Civilization, 1990.
- Boschiero, Luciano. *Experiment and Natural Philosophy in Seventeenth-Century Tuscany: The History of the Accademia del Cimento*. Dordrecht: Springer, 2007.
- Bregoli, Francesca. "Jewish Modernity in Eighteenth-Century Italy: A Historiographical Survey." *Jahrbuch des Simon-Dubnow-Instituts* 6 (2007): 67-78.
- Bregoli, Francesca. "Biblical Poetry, Spinozist Hermeneutics, and Critical Scholarship." *Journal of Modern Jewish Studies*, 8:2 (2009): 173-198.
- Bregoli, Francesca, and Federica Francesconi. "Tradition and Transformation in Eighteenth-Century Europe: Jewish Integration in Comparative Perspective." *Jewish History*, Special Issue, Vol. 24, Nos. 3-2, 2010.
- Bregoli, Francesca. *Mediterranean Enlightenment: Livornese Jews, Tuscan Culture, and Eighteenth-Century Reform*. Stanford: Stanford University Press, 2014.
- Brockliss, Laurence. *French Higher Education in the Seventeenth and Eighteenth Centuries: A Cultural History*. Oxford: Clarendon Press, 1987.
- Brockliss, Laurence, and Colin Jones. *The Medical World of Early Modern France*. Oxford: Clarendon Press, 1997.
- Broman, Thomas. "The Habermasian Public Sphere and 'Science in the Enlightenment'." *History of Science*, 36, 2 (1998): 123-149.
- Brooke, John Hedley. *Science and Religion: Some Historical Perspectives*. Cambridge: Cambridge University Press, 1991.
- Brown, Horatio. "Inglese e Scozzesi all'Universita di Padova dall'anno 1618 sino al 1765." In *Monografie storiche sullo Studio di Padova. Contributo del r. Istituto Veneto di scienze,*

- lettere ed arti alla celebrazione del VII centenario dell'Universita*, 137-213. Venice, 1922.
- Burke, Peter. *A Social History of Knowledge: From Gutenberg to Diderot*. Cambridge: Polity, 2000.
- Butterfield, Herbert. *The Origins of Modern Science, 1300–1800*, rev. ed. New York, 1965.
- Bylebyl, Jerome. “The School of Padua: Humanistic Medicine in the Sixteenth Century.” In *Health, Medicine, and Mortality in the Sixteenth century*, 335-370. CUP Archive, 1979.
- Bynum, W. F., and Roy Porter eds. *William Hunter and the Eighteenth-Century Medical World*. Cambridge: Cambridge University Press, 1985.
- Cappelletti, Vincenzo. “Nota sulla medicina umbra del Rinascimento: Pietro Andrea Mattioli.” In *Atti del IV Convegno di studi umbri*, 513–532. Perugia, 1967.
- Capra, Carlo, Giuseppe Ricuperati, and Valerio Castronovo. *La Stampa italiana dal cinquecento all'ottocento*. Bari: Laterza, 1986.
- Carlebach, Elisheva. *The Pursuit of Heresy: Rabbi Moses Hagiz and the Sabbatian Controversies*. New York: Columbia University Press, 1990.
- Caro, Luciano. “Fermenti Kabalistici nella Ferrara di Isaaco Lampronti.” In *Ebrei a Ferrara, Ebrei di Ferrara: Aspetti Culturali* (Conference Proceedings), 213-218. Ferrara, 2013.
- Carpanetto, Dino, and Giuseppe Ricuperati eds. *Italy in the Age of Reason, 1685-1789*. Translated by Caroline Higgitt. New York: Longman, 1987.
- Carpi, Daniel. “Jews Holding the Degree of Doctor of Medicine from the University of Padua in the Sixteenth and Beginning of the Seventeenth Centuries” (Hebrew). In *Scritti in memoir di Nathan Cassuto*, 62-91. Jerusalem, 1986.
- Carpi, Daniel. *Pinkas va 'ad kehilah kedoshah Padova*, vols 1 and 2. Jerusalem: Alpha Press, 1979.
- Cassirer, Ernst. *Die Philosophie der Aufklärung*. Tübingen, 1932. Translated by F. C. A. Koelln and J. P. Pettegrove as *The Philosophy of the Enlightenment*. Princeton, 1951.
- Ceseracciu, Emilia Veronese. “Ebrei laureati a Padova nel Cinquecento.” *Quaderni per la storia dell'Universtia di Padova* 13 (1980): 151-68.

- Chartier, Roger. "The Public Sphere and Public Opinion." In *The Cultural Origins of the French Revolution*, translated by Lydia G. Cochrane, 20-37. Durham: Duke University Press, 1991.
- Chriqui, Mordechai. *'Igerot Ramhal u-vene doro*. Jerusalem: Mekhon Ramhal, 2001.
- Ciscato, Antonio. *Gli Ebrei in Padova (1300-1800)*. Bologna: Forni Editore, 1967.
- Clanchy, M.T. *From Memory to Written Record in England, 1066-1307*. London: E. Arnold, 1979.
- Cohen, Boaz. "A List of Authors of Responsa Printed in the *Pahad Yitzhak*." In *Festschrift fur Aron Freimann zum 60. Geburtstag*, edited by Alexander Marx and Hermann Meyer, 141-43. Berlin, 1935.
- Colomi, Vittore. "Sull'ammissibilità degli ebrei alla laurea anteriormente al secolo IX." In *Scritti in onore di Riccardo Bachi, Rassegna mensile di Israel* 16 (1950): 202-16.
- Cook, Harold. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven: Yale University Press, 2007.
- Coudert, Allison, Richard Popkin, and Gordon Weiner eds. *Leibniz, Mysticism, and Religion*. Dordrecht: Kluwer Academic Publishers, 1998.
- Coudert, Allison. *Religion, Magic, and Science in Early Modern Europe and America*. Santa Barbara, California: Praeger, 2011.
- Crellin, J. "Theophile Bonet (1620-1689)." *The American Journal of Pathology*, Volume 98, Issue 1 (1980): 212.
- Cunningham, Michael. "Seashells on the Mountains: Antonio Vallisneri, Fossils, and the Republic of Letters." PhD diss., University of Connecticut, 2005.
- Cunningham, Andrew. *The Anatomist Anatomis 'd: An Experimental Discipline in Enlightenment Europe*. Farnham: Ashgate, 2009.
- Daly, Lloyd. *Contributions to a History of Alphabetization in Antiquity and the Middle Ages*. In Collection Latomus 90. Brussels: Latomus, 1967.
- Danieli, Natascia. *L'epistolario di Moseh Hayyim Luzzatto*. Florence, 2006.
- Darnton, Robert. "The High Enlightenment and the Low-Life of Literature in Pre-Revolutionary France." *Past & Present*, 51 (1971): 81-115.

- Daston, Lorraine. "The Factual Sensibility." *Isis* 79:3 (1988): 452-467.
- Daston, Lorraine. "Marvelous Facts and Miraculous Evidence in Early Modern Europe." *Critical Inquiry* 18 (1991): 93-124.
- Daston, Lorraine. "Baconian Facts, Academic Civility, and the Prehistory of Objectivity." In *Rethinking Objectivity*, edited by Allan Megill. Durham: Duke University Press, 1994.
- Daston, Lorraine. "The Several Contexts of the Scientific Revolution." Review of *The Scientific Revolution in National Context*, edited by Roy Porter and Mikulas Teich. *Minerva* 32 (1994): 108-14.
- Daston, Lorraine, and Katharine Park. *Wonders and the Order of Nature: 1150-1750*. New York: Zone Books, 1998.
- Daston, Lorraine. *Objectivity*. New York: Zone Books, 2007.
- Daston, Lorraine, and Elizabeth Lunbeck, eds. *Histories of Scientific Observation*. Chicago: University of Chicago Press, 2011.
- Davis, Joseph. "The Reception of the 'Shulhan 'Arukh' and the Formation of Ashkenazic Jewish Identity." *Association for Jewish Studies Review* 26:2 (Nov., 2002): 252.
- Davis, Joseph. "Ashkenazic Rationalism and Midrashic Natural History: Responses to the New Science in the Works of Rabbi Yom Tov Lipmann Heller (1578-1654)." *Science in Context* 10.04 (1997): 605-626.
- Dawson, John P. "The Codification of the French Customs." *Michigan Law Review* 38.6 (1940): 765-800.
- Daybell, James. *The Material Letter in Early Modern England: Manuscript Letters and the Culture and Practices of Letter-Writing, 1512-1635*. Basingstoke: Palgrave Macmillan, 2012.
- Dear, Peter. *Discipline and Experience: The Mathematical Way in the Scientific Revolution*. Chicago: University of Chicago Press, 1995.
- Debus, Allen. *The English Paracelsians*. London: Oldbourne, 1965.
- Debus, Allen. *The French Paracelsians: The Chemical Challenge to Medical and Scientific Tradition in Early Modern France*. Cambridge: Cambridge University Press, 1991.

- de Landtsheer, Jeanine, and Henk Nellen eds. *Between Scylla and Charybdis: Learned Letter Writers Navigating the Reefs of Religious and Political Controversy in Early Modern Europe*. Leiden and Boston: Brill, 2011.
- Del Negro, Piero ed. *L'Università di Padova: Otto Secoli di Storia*. Padua: Signum Padova Editrice, 2002.
- Des Chene, Dennis. *Spirits and Clocks: Organism and Machine in Descartes*. Ithaca: Cornell University Press, 2001.
- di Segni, David Gianfranco. "Il problema dello storione secondo Rabbi Yitzchaq Lampronti nella Ferrara del '700." *Zakhor* 4 (2000): 115-125.
- Di Porcia, Giovanni Artico. *Notizie della vita, e degli studi del kavalier Antonio Vallisneri*. Edited by Dario Generali. Bologna: Patron, 1986.
- Dooley, Brendan. "La scienza in aula nella Rivoluzione scientifica: dallo Sbaraglia al Vallisneri." *Quaderni Storici dello Studio di Padova* 21 (1988): 27.
- Dooley, Brendan. *Science, Politics, and Society in Eighteenth-Century Italy: The Giornale de' letterati d'Italia and its World*. New York: Garland Publishing, 1991.
- Dooley, Brendan. "Science Teaching as a Career at Padua in the Early Eighteenth Century: The Case of Giovanni Poleni." In *History of Universities*, edited by Charles Schmitt, 115-151. Oxford: Oxford University Press, 1998.
- Dooley, Brendan. *The Social History of Skepticism*. Baltimore: Johns Hopkins University Press, 1999.
- Dooley, Brendan. *Science and the Marketplace in Early Modern Italy*. Lanham: Lexington Books, 2001.
- Dubin, Lois C. "Trieste and Berlin: The Italian Role in the Cultural Politics of the Berlin Haskalah." In *Toward Modernity*, edited by Jacob Katz (1987), 189-224.
- Dubin, Lois C. *The Port Jews of Habsburg Trieste: Absolutist Politics and Enlightenment Culture*. Stanford: Stanford University Press, 1999.
- Dubin, Lois C. "Medicine as Enlightenment Cure: Benedetto Frizzi, 'Physician to Eighteenth-Century Italian Jewish Society.'" *Jewish History*, Vol. 26, No. 1/2 (May, 2012): 201-221.

- Dubnov, Simon. "Jewish Students at the University of Padua in the Seventeenth and Eighteenth Centuries" (Hebrew). *Sefer ha-Shana le-Yehudei Amerika*, edited by Menachem Ribolow and Zevi Scharfstein (New York, 1931), 216-291.
- Efron, John. *Medicine and the German Jews: A History*. New Haven: Yale University Press, 2001.
- Efron, Noah. *Judaism and Science: A Historical Introduction*. Westport, Connecticut: Greenwood Press, 2007.
- Eisenstein, Elizabeth. *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*. Cambridge: Cambridge University Press, 1979.
- Elman, Yaakov. "Order, Sequence, and Selection: The Mishnah's Anthological Choices." In *The Anthology in Jewish Literature*, edited by David Stern, 53-80. New York: Oxford University Press, 2004.
- Elon, Menachem. *Ha-mishpat ha-ivri*. 3 vols., 1973. Trans. *Jewish Law: History, Sources, Principles*. Jewish Publication Society, 1974.
- Emanuel, Simcha. *Shivrei luhot: sefarim 'avudim shel ba'alei ha-Tosafot*. Jerusalem: Hebrew University Magnes Press, 2006.
- Farley, John. *The Spontaneous Generation Controversy from Descartes to Oparin*. Baltimore: The Johns Hopkins University Press, 1977.
- Favaro, Giuseppe. *Gabrielle Falloppia Modenese (MDXXIII-MDLXU)*. Modena, 1928.
- Feiner, Shmuel. *The Jewish Enlightenment*. Translated by Chaya Naor. Philadelphia: University of Pennsylvania Press, 2002.
- Feiner, Shmuel. *The Origins of Jewish Secularization in Eighteenth-Century Europe*. Translated by Chaya Naor. Philadelphia: University of Pennsylvania Press, 2010.
- Feingold, Mordechai. *The Mathematicians' Apprenticeship: Science, Universities and Society in England, 1560-1640*. Cambridge, 1984.
- Feingold, Mordechai ed. *Jesuit Science and the Republic of Letters*. Cambridge: MIT Press, 2003.
- Feldhay, Rivka. *Galileo and the Church: Political Inquisition or Critical Dialogue?* Cambridge: Cambridge University Press, 1995.

- Ferrone, Vincenzo. *The Intellectual Roots of the Italian Enlightenment: Newtonian Science, Religion, and Politics in the Early Eighteenth Century*. Translated by Sue Brotherton. Atlantic Highlands, NJ: Humanity Books, 1995.
- Findlen, Paula. *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*. Berkeley: University of California Press, 1994.
- Fishman, David E. "Rabbi Moshe Isserles and the Study of Science Among Polish Rabbis." *Science in Context* 10.4 (1997): 571-588.
- Fishman, Talya. *Becoming the People of the Talmud: Oral Torah as Written Tradition in Medieval Jewish Cultures*. Philadelphia: University of Pennsylvania Press, 2011.
- Fontaine, Resianne. "An Unexpected Source of Meir Aldabi's *Shevilei Emunah*." *Zutot* 2004 (2007): 98–102.
- Fontaine, Resianne, Andrea Schatz and Irene Zwiep eds. *Sepharad in Ashkenaz: Medieval Knowledge and Eighteenth-Century Enlightened Jewish Discourse*. Amsterdam: Koninklijke Nederlandse Akademie van Wetenschappen, 2007.
- Fontaine, Resianne, Ruth Glasner, Reimund Leicht, and Giuseppe Veltri, eds. *Studies in the History of Culture and Science: A Tribute to Gad Freudenthal*. Leiden: Brill, 2011.
- Force, James, and Richard Popkin eds. *Essays on the Context, Nature, and Influence of Isaac Newton's Theology*. Boston: Kluwer, 1990.
- Force, James, and Richard Popkin eds. *The Books of Nature and Scripture: Recent Essays on Natural Philosophy, Theology, and Biblical Criticism in the Netherlands of Spinoza's Time and the British Isles of Newton's Time*. Boston: Kluwer, 1994.
- French, Roger. *William Harvey's Natural Philosophy*. Cambridge: Cambridge University Press, 1994.
- French, Roger. "Pliny and Renaissance Medicine." In *Science in the Early Roman Empire: Pliny the Elder, his Sources and Influence*, edited by R. French and F. Greenaway, 252-281. London, 1986.
- French, Roger, and Andrew Wear eds. *The Medical Revolution of the Seventeenth Century*. Cambridge: Cambridge University Press, 1989.

- Freudenthal, Gad. "Blessed Is the Air and Blessed Is Its Name in Sefer ha-Maskil of R. Solomon Simhah of Troyes: Toward a Portrait of Scientific-Midrashic Cosmology under Stoic Influence from the Thirteenth Century" (Hebrew). *Da'at* 32-33 (1994): 182-234.
- Freudenthal, Gad. "Arabic and Latin Cultures as Resources for the Hebrew Translation Movement: Comparative Considerations, Both Quantitative and Qualitative." In *Science in Medieval Jewish Cultures*, edited by Gad Freudenthal, 74-105. Cambridge: Cambridge University Press, 2011.
- Friedenwald, Harry. *The Jews and Medicine*. Baltimore: Johns Hopkins Press, 1944.
- Frisi, Paolo. *Elogi*. Livorno, 1774.
- Furey, Constance M. *Erasmus, Contarini, and the Religious Republic of Letters*. Cambridge: Cambridge University Press, 2006.
- Galinsky, Judah. "The Four Turim and the Halakhic Literature of Fourteenth-Century Spain: Historical, Literary and Halakhic Aspects" (Hebrew). PhD, diss., Bar-Ilan University, Ramat Gan, 1999.
- Galinsky, Judah. "Ashkenazim in Sefarad: The Rosh and the Tur on the Codification of Jewish Law." *Jewish Law Annual* 16 (2006): 3-23.
- Galinsky, Judah. "On Popular Halakhic Literature and the Jewish Reading Audience in Fourteenth-Century Spain." *The Jewish Quarterly Review*, 98, no. 3 (Summer 2008): 305-37.
- Galinsky, Judah. "The Significance of Form: R. Moses of Coucy's Reading Audience and his Sefer ha-Mitsvot." *AJS Review* 35, no. 2 (2011): 293-321.
- Gamble, Harry Y. *Books and Readers in the Early Church: A History of Early Christian Texts*. New Haven: Yale University Press, 1995.
- Garber, Daniel. *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science*. Cambridge: Cambridge University Press, 2001.
- Gardair, Jean-Michel. *Le "Giornale de'letterati" de Rome (1668-1681)*. Florence: L.S. Olschki, 1984).
- Garolfalo, Silvano. *L'enciclopedismo Italiano: Gianfrancesco Pivati*. Ravenna: Longo Editore, 1980.

- Garolfalo, Silvano. "Gianfrancesco Pivati's *Nuovo dizionario*." In *Notable Encyclopaedias of the 17<sup>th</sup> and 18<sup>th</sup> Century: Nine Predecessors of the Encyclopédie*, in *Studies on Voltaire and the Eighteenth Century*, vol. 194 edited by Frank A. Kafker. Oxford: The Voltaire Foundation, 1981.
- Garrison, Fielding H. "The Medical and Scientific Periodicals of the 17th and 18th Centuries, With a Revised Catalogue and Check-List." *Bull. Inst. Hist. Med.*, 2, (1934): 285-343.
- Gascoigne, John. *Cambridge in the Age of the Enlightenment: Science, Religion and Politics from the Restoration to the French Revolution*. Cambridge: Cambridge University Press, 1989.
- Gascoigne, John. "A Reappraisal of the Role of the Universities in the Scientific Revolution." In *Reappraisals of the Scientific Revolution*, edited by David C. Lindberg and Robert S. Westman, 207–60. Cambridge: Cambridge University Press, 1990.
- Gasking, Elizabeth B. *Investigations into Generation 1651-1828*. Baltimore, Johns Hopkins Press, 1967.
- Gaukroger, Stephen. *Descartes, An Intellectual Biography*. Oxford: Oxford University Press, 1995.
- Gay, Peter. *The Enlightenment: An Interpretation*, 2 vols. London, 1967-70.
- Gelber, Nathan Michael. "On the History of Jewish Doctors in Poland in the Eighteenth Century" (Hebrew). *Shai le-Yishayahu* (Tel Aviv, 1956): 347-71.
- Geller, Mark J. "Akkadian Healing Therapies in the Babylonian Talmud." Berlin: Max-Planck-Institut für Wissenschaftsgeschichte, 2004.
- Generali, Dario. "*Repubblica delle lettere fra censura e libero pensiero*." *Intersezioni*, Anno VI, n. 1 (April, 1986): 73-94.
- Genette, Gerard. *Paratexts: Thresholds of Interpretation*. Translated by Jane E. Lewin. Cambridge: Cambridge University Press, 1997.
- Ginzburg, Simon. *Ramhal u-vene doro*. Tel Aviv: 1937.
- Giomo, Giuseppe. *L'Archivio Antico Della Università di Padova*. Venice, 1893.
- Goldgar, Anne. *Impolite Learning: Conduct and Community in the Republic of Letters, 1680-1750*. New Haven: Yale University Press, 1995.

- Goldish, Matt. "The Spirit of the Eighteenth Century in the Anti-Sabbatean Polemics of Hakham David Nieto." In *The Legacies of Richard Popkin*, edited by Jeremy D. Popkin, 229-243. Dordrecht: Springer, 2008.
- Golinski, Jan. *Science as Public Culture: Chemistry and Enlightenment in Britain, 1760-1820*. New York: Cambridge University Press, 1992.
- Goodman, Dena. "Public Sphere and Private Life: Toward a Synthesis of Current Historiographical Approaches to the Old Regime." *History and Theory* 31 (1992): 1-20.
- Goodman, Dena. *The Republic of Letters: A Cultural History of the French Enlightenment*. New York: Cornell University Press, 1994.
- Grafton, Anthony. "A Sketch Map of a Lost Continent: The Republic of Letters." *Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts* 1, no. 1 (2009).
- Green, Monica H. *Women's Healthcare in the Medieval West*. Burlington, VT: Ashgate, 2000.
- Green, Monica H. "Flowers, Poison and Men: Menstruation in Medieval Europe." In *Menstruation: A Cultural History*, edited by Andrew Shail and Gillian Howie, 58-9. Basingstoke: Palgrave, 2005.
- Grell, Ole Peter, and Andrew Cunningham, eds. *Medicine and Religion in Enlightenment Europe*. Burlington: Ashgate, 2007.
- Grendler, Paul. *The Universities of the Italian Renaissance*. Baltimore: John Hopkins University Press, 2002.
- Gutwirth, Eleazar. "Amatus Lusitanus and the Location of Sixteenth-Century Cultures." In *Cultural Intermediaries: Jewish Intellectuals in Early Modern Italy*, edited by David Ruderman and Giuseppe Veltri. Philadelphia: University of Pennsylvania Press, 2004.
- Habermas, Jürgen. *The Structural Transformation of the Public Sphere*. Translated by Thomas Burger with Frederick Lawrence. Cambridge: MIT Press, 1989.
- Halbertal, Moshe. *People of the Book: Canon, Meaning, and Authority*. Cambridge: Harvard University Press, 1997.
- Harkness, Deborah E. "A View from the Streets: Women and Medical Work in Elizabethan London." *Bulletin of the History of Medicine* 82, 1 (2008): 52-85.
- Harrison, Peter. *'Religion' and the Religions in the English Enlightenment*. Cambridge: Cambridge University Press, 1990.

- Harrison, Peter. *The Fall of Man and the Foundations of Science*. Cambridge: Cambridge University Press, 2007.
- Harvey, Steven eds. *The Medieval Hebrew Encyclopedias of Science and Philosophy*. Dordrecht: Kluwer Academic Publishers, 2000.
- Hazard, Paul. *The European Mind*. Translated by J. Lewis May. London: Hollis & Carter, 1953.
- Hes, Hindle S. *Jewish Physicians in the Netherlands (1600-1940)*. Assen, 1980.
- Hezser, Catherine. "Mishnah and Ancient Book Production." In *The Mishnah in Contemporary Perspective, Vol 1*, edited by Jacob Neusner and Alan Avery-Peck, 167-192. Leiden: Brill, 2002.
- Hunter, Michael. *Establishing the New Science: the Experience of the Early Royal Society*. Wolfeboro, N.H.: Boydell Press, 1989.
- Hunter, Michael. *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain*. Woodbridge: Boydell Press, 1995.
- Hunter, Michael. "The Crown, the Public and the New Science." In *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-Century Britain*, 151-166. Woodbridge: Boydell Press, 1995.
- Hunter, Michael. *Boyle: Between God and Science*. New Haven: Yale University Press, 2009.
- Irons, Ernest. "Théophile Bonet, 1620-1689, His Influence on the Science and Practice of Medicine." *Bulletin of the History of Medicine*, Vol 12 (1942): 623.
- Israel, Jonathan. *European Jewry in the Age of Mercantilism*. New York: Oxford University Press, 1985.
- Israel, Jonathan. *The Radical Enlightenment: Philosophy and the Making of Modernity 1650-1750*. New York: Oxford University Press, 2002.
- Israel, Jonathan. *Enlightenment Contested: Philosophy, Modernity, and the Emancipation of Man, 1670-1752*. New York: Oxford University Press, 2006.
- Israel, Jonathan. *A Revolution of the Mind: Radical Enlightenment and the Intellectual Origins of Modern Democracy*. Princeton: Princeton University Press, 2010.

- Israel, Jonathan. *Democratic Enlightenment: Philosophy, Revolution, and Human Rights 1750– 1790*. New York: Oxford University Press, 2011.
- Jacob, Margarget C. *The Radical Enlightenment: Pantheists, Freemasons and Republicans*. London: Allen & Unwin, 1981.
- Jacob, Margaret C. "The Crisis of the European Mind: Hazard Revisited." In *Politics and Culture in Early Modern Europe*, edited by Phyllis Mack and Margaret C. Jacob, 251-71. New York: Cambridge University Press, 1987).
- Jacob, Margaret C. "The Mental Landscape of the Public Sphere: A European Perspective." *Eighteenth-Century Studies* 28 (1994): 95-113.
- Jarcho, Saul ed. *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)*. Boston: The Francis A. Countway Library of Medicine, 1984.
- Jarcho, Saul. "Giovanni Battista Morgagni; his Interests, Ideas, and Achievements." *Bull. Hist. Med.* 22 (1948): 503-524.
- Jarcho, Saul. "Dr. Isac Lampronti of Ferrara." *Korot* 8, 11-12 (1985): 203-206.
- Jardine, Lisa. *Erasmus, Man of Letters: The Construction of Charisma in Print*. Princeton: Princeton University Press, 1993.
- Johns, Adrian. *The Nature of the Book: Print and Knowledge in the Making*. Chicago: University of Chicago Press, 1998.
- Jones, Matthew. *The Good Life in Scientific Revolution: Descartes, Pascal, Leibniz, and the Cultivation of Virtue*. Chicago: University of Chicago Press, 2006.
- Kagen, Richard L. *Lawsuits and Litigants in Castile, 1500-1700*. Chapel Hill, NC, 1988.
- Kahana, Maoz. "From Prague to Pressburg: Halakhic Writing in a Changing World. From the Noda BeYehuda to the Hatam Sofer, 1730- 1839." PhD diss., Hebrew University of Jerusalem, 2010.
- Kahana, Maoz. "The Scientific Revolution and the Encoding of Sources of Knowledge: Medicine, Halakhah, and Alchemy in Hamburg-Altona, 1736" (Hebrew). *Tarbiz*, Vol 82: Issue 1 (2013): 165-212.
- Kahana, Maoz. "An Esoteric Path to Modernity: Rabbi Jacob Emden's Alchemical Quest." *Journal of Modern Jewish Studies* 12:2 (2013): 253-275.

- Kanarfogel, Ephraim. *Jewish Education and Society in the High Middle Ages*. Detroit: Wayne State University Press, 1992.
- Kanarfogel, Ephraim. *The Intellectual History and Rabbinic Culture of Medieval Ashkenaz*. Detroit: Wayne State University Press, 2013.
- Kaplan, Joseph. "Jewish Students from Amsterdam at the University of Leiden in the Seventeenth Century" (Hebrew). In *Mehkarim al Toledot Yahadut Holland*, 65-75. Jerusalem, 1979.
- Kaplan, Lawrence. "Rabbi Morekhai Jaffe and the Evolution of Jewish Culture in Poland in Sixteenth-Century Eastern Europe." In *Jewish Thought in the Sixteenth Century*, edited by Bernard Cooperman, 266-282. Cambridge, 1983.
- Katz, Jacob. *Halakhah and Kabbalah: Studies in the History of Jewish Religion, its Various Faces and Social Relevance* [Hebrew]. Jerusalem: Magnes Press, 1984.
- Katz, Jacob ed. *Toward Modernity: the European Jewish Model* New Brunswick: Transaction Books, 1987.
- Katz, Jacob. "Post-Zoharic Relations Between Halakhah and Kabbalah." In *Divine Law in Human Hands: Case Studies in Halakhic Flexibility* [Hebrew]. Jerusalem: Magnes Press, 1998.
- Kaufmann, David. *Dr. Israel Conegliano und seine Verdienste um die Republik Venedig dis nach dem Frieden von Carolwitz*. Budapest, 1895.
- Kenyon, Frederic. *Books and Readers in Ancient Greece and Rome*. Oxford: Clarendon Press, 1951.
- Kibre, Pearl. *The Nations in the Medieval Universities*. Cambridge, Ma.: Medieval Academy of America, 1948.
- King, Lester. *The Philosophy of Medicine in the Early Eighteenth Century*. Cambridge: Harvard University Press, 1978.
- King, Helen. *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of a Sixteenth-Century Compendium*. Burlington: Ashgate, 2007.
- Kirwan, Richard ed. *Scholarly Self-Fashioning and Community in the Early Modern University*. Burlington: Ashgate, 2013.
- Kisch, Guido. *Die Prager Universitat und die Juden, 1348-1848*. Mahrisc-Ostrau, 1935.

- Kisch, Guido. "Cervo Conegliano: A Jewish Graduate of Padua in 1743." *Journal of the History of Medicine* 4 (1949): 450-59.
- Klausner, Yehudah A. "An Unknown MS of R. Isaac Lampronti's Sermons" [Hebrew]. *Qiryat sefer* 36 (1960-1): 123-36.
- Kohl, Benjamin. *Padua Under the Carrara: 1318-1405*. Baltimore: John Hopkins University Press, 1998.
- Koren, Nathan. *Jewish Physicians: A Biographical Index*. Jerusalem: Israel University Press, 1973.
- Kottek, Samuel. "An Introduction to *Ma'ase Tuviya*: The Work in Context." *Korot* 20 (2009-2010): 13.
- Kristeller, Paul Oskar. "Philosophy and Medicine in Medieval and Renaissance Italy." In *Organism, Medicine, and Metaphysics: Essays in Honor of Han Jonas*, edited by Stuart Spicker, 29-40. Dordrecht: D. Reidel Pub, 1978.
- Kronick, David. "The Fielding H. Garrison List of Medical and Scientific Periodicals of the 17th and 18th Centuries Addenda and Corrigenda." *Bull Hist. Med.*, 32 (1958): 456-74.
- Kronick, David. *A History of Scientific and Technical Periodicals: The Origins and Development of the Scientific and Technological Press, 1665-1790* [Second Edition]. Metuchen, NJ: Scarecrow Press, 1976.
- Kupfer, Ephraim. "Concerning the Cultural Image of Ashkenazic Jewry and Its Sages in the Fourteenth and Fifteenth Centuries" (Hebrew). *Tarbiz* 42 (1972-73): 113-7.
- Langermann, Y. Tzvi. "A Hebrew Version of the Encyclopedia of Guillaume de Conches" (Hebrew). *Kiryat sefer* 60 (1985): 328-29.
- Langermann, Y. Tzvi. "An Unknown Ashkenazic Composition on the Natural Sciences" (Hebrew). *Kiryat sefer* 62 (1988-89): 448-49.
- La Vopa, Anthony J. "Conceiving a Public: Ideas and Society in Eighteenth-Century Europe." *The Journal of Modern History* 64 (1992): 79-116.
- Lehman, Marjorie. *The En Yaaqov: Jacob ibn Habib's Search for Faith in the Talmudic Corpus*. Detroit: Wayne State University Press, 2012.

- Lehmann, Matthias. *Emissaries from the Holy Land: the Sephardic Diaspora and the Practice of pan-Judaism in the Eighteenth Century*. Stanford: Stanford University Press, 2014.
- Leibowitz, J. "On the History of Jewish Doctors in Salonika" (Hebrew). *Sefer Yavan* 1 (Sefunot 11) (1971-77): 341-51.
- Levi, Benedetto. *Della vita e dell'opera Isacco Lampronti*. Padua, 1869.
- Levi, Benedetto. *Sefer toldot ha-rav ha-gadol Yiṣḥak Lampronti*. Lyck: Mikizzei Nirdamim, 1871.
- Libson, Gideon. *Jewish and Islamic Law: A Comparative Study of Custom during the Geonic Period*. Cambridge: Harvard University Press, 2003.
- Lieberman, Saul. *Hellenism in Jewish Palestine*. New York: Jewish Theological Seminary, 1962.
- Lifschitz, Berachyahu. "The Legal Status of the Responsa Literature." In *Authority, Process, and Method*, edited by Hanina Ben-Menahem and Neil S. Hecht, 59-100. Amsterdam: Harwood Academic Publishers, 1998.
- Lindemann, Mary. *Medicine and Society in Early Modern Europe*. Cambridge: Cambridge University Press, 1999.
- Long, Pamela O. *Artisans/Practitioners and the Rise of the New Sciences, 1400-1600*. Corvallis, OR: Oregon State University Press, 2011.
- Maclean, Ian. "The Medical Republic of Letters before the Thirty Years' War." *Intellectual History Review* 18:1 (2008), 15-30.
- Maffioli, Cesare. *Out of Galileo: The Science of the Waters, 1628-1718*. Rotterdam: Erasmus Publishing, 1994.
- Malkiel, David. "Between Worldliness and Traditionalism: Eighteenth-Century Jews Debate Intercessory Prayer." *JSIJ* 2 (2003): 169-198.
- Malkiel, David. "The Sambation River and the Ten Tribes in the *Pahad Yiṣḥak*," [Hebrew] *Pe'amim* 94-95 (2003): 159-180
- Malkiel, David. "Ebraismo, tradizione e societa: Isacco Lampronti e l'identita ebraica nella Ferrara del XVIII secolo." *Zakhor* 8 (2005): 9-42.
- Malkiel, David. "Empiricism in Isaac Lampronti's *Pahad Yitzhak*." *Materia Giudaica* 10,2 (2005): 341-351.

- Malkiel, David. "The Burden of the Past in the Eighteenth Century: Authority, Custom and Innovation in the *Pahad Yitzhak*." *Jewish Law Annual* 16 (2006): 93-132.
- Malkiel, David. "Law and Architecture: The Pollution Crisis in the Italian Ghetto." *European Journal of Jewish Studies* 4, 2 (2010): 255-284.
- Mandelbrote, Scott. "Isaac Newton and Thomas Burnet: Biblical Criticism and the Crisis of Late Seventeenth-Century England." In *The Books of Nature and Scripture: Recent Essays on Natural Philosophy, Theology, and Biblical Criticism in the Netherlands of Spinoza's Time and the British Isles of Newton's Time*, edited by Force and Popkin, 149-178. Boston: Kluwer, 1994.
- Margalit, David. *Hakhmei Yisra'el ke-rof'im*. Jerusalem, 1962.
- Masat Lucchetta, Paola. *A.V. Medico naturalista: Scienza e filosofia nel Settecento*. Venice: Cafoscarina, 1984.
- Mattern, Susan. *The Prince of Medicine: Galen in the Roman Empire*. Oxford: Oxford University Press, 2013.
- McClive, Cathy. "Bleeding Flowers and Waning Moons: A History of Menstruation in France, c. 1495-1761." PhD diss., University of Warwick, 2004.
- McClive, Cathy. *Menstruation and Procreation in Early Modern France*. Burlington, VT: Ashgate, 2015.
- McInelly, Brett C., ed. *Religion in the Age of Enlightenment*, Volumes 1-5. Brooklyn: AMS Press, 2009-2015.
- Meir, Jonathan. "The Origins of Hevrat Medikze Nirdamim in Eastern Europe." In *From the Depths of the Archive to the Bookshelf: 150th Anniversary of Mekizei Nirdamim Publishers*, 33-45. Jerusalem, 2013.
- Metger, Hélène. *Les doctrines chimiques en France du début du XVIIe à la fin du XVIIIe siècle*. Paris, 1923; repr. 1969.
- Middleton, William. *The Experimenters: A Study of the Accademia del Cimento*. Baltimore and London, 1971.
- Modena, Abdelkader, and Edgardo Morpurgo. *Medici e Chirurghi Ebrei Dottorati e Licenziati nell'Universita di Padova dal 1617 al 1816*. Bologna, 1967.

- Morsel-Eisenberg, Tamara. "The Organization of *Halakhic* (Jewish Legal) Knowledge in the Early Modern Period: *Ashkenazic* Responsa as a Case Study." PhD diss., University of Pennsylvania, 2017.
- Morton, Leslie T., and Robert J. Moore. *A Bibliography of Medical and Biomedical Biography*. Brookfield, VT: Gower, 1989.
- Morton, Leslie T. "The Growth of Medical Periodical Literature." In *Thornton's Medical Books, Libraries and Collectors: A Study of Bibliography and the Book Trade in Relation to the Medical Sciences* [Third edition], edited by Alain Besson. Vermont: Gower, 1990.
- Mosley, Adam. *Bearing the Heavens: Tycho Brahe and the Astronomical Community of the Late Sixteenth Century*. New York: Cambridge University Press, 2007.
- Neher, Andre. "Copernicus in the Hebraic Literature from the Sixteenth to the Eighteenth Centuries." *Journal of the History of Ideas* 38:2 (1977): 211-226.
- Nevins, Michael. *The Jewish Doctor: A Narrative History*. Northvale: Jason Aronson, 1996.
- Nepi, Hananel, and Mordekhai Ghironi. *Toledot gedolei Yisra'el*. Trieste: Tipografia Marenghi, 1853.
- Neusner, Jacob. *The Memorized Torah: The Mnemonic System of the Mishnah*. Chico: Scholars Press, 1985.
- Neusner, Jacob. *The Mishnah: An Introduction*. Northvale: Jason Aronson, 1989.
- Newman, George. "A Century of Medicine at Padua." *The British Medical Journal*, Vol. 1 No. 3195 (1922): 489.
- Nicolson, Harold. *The Age of Reason: The Eighteenth Century*. Doubleday, 1961.
- Noether, Emiliana P. *Seeds of Italian Nationalism, 1700-1815*. New York: Columbia University Press, 1951.
- Norman, A.F. "The Book Trade in Fourth-Century Antioch." *Journal of Hellenistic Studies* 80 (1960): 1-17.
- Ogilvie, Brian. "How to Write a Letter: Humanist Correspondence Manuals and the Late Renaissance Community of Naturalists." *Jahrbuch für europäische Wissenschaftskultur/Yearbook for European Culture of Science* 6 (2011), 13-38.

- Olszowy-Schlanger, Judith. “*Petit guide de description des écritures hébraïques: identifier la main du scribe.*” *Instrumenta BwB* 1, 2013.
- Olszowy-Schlanger, Judith. “Check List for Observation and Evaluation of Hebrew Script.” *Instrumenta BwB* 2, 2013.
- Osimo, Marco. *Narrazione della strage compiuta nel 1547 contro gli ebrei d’Asolo e cenni biografici della famiglia Koen-Cantarini*. Casale Monferrato, 1875.
- Oz-Salzberger, Fania. “New Approaches Towards a History of the Enlightenment: Can Disparate Perspectives Make a General Picture?” *Tel Aviver Jahrbuch für deutsche Geschichte* 29 (2000): 171-82.
- Paine, Thomas. *The Age of Reason: Being an Investigation of True and Natural Theology*. London, 1794.
- Commeno Papadopoli, Nicolo. *Historia Gymnasii Patavini*. Venice, 1726.
- Park, Katharine, and Lorraine Daston eds. *The Cambridge History of Science - Volume 3 Early Modern Science*. Cambridge: Cambridge University Press, 2006.
- Partington, James. *A History of Chemistry*, III. London, 1962.
- Pepe, Luigi. “Universities, Academies, and Sciences in Italy in the Modern Age.” In *Universities and Science in the Early Modern Period*, edited by Mordechai Feingold and Victor Navarro-Brotons. Dordrecht: Springer, 2006.
- Pepe, Luigi. “Universities, Academies, and Sciences in Italy in the Modern Age.” In *Universities and Science in the Early Modern Period*, edited by Mordechai Feingold and Victor Navarro-Brotons. Dordrecht: Springer, 2006.
- Pesaro, Abraham. *Memorie storiche sulla comunità israelitica ferrarese*. Ferrara, 1878.
- Pomata, Gianna. “*Praxis Historialis*: The Uses of *Historia* in Early Modern Medicine.” In *Historia: Empiricism and Erudition in Early Modern Europe*, edited by Gianna Pomata and Nancy G. Siraisi, 133-4. Cambridge: MIT Press, 2005.
- Pomata, Gianna, and Nancy G. Siraisi, eds. *Historia: Empiricism and Erudition in Early Modern Europe*. Cambridge, Mass.: MIT Press, 2005.
- Pomata, Gianna. “Sharing Cases: The *Observationes* in Early Modern Medicine.” *Early Science and Medicine*, 15 (2010): 193-236.

- Popkin, Richard. *The History Of Scepticism From Erasmus To Spinoza*. Berkeley: University of California Press, 1979.
- Porter, Roy, and Mikulás Teich eds. *The Enlightenment in National Context*. Cambridge: Cambridge University Press, 1981.
- Porter, Roy. "Science, Provincial Culture and Public Opinion in Enlightenment England." *British Journal for Eighteenth-Century Studies* 3 (1980): 20-46.
- Porter, Roy. *Disease, Medicine and Society in England, 1550-1860*. Cambridge: Cambridge University Press, 1995.
- Porter, Roy ed. *The Cambridge History of Science - Volume 4 Eighteenth-Century Science*. Cambridge: Cambridge University Press, 2003.
- Raphael, Yizhak. "Rabbi Yizhak Lampronti" (Hebrew). In *Rishonim ve-aharonim: perakim be-toldot Yisra'el ve-sifruto*. Tel Aviv: A. Tsiyoni, 1957.
- Rappaport, Rhoda. "Italy and Europe: the case of Antonio Vallisneri (1661-1730)." *History of Science* 29 (1991): 73-98.
- Rappaport, Rhoda. *When Geologists Were Historians, 1665-1750*. Ithaca: Cornell University Press, 1997.
- Raz-Krakotzkin, Amnon. "From Safed to Venice: The Shulhan Arukh and the Censor." In *Tradition, Heterodoxy and Religious Culture: Judaism and Christianity in the Early Modern Period*, edited by Chanita Goodblatt and Howard Kreisel, 91-115. Beer-Sheva: Ben Gurion University of the Negev Press, 2006.
- Read, John. *Humour and Humanism in Chemistry*. London, 1947.
- Reiner, Elhanan. "The Ashkenazi Elite at the Beginning of the Modern Era: Manuscript vs. Printed Book." *Polis* 10 (1997): 85-98.
- Resnick, Irven M. "The Codex in Early Jewish and Christian Communities." *Journal of Religious History* 17.1 (1992): 1-17.
- Reynolds, L.D., and N.G. Wilson. *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature*. Oxford: Clarendon Press, 1974.
- Ricci, James. *The Genealogy of Gynaecology: History of the Development of Gynaecology Throughout the Ages*. Philadelphia: The Blakiston Company, 1950.

- Richarz, Monika. *Der Eintritt der Juden in die akademischen Berufe. Jüdische Studenten und Akademiker in Deutschland 1678-1848*. Tübingen: Mohr, 1974.
- Roberts, C. "Books in the Graeco-Roman World and in the New Testament." In *Cambridge History of the Bible*, vol 1, edited by P.R. Ackroyd and C.T. Evans, 48-66. Cambridge: Cambridge University Press, 1970.
- Robinson, James T. "Gershom ben Solomon's *Sh'aar Ha-Shamayim*: Its Sources and use of Sources." In *The Medieval Hebrew Encyclopedia of Science and Philosophy*, edited by Steve Harvey, 248-274. Boston: Kluwer Academic Publishers, 2000.
- Rocca, Julius. *Galen on the Brain: Anatomical Knowledge and Physiological Speculation in the Second Century AD*. Leiden: Brill, 2003.
- Rosner, Fred. *Medicine in the Mishneh Torah of Maimonides*. Northvale, New Jersey: Jason Aronson, 1997.
- Rosner, Fred. *Encyclopedia of Medicine in the Bible and the Talmud*. Northvale: Jason Aronson, 2000.
- Rossetti, Lucia. "Dottorati polacchi dal 1600 al 1744 nel Sacro Collegio dei filosofi e medici di Padova (dall'Archivio antico dell'Universita)." In *Relazioni tra Padova e la Polonia. Studi in onore dell'Universita di Cracovia nel VI centenario della sua fondazione*, 131-174. Padova:Antenore, 1964.
- Rossi, Paolo. *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico*, translated by Lydia G. Cochrane (Chicago: The University of Chicago Press, 1984).
- Rouse, Richard H. and Mary A. *Authentic Witnesses: Approaches to Medieval Texts and Manuscripts*. Notre Dame, Indiana: University of Notre Dame Press, 1991.
- Ruderman, David B. "Contemporary Science and Jewish Law in the Eyes of Isaac Lampronti of Ferrara and Some of his Contemporaries." In *The Frank Talmage Memorial*, Vol. II, edited by Barry Walfish, 211-224. Haifa: Haifa University Press, 1992.
- Ruderman, David B. ed. *Preachers of the Italian Ghetto*. Berkeley: University of California Press, 1992.
- Ruderman, David B. *Jewish Thought and Scientific Discovery in Early Modern Europe*. New Haven: Yale University Press, 1995.

- Ruderman, David, and Giuseppe Veltri eds. *Cultural Intermediaries: Jewish Intellectuals in Early Modern Italy*. Philadelphia: University of Pennsylvania Press, 2004.
- Ruegg, Walter ed. *A History of the University in Europe: Volume II Universities in Early Modern Europe (1500-1800)*. Cambridge: Cambridge University Press, 1996.
- Sabia, Mario. *Le opere di Antonio Vallisneri: medico e naturalista reggiano, 1661-1730: bibliografia ragionata delle opere vallisneriane*. Rimini: Luise, 1996.
- Salah, Asher. *La République des Lettres: Rabbins, écrivains et médecins juifs en Italie au XVIIIe siècle*. Leiden: Brill, 2007.
- Salvatorelli, Germano. "Isacco Lampronti medico e talmudista." In *La Figura del Medico: Aspetti Religiosi Culturali, Sociologi, Sanitari*; [terzo] *Convegno di studi*, Ferrara, 9 giugno, 1996, 13-23. Ferrara: Comunità Ebraica di Ferrara, 1998.
- Savitz, Harry A. "Dr. Isaac Hayyim ha-Cohen Cantarini." *The Jewish Forum* 43 (1960): 80-82.
- Savitz, Harry A. "Doctor Isaac Lampronti (1679-1757): Rabbi, Physician, Teacher, Preacher, and Encyclopaedist." *Panminerva medica* 4,4 (April, 1962).
- Schacter, Jacob Joseph. "Rabbi Jacob Emden: Life and Major Works." PhD diss., Harvard University, 1988.
- Schaffer, Simon. "Natural Philosophy and Public Spectacle in the Eighteenth Century." *History of Science* 21 (1983): 1-43.
- Schickore, Jutta. *The Microscope and the Eye: A History of Reflections, 1740-1870*. Chicago: University of Chicago Press, 2007.
- Scholz Williams, Gerhild, and Charles D. Gunnoe Jr. eds. *Paracelsian Moments: Science, Medicine, and Astrology in Early Modern Europe*. Kirksville: Truman State University Press, 2002.
- Schmitt, Charles. "Science in the Italian Universities in the Sixteenth and Early Seventeenth Centuries." In *Emergence of Science in Western Europe*, edited by Maurice, 35-56. London: Macmillan, 1975.
- Sclar, David. "'Like Iron to a Magnet': Moses Hayim Luzzatto's Quest for Providence." PhD diss., the City University of New York, 2014.
- Sclar, David. "History for Religious Purposes: The Writing, Publication and Renewal of *Tzemah David*." *Zutot* 12 (2015): 1-15.

- Segal, Lester. *Historical Consciousness and Religious Tradition in Azariah de' Rossi's Me'or Einayim*. Philadelphia: Jewish Publication Society, 1989.
- Segal, Eliezer. "Anthological Dimensions of the Babylonian Talmud." In *The Anthology in Jewish Literature*, edited by David Stern, 81-107. New York: Oxford University Press, 2004.
- Segre, Michael. *In the Wake of Galileo*. New Brunswick: Rutgers University Press, 1991.
- Sela, Shlomo. *Abraham Ibn Ezra and the Rise of Medieval Hebrew Science*. Leiden: Brill, 2003.
- Shapin, Steven. "The Audience for Science in Eighteenth-Century Edinburgh." *History of Science* 12 (1974): 95-121.
- Shapin, Steven, and Simon Schaffer. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*. Princeton: Princeton University Press, 1985.
- Shapin, Steven. *The Scientific Revolution*. Chicago: University of Chicago Press, 1996.
- Shapiro, Barbara J. *A Culture of Fact: England, 1550-1720*. Ithaca: Cornell University Press, 2000.
- Shatzky, Jacob. "On Jewish Medical Students of Padua." *Journal of the History of Medicine* 5 (1950): 444-47.
- Shatzmiller, Joseph. *Jews, Medicine, and Medieval Society*. Berkeley: University of California Press, 1994.
- Shear, Adam. "'The Italian and Berlin Haskalah': Isaac Barzilay Revisited." *Jahrbuch des Simon-Dubnow-Instituts* 6 (2007): 49-66.
- Shear, Adam. *The Kuzari and the Shaping of Jewish Identity 1167-1900*. Cambridge: Cambridge University Press, 2008.
- Shear, Adam, and Joseph Hacker eds. *The Hebrew Book in Early Modern Italy*. Philadelphia: University of Pennsylvania Press, 2011.
- Sheehan, Jonathan. *The Enlightenment Bible: Translation, Scholarship, Culture*. Princeton: Princeton University Press, 2007.
- Simonsohn, Shlomo. *History of the Jews in the Duchy of Mantua*. Jerusalem: Sivan Press, 1977.

- Sirasi, Nancy G. *Avicenna in Renaissance Italy: The Canon and Medical Teaching in Italian Universities after 1500*. Princeton: Princeton University Press, 1987.
- Sirasi, Nancy G. "Girolamo Cardano and the Art of Medical Narrative." *JHI*, 52 (1991): 581-602.
- Sirasi, Nancy G. "Vesalius and Human Diversity in *De humani corporis fabrica*." *Journal of the Warburg and Courtauld Institutes*, 57 (1994): 60-88.
- Sorkin, David. *The Religious Enlightenment: Protestants, Jews, and Catholics From London to Vienna*. Princeton: Princeton University Press, 2008.
- Sorkin, David. *Moses Mendelssohn and the Religious Enlightenment*. Berkeley: University of California Press, 1996.
- Small, Jocelyn Penny. *Wax Tablets of the Mind. Cognitive Studies of Memory and Literacy in Classical Antiquity*. London: Routledge, 1997.
- Smith, Pamela H. and Paula Findlen eds. *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe*. New York: Routledge, 2002.
- Smith, Pamela H. *The Body of the Artisan: Art and Experience in the Scientific Revolution*. Chicago: Chicago University Press, 2004.
- Smith, Pamela H. "Making and Knowing in a Sixteenth-Century Goldsmith's Workshop." In *The Mindful Hand: Inquiry and Invention between the Late Renaissance and Early Industrialization*, edited by Lissa Roberts, Simon Schaffer, and Peter Dear, 20–37. Amsterdam, 2007.
- Smith, Pamela H. "Science on the Move: Recent Trends in the History of Science." *Renaissance Quarterly*, Vol. 62, No. 2 (Summer 2009): 345-375.
- Smith, Pamela H. "Why Write a Book? From Lived Experience to the Written Word in Early Modern Europe." *Bulletin of the German Historical Institute*, 47 (Fall 2010): 25-50.
- Snyder, H. Gregory. *Teachers and Texts in the Ancient World: Philosophers, Jews, and Christians*. London: Routledge, 2000.
- Soave, M. "Medici ebrei laureati nell'Universita di Padova nel 1600 e 1700." *Il Vessillo israelitico* 24 (1876): 189-92.
- Sonne, Isaiah. "Foundation Stones for the History of Italian Jewry: Texts and Studies about the circle of Ramhal and R. I. Lampronti" (Hebrew). *Horev* 5-6 (1939-1940): 76-114.

- Stallybrass, Peter. "Books and Scrolls: Navigating the Bible." In *Books and Readers in Early Modern England: Material Studies*, edited by Jennifer Andersen and Elizabeth Sauer, 42-79. Philadelphia: University of Pennsylvania Press, 2002.
- Starr, Raymond J. "The Circulation of Literary Texts in the Roman World." *The Classical Quarterly* 37 (1987): 213-223.
- Steegmuller, Francis. *A Woman, A Man, and Two Kingdoms: The Story of Madame D 'Epinay and the Abbe Galiani*. New York: Alfred A. Knopf, 1991.
- Stern, David ed. *The Anthology in Jewish Literature*. New York: Oxford University Press, 2004.
- Stewart, Larry. *The Rise of Public Science: Rhetoric, Technology and Natural Philosophy in Newtonian Britain, 1660-1750*. New York: Cambridge University Press, 1992.
- Stolberg, Michael. *Experiencing Illness and the Sick Body in Early Modern Europe*. New York: Palgrave Macmillan, 2011.
- Sussman, Yaakov. "Torah she-be'al peh: peshutah ke-mashma'ah - koḥo shel koḥo shel yod." In *Mehkerei Talmud*, 3 (2006): 209-384.
- Ta-Shema, Israel. "Sefer ha-Maskil: An Unknown French-Jewish Book from the End of the Thirteenth Century" (Hebrew). *Jerusalem Studies in Jewish Thought* 2, no. 3 (1982-83): 416-38.
- Ta-Shma, Israel. *Minhag 'ashkenaz ha-kadmon*. Jerusalem: Hebrew University Magnes Press, 1992.
- Ta-Shma, Yisrael. "Rashi-Rif ve-Rashi-Rosh." In *Rashi: 'Iyyunim be-yezirato*, edited by Z. Steinfeld, 209-20. Ramat Gan, 1993.
- Ta-Shma, Israel. "Jacob Katz on Halakhah and Kabbalah." In *The Pride of Jacob: Essays on Jacob Katz and his Work*, edited by Jay Harris. Cambridge: Harvard University Press, 2002.
- Ta-Shma, Israel M. "The Law in Accordance with the Later Authority Hilkheta ke-vatr'ei: Historical Observations on a Legal Rule." In *Creativity and Tradition Studies in Medieval Rabbinic Scholarship, Literature and Thought*, 142-165. Cambridge: Harvard University Press, 2006.
- Tchernowitz, Haim. *History of Hebrew Law* (Hebrew). New York: 1945.

- Temkin, Owsei. *Galenism: Rise and Decline of a Medical Philosophy*. Ithaca: Cornell University Press, 1973.
- Teplitsky, Joshua. "Between Court Jew and Jewish Court: David Oppenheim, the Prague Rabbinate, and Eighteenth-Century Jewish Political Culture." PhD diss., New York University, 2012.
- Thorndike, Lynn. "The *Encyclopédie* and the History of Science." *Isis* 6 (1924): 361.
- Tirosh-Rothschild, Hava. *Between Worlds: The Life and Thought of Rabbi David ben Judah Messer Leon*. Albany: State University of New York Press, 1991.
- Tomasini, Jacobi Philippi. *Gymnasium patavinum*. Udina, 1645.
- Tucci, Saverio. "Il parlare della S. Scrittura e l'operare della natura: gli interrogativi della geologica storica nella riflessione di Antonio Vallisneri." *Contributi* 1 (1983): 5-37.
- Twersky, Isadore. "Shulhan Arukh: Enduring Code of Jewish Law." In *The Jewish Expression*, edited by J. Goldin, 322-343. New Haven: Yale University Press, 1976.
- Twersky, Isadore. *Introduction to the Code of Maimonides (Mishneh Torah)*. New Haven: Yale University Press, 1980.
- Underwood, Edgar Ashworth. "The Early Teaching of Anatomy at Padua, with Special Reference to a Model of the Padua Anatomical Theatre." *Annals of Science* 19 (1963): 1-26.
- Urbach, Ephraim. *Ba'alei ha-Tosafot*. Jerusalem, 1980.
- Urbach, Ephraim. "The Ways of Codification: On the Tur of Jacob b. Asher" (Hebrew). *Proceedings of the American Academy for Jewish Research: Jubilee Volume*, 1-14. New York, 1980.
- Urbach, Ephraim. "R. Isaac Lampronti and his *Paḥad Yiṣḥak*" (Hebrew). In *Collected Writings in Jewish Studies*, edited by Moses D. Herr and Yonah Fraenkel, 385-90. Jerusalem: The Hebrew University Magnes Press, 1999.
- van Miert, Dirk ed. *Communicating Observations in Early Modern Letters (1500–1675): Epistolography and Epistemology in the Age of the Scientific Revolution*. London: The Warburg Institute, 2013.
- Vila, Anne C. *Enlightenment and Pathology: Sensibility in the Literature and Medicine of Eighteenth-Century France*. Baltimore: John Hopkins University Press, 1998.

- Venturi, Franco. *Settecento Riformatore*. Torino: G. Einaudi, 1969.
- Visentini, M.A. *L'Orto botanico di Padova e il giardino del Rinascimento*. Milan: Polifilo, 1984.
- Weinberg, Joanna. *Azariah de' Rossi, The Light of the Eyes*. New Haven: Yale University Press, 2000.
- Weinberg, Joanna. "Midrash in a Lexical Key: Nathan ben Yehiel's Arukh." In *Midrash Unbound: Transformations and Innovations*, edited by Joanna Weinberg and Michael Fishbane, 213-231. Oxford: Littman Library of Jewish Civilization, 2013.
- Weinstein, Roni. *Marriage Rituals Italian Style: A Historical Anthropological Perspective on Early Modern Italian Jews*. Leiden: Brill, 2004.
- Williams, Elizabeth. *A Cultural History of Medical Vitalism in Enlightenment Montpellier*. Burlington: Ashgate, 2003.
- Wood, Paul. "Science, the Universities, and the Public Sphere in Eighteenth-Century Scotland." *History of Universities* 14 (1994): 99-135.
- Yeo, Richard. *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture*. Cambridge: Cambridge University Press, 2001.
- Zimmels, H. Jacob. *Magicians, Theologians, and Doctors: Studies in Folk Medicine and Folklore as Reflected in the Rabbinical Responsa*. New Jersey: Jason Aronson, 1997.

### Appendix A [Chapter 3]

Table 1: Jewish students by number of years matriculated, 1690 - 1703:

0 years (but received degree)	1-3 years	4-10 years	10+ years
2 students	25 students	12 students	1 student
Aboas Usiel (graduated 1691)	Jacob Coen (graduated 1690; matriculated 1689)	Marco Morpurgo (grad 1694; mat 1691, 1692, 1693, 1697)	Raffael Rabbeni (grad 1696; mat 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1701, 1702, 1703, 1704)
Abraham Sacerdote (grad 1693)	Moises Burga Clava (grad 1691; mat 1688, 1689)	Salamon Lustro (grad 1697; mat 1688, 1690, 1691, 1692, 1693, 1694, 1696, 1697)	
	Leo Wallich (grad 1692; mat 1691)	Angelo Cantarini (grad 1697; mat 1697, 1701, 1703, 1704)	
	Hirsch Wallich (grad 1692; mat 1691)	Abraham Machiori (grad 1698; mat 1697, 1704, 1705, 1707)	
	Jacob Aboab (grad 1692; mat 1690, 1691)	Maso della Bella (grad 1698; mat 1694, 1695, 1696, 1697)	
	Salomon Coen (grad 1692; mat 1691)	Lazzaro Mordo (grad 1699; mat 1698, 1699, 1700, 1701, 1707, 1708)	

0 years (but received degree)	1-3 years	4-10 years	10+ years
	Abraham Cesana (grad 1694; mat 1694, 1697)	Moise Fano (grad 1700; mat 1686, 1687, 1691, 1692, 1693, 1694)	
	Isaac Vita (grad 1695; mat 1695, 1697)	Samson Morpurgo (grad 1700; mat 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1707)	
	Copilio Pictor (grad 1695; mat 1694, 1697)	Marcus Mentzer (grad 1701; mat 1701, 1702, 1703, 1707)	
	Aaron Staub (grad 1696; mat 1696, 1697)	Samuel Coen (grad 1702; mat 1698, 1699, 1700, 1701, 1704, 1705)	
	David Vita Loria (grad 1696; mat 1694, 1696)	Anselmus Rabbeni (grad 1702, mat 1699, 1700, 1701, 1702, 1703, 1704, 1705)	
	Isaac Lampronti (grad 1696; mat 1694, 1695, 1697)	Graziado Cantarini (grad 1703; mat 1699, 1700, 1701, 1702, 1703)	
	Joseph Fua (grad 1696; mat 1693, 1694, 1695)		
	Joseph Sacerdote (grad 1697; mat 1697)		
	Isaac Pangalli (grad 1698; mat 1698)		

0 years (but received degree)	1-3 years	4-10 years	10+ years
	Cervo Marini (grad 1698; mat 1697, 1704, 1705)		
	Abraham Haiman Bachrach (grad 1699; mat 1698, 1699, 1701)		
	Isaac Waisauser (grad 1699; mat 1699)		
	Moise Servadus (grad 1700; mat 1699, 1700)		
	Moise Jacob Fermi (grad 1701; mat 1700, 1707, 1708)		
	Jacob Israel Ben Porad (grad 1701; mat 1700)		
	Wolff Winkler (grad 1701; mat 1700)		
	Joseph Nizza (grad 1702; mat 1702, 1707, 1708)		
	Joseph Conegliano (grad 1703; mat 1701, 1702, 1703)		
	David de Castro (grad 1700; mat 1700, 1701, 1702)		

Table 2: Jewish matriculates by year, 1694-1697 (Lampronti's years as student):

1694	1695	1696	1697	1694-1697
16 total	6 total	9 total	18 total	24 total
Copilio Pictor (Jacob Maler)	Abram Staub	David Vita Loria	Copilio Pictor	Copilio Pictor
David Vita Loria	Isaac Lampronti	Aron Staube	Abram Coen del Sabato	David Vita Lora
Abram Cesana	Maso della Bella	Jacob Lustro	Abram Cesana	Abram Cesana
Jacob Lustro	Marco Ferrarese	Maso della Bella	Aron Staube	Jacob Lustro
Isaac Lampronti	Joseph Fua	Marco Ferrarese	Jacob Lustro	Isaac Lampronti
Isaac Gianforti	Raffael Rabeni	Raffael Rabeni	Isaac Lampronti	Isaac Gianforti
Moise da Fano		Simon Lustro	Isaac Vita Romania	Moise da Fano
Maso della Bella		Samuel Lionzin	Maso della Bella	Maso della Bella
Marco Ferrarese		Salamon Lustro	Marco Morpurgo	Marco Ferrarese
Michiel Salon del Aron			Michiel Salon del Aron	Michiel Salon del Aron
Mandolin da Zara			Raffael Rabeni	Mandolin da Zara
Joseph Fua			Simon Lustro	Joseph Fua
Raffael Rabeni			Samuel Lionzin	Raffael Rabeni
Simon Lustro			Salamon Lustro	Simon Lustro
Samuel Lionzin			Joseph Sacerdotte	Samuel Lionzin
Salamon Lustro			Angelo Cantarini	Salamon Lustro

			Abram Macchioro	Abram Staub
			Cervo Marini	Aron Staub
				Isaac Vita Romania
				Marco Morpurgo
				Joseph Sacerdotte
				Angelo Cantarini
				Abram Macchioro
				Cervo Marini

Table 3: Geographical origin of Jewish students at the university:

	1617-1637	1638-1657	1658-1677	1678-1697	1698-1717
<b>Venice/Padua</b>	6	3	9	15	24
<b>Rest of Italy</b>	2	9	3	14	16
<b>Eastern Adriatic/ Ottoman Empire</b>	9	3	1	6	11
<b>Northern/ Central Europe</b>	4	3	6	7	3
<b>Eastern Europe</b>	1	1	2	7	4
<b>Other/Unknown</b>	6	3	0	0	1
<b>Total</b>	29	22	21	49	59

Text 1:

**Transcription of Lampronti's degree [ASUPd, ms. 285, f. 103v-104r]**

1696, die iovis X mensis maii etc.

Coram illustrissimo domino comite Renaldino dignissimo propraeside etc. comparuit excellens dominus comes Borromaeus promotor et praesentavit dominum Isaac Lampronti hebraeum Ferrariensem pro die lunae cum licentia in scriptis excellentissimi pretoris, hora 13, asserens esse sufficientem in philosophia et medicina, et reventer petiit assignari puncta pro subeundo examine [*ms.* examen] iusta formam ducalium etc.

Qua dominatio sua illustrissima audita attestazione etc. admisit in forma etc., cum integra ut moris est etc.

**[Text pertaining to the presentation of Joseph Fua omitted here]**

1696, die dominico 13 mensis maii.

Puncta domini Isaac Lampronti hebraei Ferrariensi sorte etc.

In secundo Physicorum tex. 48

Primum igitur cum videamus alia quidem semper etc.

In librum Artis medicae Galeni cap. 45

Temperatura vero testiculorum calida quidem etc.

**[The *puncta* of Joseph Fua omitted here]**

In Dei eterni nomine amen. 1696, inditione 4<sup>a</sup>, die lunae 14 mensis maii, in excellentissimo Collegio auctoritate Veneta almi Gymnasii Patavini, cum praesentia illustrissimi domini Francisci Besenella nobilis Tyrolensis etc. dignissimi prosyndici etc. nec non et infrascriptorum excellentissimorum dominorum professorum per braevia iuxta morem convocatos. Ubi in eodem loco suprascriptus dominus Isaac Lampronti hebraeus [*ms.* hebraei] Ferrariensis recitavit puncta sua heri sibi sorte extracta in phylosophia et medicina et super eis [*punctis*] rigorose tentatus et examinatus, optime se gessit tam in reassumendis et resolvendis strictissimis obiectionibus sibi factis, quam in curando casum in re medica ei orectenus proposito, adeo ut eruditionis suae omnibus maximum praebuerit argumentum, et finito examine, semotus extra iuxta solitum clausoque ostio, positus fuit ad suffragia infrascriptorum excellentissimorum dominorum doctorum, a quibus ex omnibus eorum votis doctor in phylosophia et medicina approbatus remansit. Qua aprobatione per nuntium publicata, dennuo introductus, fuit per eundem illustrissimum dominum propraesidem etc. pronunciatus nemine penitus atque penitus etc. praesentibus etc. ultra etc.

illustrissimo domino comite Carolo Renaldino dignissimo propraeside

Michaele Angelo Molinetto

Viscardi, arguit in medicina

comite Alexandro Borromeo, a quo fuit insignitus  
Pompeo Sachi, arguit in phylosophia  
Antonio de Marchetis  
Francisco Alfonso Donnoli  
Georgio Calaphates, proposuit casum sorte etc.

**Translation:**

Before the illustrious and dignified lord Renaldino, acting president, comes the most excellent sir Borromeo as promoter, presenting Mr. Isaac Lampronti, Jew of Ferrara, for the day Monday at the time 1:00. With the permission of the most excellent previously mentioned individual [Renaldini], Borromeo declares that Isaaco is sufficient in philosophy and medicine, and with respect, he asks that Lampronti be assigned the *puncta* in order to take the final exam in its original/canonic form. The illustrious authority Renaldini heard this statement and gives permission for Isaaco to take his final exam, as usual.

[Text pertaining to Joseph Fua's degree]

1696 Sunday 13 May

*Puncta* selected for Isaac Lampronti, Jew of Ferrara

In the second book of Aristotle's Physics text 48.

(First line of text quoted)

(Second *puncta*)

In the book Art of Medicine, Galen chapter 45

(Line of text again)

[Text pertaining to Joseph Fua's degree]

1696 quarta indizione - Lunedì 14 May

In the name of the eternal God, in the most excellent Collegio Veneto of the University (Gymnasium Patavini), in front of the illustrious sir Francesco Besenella, noble from Tyrol and the dignified *prosindaco* and also the most excellent sir, professor who was charged with the short written communication. In the same place, the previously mentioned Isaac Lampronti, Jew of Ferrara, answered the *puncta* in philosophy and medicine that were selected yesterday and he examined and interrogated these *puncta* during the final exam. He performed on the highest level even in the analysis and in answering the questions asked by the committee, and even in the medical case that was proposed orally to him. He demonstrated his understanding of the arguments and his depth of knowledge. After the exam finished, he was instructed to leave the room and the door was closed, as usual, and afterwards the committee could begin to vote on his exam [performance]. And they unanimously declared him doctor in philosophy and medicine. He [Lampronti] was then called back into the room and his approval was publicly declared and the illustrious president stated again that his [Lampronti's] passing was unanimously approved.

The illustrious sir Carlo Renaldino, the dignified acting president  
Michaelangelo Molinetta  
Viscardi, who posed the question in medicine  
Count Alexandro Borromeo, who bestowed the paraphernalia of physicians upon him<sup>1</sup>  
Pompeo Sachi, who posed the question in philosophy  
Antonio de Marchetti  
Francisco Alfonso Donnoli  
Georgio Calaphates, who selected the medical case

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<sup>1</sup> A cape, gold ring, hat, and wreath as well as the ritual of opening and closing a book were together called “*insignias doctoraus*” and constituted the proof of being a doctor.

## Appendix B [Chapter 4]

Punctuation and paragraph divisions in all transcribed Hebrew texts are my own.

### Case 2:

Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 1a, 111v, s.v. “*ishah ro'ah dam*” (Venice, 1750) (first printed edition); Paris, Bibliotheque Nationale de France, Ms. Hebrew 467, f. 205r-206r (manuscript original).

שאלה

ובשנת הת"ץ, עשרה ימים לחדש אגוסטו, כז לחודש אב, כמהר"ר אביעד שר שלום ממנטובה שאל ממני באגרתו שלוחה אלי זה לשונו:

הנני בא אל חכמת מעכ"ת הגדולה מאד המחברת בה תואר שני אנשים גדולים ועליהם רבותינו, אבא שאל לחכמים וחכמים לרופאים. אשה שיש לה חולי נפילת הרחם וממנו יוצאה איזו ליחה אדומה הנראית בסמרטוט כאשר היא מקנחת בעז ידיה. הרופאים צוו לעשות לה טבעת עם לאסירפיציו ודברים אחרים אשר הועילו בכל מכל כל, אבל בהסירה הטבעת מפני הטבילה מצאה ליחה אדומה. כאן נמצא מי שמכשיר עם ספר פני יהושע, ובו לא יכולתי להסכים בשום אופן. והנני נוטה מאד מאד להתיר לה לטבול עם הטבעת ברחם, ולזה נוטה מאד גם כן דעת הרב פינצי. וטעמי הוא, שאף על פי שתוף הרחם נקרא 'בית הסתרים', שכן אינו מיטמא אם נגע בו המת כמו ששנינו: החיה טמאה טומאת שבעה והאשה טהורה עד שיצא הולד, ובית הסתרים צריך שיהיה ראוי לבא בהם המים אף על פי שאינו צריך שיבואו - עם כל זה מן הסברא נראה לחלק בין הקמטים ותוך הפה וכו' לתוך הרחם, שהרי קטנה בתולה רחמה סתום לגמרי ויכולה לטבול, וכמו שאמר: מעשה שהיה והטבילה קודם לאמה, ולכן תוך הרחם נראה שאין צריך שיבואו בהם המים. תדע, שמצינו שצריך לחצוץ שער ולא מצינו שצריך לבדוק תוך הרחם.

והנני מצפה דעתו הרחבה והחכמה מאד מאד, ובכניעה רשומה הנני הנני עבדו הנכנע מאד מאד מקושר מאד בקשר החובות.

אביעד שר שלום באזילה

תשובתי

אין אצלי ספק דבדיק לי מר, יען כי מה ידעתי ולא ידע מר, ואף על פי כן לעשות במצותו אשר צוני אומר בקצרה: כי הוא מוסכם בין הרופאים את אשר כתב סינרטי, סקנקיו, והבוגניטו על לידת קיסריית, חבור ששי, פרק ה והבאווינו, ועל כולם הנסיון, כי ברצותנו להכניס בתוך הרחם הטבעות או פתילות באיזו צורה שתעשנה האשה למען לא תפול עוד הרחם, היא מקבלת ברצונה הגמור הפתילה והטבעת באותו מקום בכל עת ובכל שעה ובכל רגע, יען כי אינה מעכבת לה ההליכה ולא שום אחת מהפעולות אשר צריכה האשה לעשות, היינו התשמיש, ההריון וגם הלידה. כי על כן הדרן לככליין: כל המקפיד עליו - חוצץ, ושאינו מקפיד עליו - אינו חוצץ - כלל גדול אשר אין לדחותו כלל ועיקר. ומן הטעם הזה דעתי נוטה, שיכולה האשה לטבול בלתי הסירה הטבעת או הפתילה. ובר מן דין, תעיין מעלת כבוד תורתו דברי שבות יעקוב, חלק ב, תשובה עה, המביא דברי דבר שמואל המחמיר כמנהגו ודברי הפוסקים המתירים, והביא גם כן

דברי פני יהושע, הן אמת שנראה שהוא רוצה לחלק בין שבירת קשרי הרחם לנפילתם למטה ברפיונה הנקראת רילאסאציוני, אבל זאת היתה לי כתשובת הראש, היינו תשובת ראשו בלי ראייה. יען כי כל חכם לב ובקי בחכמת הנתוח רואה בעיניו כי מקרה נפילת הרחם הוא כמקרה נפילת הכרכשתא לחוץ מפי הטבעת, שגם היא על הרוב מוציאה קצת ליחה אדומה בצאת הכרכשתא או בהכניסנו אותו לפנינו בחזקה בהשבר אחת מהעורקים הדקים כחוט השערה הנקראים ויני קאפילארי, ובודאי לא נוכל לומר דהדמים האלה באים מן המקור.

ועוד נוסף על אשר אמרתי דלא יסק אדעתייהו אפילו להני דסברי דלא כרש"י, לחלק בין בית הקמטים ובית הסתרים, לקרא בית הסתרים פנימיות הרחם ופי הטבעת לעילא ולעילא ובאותו מקום אשר אנו משימים הטבעת והפתילה, דאם כן אין לדבר סוף ותפסת מרובה לא תפסת. ועדיין היינו צריכים למודעי לידע עד איזה מקום יקרא בית הסתרים ומעולם לא היינו יוצאים מידי ספק. ומכל הני טעמי תריצי יראה לי, דאם דעת מעלת כבוד תורתו וחברייא דעתיה יסכימו להטבילה מבלתי הסר הטבעת או הפתילה - יצאו מכל ספיקי. יען וביען גם הבעל פני משה וחברוהי העומדים בסברתו יהיו עמכם. הן אמת כי במעשה אשר לפני מעכ"ת הייתי מצוה לאשה לטבול בלא ברכה, מפני הפוסקים מתירים בלא טבילה. כן זה אני אומר כמצווה ועושה, אבל הנני מבטל סברתי מפני סברתו וסברת הרב פינצי אשר להם משפט המלוכה להגיד לכל איש ואשה את אשר יעשו ותו לא מידי.

עבדו הנע הנכנע יצחק לאמפרונטי

QUESTION: In the year 1730, on the 10th day of the month of August, the 27th of Ab, Rabbi Abi'ad Sar Shalom of Mantua asked me, in a letter he sent to me, the following:

I am approaching the great Torah wisdom who has the characteristics of two great men, and about this our rabbis wrote: "my father asked the sages and the sages asked the physicians."<sup>1</sup>

There is a woman with the sickness of a fallen womb [prolapsed uterus]: a red wetness secretes from [her womb], which can be seen on a rag when she wipes herself with her hand. The physicians advised to make for her a ring out of *laserpizio*<sup>2</sup> and other materials which would help in every matter. But when she removed the ring because of [before] immersing, she (again) found the red secretions. I found someone who considers her kosher (despite the blood) in the book *Pnei Yehoshua*,<sup>3</sup> but I could not agree in any way with this opinion. I am very much inclined to permit her to immerse herself with the ring in her womb, and Rabbi Finzi is also very much inclined towards this view. My reason is that even though the womb is called the 'house of secrets'<sup>4</sup> it is not made impure by the touching of a corpse as we learn:<sup>5</sup> one who touches the fetus is impure seven days and the woman is pure until the fetus exits her womb.<sup>6</sup> And (when a

<sup>1</sup> Babylonian Talmud, *Nidah* 22b.

<sup>2</sup> This is the Italian name for a medicinal plant; the scientific name is *Laserpitium gallicum*.

<sup>3</sup> Jacob Joshua Falk, *Pnei Yehoshua*, Vol. 1 *Yoreh de'ah* (Amsterdam, 1715), p. 15r-16v, Question 6.

<sup>4</sup> Mishnah *Mikvaot* 9:2.

<sup>5</sup> Mishnah *Hulin* 4:3.

<sup>6</sup> The Mishnah (*Hulin* 4:3) teaches that if one touches an impure animal inside of which there was a dead fetus, he is impure for 7 days; but a woman (with a dead fetus inside her) is pure until the fetus is extracted from her.

woman immerses in the *mikveh*) it has to be possible for water to enter the ‘house of secrets’ even though there is no need for water to actually enter there. And with all this it seems logical to make a distinction between the inside of her uterus and the outside parts. For indeed, a young virgin's womb is completely closed yet she is able to immerse herself as it was said:<sup>7</sup> an incident happened and the infant immersed before her mother, and thus it seems that the water does not need to enter the inside of the womb. And notice (the fact) that we find that a woman needs to check for an impediment to immersion, but we do not find that she needs to check internally within her womb.

And now I await his wisdom which is broad and very brilliant. And in inscribed submission here, I am his servant, greatly entangled with ties of endearment.

Abi'ad Sar Shalom Basilea

MY ANSWER: I have no doubt that his honor is examining me. For what do I know that his honor does not know? In spite of this, to fulfill the request he has made of me, I answer in short that there is agreement among the physicians concerning the writings of *Sennarti*,<sup>8</sup> *Schenckav*,<sup>9</sup> and *ha-Boneto*<sup>10</sup> on Cesarean birth, volume 6, chapter 5, and *ha-Bauhino*.<sup>11</sup> And according to all

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<sup>7</sup> Rashi, B.T., *Nidah* 32a.

<sup>8</sup> Lampronti is referring here to Daniel Sennert (d. 1637), a German physician and prolific author of books on chemistry, alchemy, and medicine. Sennert is chiefly known for his contributions to atomic theory, but his medical writings, including *Practicae medicinae* (Volumes 1-6) were also widely circulated. Book 4, chapter 16 of *Practicae medicinae* specifically covers “the falling of the womb”. There Sennert explained how and what materials can be used to make a device to keep the prolapsed uterus in place, and writes: “they [the device] neither hinder conception, nor bring any inconvenience, nay, that they help conception, and retain it, and cure this disease perfectly.” Sennert also referenced the work of Caspar Bauhin on Cesarean birth, which Lampronti later mentioned. For a seventeenth-century English translation of this passage, see: Daniel Sennert, *Practical Physick* (London, 1664), p. 52-3.

<sup>9</sup> This is either a reference to Johann Schenck von Grafenberg (d. 1598), whose *Observationes Medicae*, a seven volume pathological work containing case descriptions including many gynecological, was a standard medical text used throughout the seventeenth and eighteenth centuries, or to his son, Johann Georg Schenck von Grafenberg (d. 1620), who wrote books on pathology and the occurrence of monstrosities, and in 1606 published the first extended list of gynecological authors as an appendix to a commentary on the *Gyneciorum Libri*. The specific passage to which Lampronti is referring could not be located, but the most reasonable conclusion is that Lampronti is referencing either Schenck the elder or younger here.

<sup>10</sup> There is good reason to believe this is the Swiss physician Theophile Bonet (d. 1689) who was educated in Bologna and wrote many medical treatises on his clinical and anatomical studies (including gynecological observations). The most significant of Bonet's works is the *Sepulchretum* – a very influential anatomical work that formed the basis upon which Giambattista Morgagni, one of the most renowned physicians of the eighteenth century and an individual with whom Lampronti had personally exchanged letters, built his path breaking work, *De Sedibus*. A dedicated work on Cesarean birth (or a volume 6 to the *Sepulchretum*), as Lampronti refers, could not be found so it is possible that this reference is to another physician or work.

<sup>11</sup> This is Caspar Bauhin (d. 1624), a prolific scholar of anatomy and biology who was responsible both for the establishment of our modern terminology of muscles, veins, and nerves, and for the improvement of the taxonomy of biology. Bauhin specifically discussed the ramifications of the prolapsed uterus and its treatment in his appendix to Francis Rousset's works on Cesarean Birth, both published in Israel Spach's edition of the *Gyneciorum Libri*. Israel Spach, *Gynaeciorum sive de mulierum tum communibus...* (1597), p. 480-91.

of them, the woman willingly places in the womb rings or some other suppository that achieves the same purpose, so the womb no longer falls. It is her will to receive this ring or suppository and to wear it all times, at all places, all hours, even every second; it does not interfere with her walking or any of the activities she needs to do as a woman – not intercourse, pregnancy, or childbirth. And for this reason we rely upon the following rule: that if a woman is conscious of an externality or it is bothersome, then it impedes ritual immersion – but if she is not conscious about it, then it does not form an impediment. This is an important rule and it is not to be brushed aside. And from this reason my thoughts are inclined to allow the woman to immerse without removing the ring or other device inserted.

And aside from this, let his honor look in the *Shevut Yaakov*, volume 2, responsa 75,<sup>12</sup> who cites the words of *Devar Shmuel*,<sup>13</sup> who is stringent as usual, and the words of authorities who permitted this, and he also cited the words of the *Pnei Yehoshua* (that you cited), and indeed it seems that he wants to differentiate between the breaking of one of the connecting bindings of the womb, and the dropping of the womb downward with softness, which is called relaxation. However, this sounded to me like an answer from the head, that is, an answer from his head without any resource behind it, because every wise-hearted person well versed in the science of dissection sees with his eyes that the case of a fallen womb is like a case of the falling of the large intestine to the outside (prolapsed rectum). In the majority of these cases there is a minor reddish secretion when the intestine falls out, or when it is put back in with force, as in this process one of the thin veins, as thin as a hair, which are called capillary<sup>14</sup> veins, is broken. Therefore, we certainly cannot say that this blood originated from the womb.

In addition to what I have already said, it does not make sense even according to those who do not hold like Rashi, to distinguish between the ‘house of the folds’ and the ‘house of secrets’, to call the ‘house of secrets’ the innermost region of a woman’s womb from the ring and onwards, and in this place we insert the ring or cloth. For if this was the case (if we hold by your logic) there would be no end, and he who grabs too much grabs nothing. And we would still not know (according to your logic) until what point the ‘house of secrets’ extends, and we would never escape from the hands of doubt.

And because of all these reasons my explanation seems best to me, if his honor and his friends agree to immersion without removal of the ring or other device then they will have escaped all my questions. Incidentally, if you changed your view, the author *Pnei Moshe* and his friends would agree with you. In truth, in the matter that came before his honor, I would command the woman to immerse without the blessing because the decisors permit her without immersion.

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<sup>12</sup> Jacob Reischer, *Shevut Yaakov, Vol 2. Yoreh de'ah* (Offenbach, 1719), p. 20v-21r, Question 75.

<sup>13</sup> Samuel Aboab, *Devar Shmuel* (Venice, 1702), p. 55v-56r, Question 105.

<sup>14</sup> There is a slight discrepancy in the Hebrew spelling in the manuscript and print versions of the text. The manuscript reads קאפיללארי while the printed text says קאפילארי.

All this I say as one who is commanded and does, but I am ready to nullify my opinion in the face of Basilea's opinion and the opinion of Rabbi Finzi, who have the reigning judgment to tell every man and woman what to do. And nothing more need be said about the matter.

Isaac Lampronti

### Case 3:

Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 7, p. 59r-60v, s.v. “*nituah ha-rey'ah*” (Lyck: Mikizei Nirdamim, 1864); Paris, Bibliotheque Nationale de France, Ms. Hebrew 528, f. 166r-166v.

ניתוח הריאה

שאלה: מי שבא ללמוד הלכות בדיקת הריאה מה צריך לידע בתחילה?

תשובה: צריך שידע בקצת דברים השייכים לחכמת הניתוח והיה בקי בהם ובשמותיהם ובמקומם ואלו הם:

א' מה הוא הכבד.

ב' חצר הכבד דהיינו אותו הבשר המפריד בין איברי הנשימה לאיברי המאכל ועליו ב' קרומים א' לצד איברי הנשימה וא' לצד איברי המאכל ודרכו של החצר הכבד להיות מתוח.

ג' צלעות שהם אותם עצמות שיש לרוחב הבהמה, ובין עצם לעצם יש בשר ונקראים דופן הריאה.

ד' שדרה דהיינו אותם עצמות המחברים לצלעות שבתוכם עובר חוט השדרה...

### Dissection of the lung

Question: One who comes to study the laws of checking the lung, what does he need to know at the start?

Answer: One needs to know a few things pertaining to the science of dissection and be an expert in them, and their names, and places, and these are the things [that one should know]:

1. What is the liver
2. The surrounding area of the liver is that flesh that divides between the breathing organs and the digestive organs. And on it there are two membranes - one on the side of the breathing organs and one on the side of the digestive. And it is the norm of the area of the liver to be stretched.
3. The ribs are the bones that span the width of the animal, between each bone there is flesh, and these are called the walls of the lung.

4. The spine, which consists of those bones attached to the ribs, through which the spinal cord passes...

[Continues until point 32]

## Appendix C [Chapter 5]

Punctuation and paragraph divisions in all transcribed Hebrew texts are my own.

### Example 1:

Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 1b, p. 38, s.v. “*ben shivah*” (Venice, 1750); Paris, Bibliotheque Nationale de France, Ms. Hebrew 471, f. 121v-122r.

בן שבעה - מי שנולד בחודש השביעי - מלין אותו בשבת אפילו אם לא גמרו שערו וצפרניו [בריייתא דשבת, דף קלה, עמוד א, וכדמוקי לה ביבמות דף פ, עמ' א]. אבל מי שנולד בחדש השמיני - אין מלין אותו בשבת, אלא אם כן גמרו שערו וצפרניו. והוא הדין לספק בן שבעה ספק בן שמונה, שאין מלין אותו בשבת אלא אם כן גמרו שערו וצפרניו [בית יוסף לדעת הרי"ף והרא"ש והרמב"ם]. ויש אומרים, דמהלינן ליה הואיל וספק בן שבעה הוא, אלא דאין מחללין עליו השבת בשאר דברים [סמ"ג. וכן משמע מהרי"ף והרא"ש]. וכן נראה לי עיקר: שולחן ערוך יורה דעה, סימן רסו, סעיף יא.

מצאתי כתוב, שאירע מעשה במנטובה שנולדו תאומים ספק בן שבעה או בן שמונה ומת אחד מהם, ולא מלו את החי אפילו בחול עד שלשים יום, אף על פי שנגמרו שערו וצפרניו, הואיל והתאומים יונקים זה מזה כי הוא מסוכן עד שלשים יום. עיין רי"ף ור"ן, פרק יט דשבת, דף קנה, עמ' ב, ושלטי גבורים, שם, אות א.

המעשה הנ"ל הביאו מהר"ר גא"ל בהגהתו, שם, אות ב, אבל פה פירארא לא חשו ליה כלל למה שמצא הוא כתוב לדחות מצות מילה בזמנה. יען כי אחר שאלת מחילה מאת כבוד תורתו, הטעם שאמר דמצא כתוב לא קאי, דידוע לחכמי הנתוח דאין התאומים יונקים זה מזה, אלא כל אחד ואחד יש לו שליא לבדו, ויש לו עוקרים דופקים ובלתי דופקים וגידים ועוקרים המביאים מים קראום ואסי לינפאטיסי לבדו, והם יוצאים מהפלאצינטה אוטרינא, אלה ממקום זה ואלה ממקום אחר רחוקים זה מזה כרחוק מזרח ממערב. ובאמרו שמצא כתוב שהיה מעשה - אין לחוש אליו, יען הוא לא ראה ולא ידע המעשה כי אם כך מצא כתוב. וגם חכמי מנטובה שקדמוהו וגם את אשר בחיים חיותם, ישמרם צורם נס"ו, לא ידעו ולא הוגד להם המעשה ההוא ואינם נוהגים כן.

ושתים, זכורני, המעשים שהיו פה פירארא. האחד, בבית הרב הגדול כמוהר"ר שבתי אלחנן ריקאנאטי צוק"ל, כי לבנו החבר כמהה"ר משה חי ריקאנאטי תלמידי נולד לו תאומים בן ובת בשנים שעברו, ונגמרו השערות והצפרנים. ותמת הבת אחר יום או יומים ללדתה, ונמול הבן תוך שלשים ויחי ארבעה חודשים. והמוהל היה בר אוריין רב גדול בישראל, ועיני כמוהר"ר שבתי אלחנן הנ"ל רואות.

ובשנת התק"א, לכמ"ר אלישע בן ציון בכמ"ר יעקב מנחם מהאדומים ז"ל נולדו תאומים בחדש השמיני, ונגמרו השערות והצפרנים. ותמת הבת בליל שמיני והזכר נמול ביום שמיני, בו ביום, כי כן הורו בית דין, היינו מעלת ישיבתנו יע"א, אף על גב דראה ראינו הגהת מהר"ר גא"ל הנ"ל, ואחרי העיון והפלפול בדבר גמרנו אומר למול אותו בזמנו בו ביום יום שמיני ללדתו, וכן נעשה בהסכמת כל הישיבה.

*Ben Shivah* - Boy born in the seventh month

“One who is born in the seventh month – we circumcise him on Shabbat even if he has not grown hair and nails (*Barait'a de-Shabbat* 135b, in accordance with *Yevamot* 80a). But one who is born in the eighth month, we do not circumcise him on Shabbat, unless he has grown hair and nails. And this is the rule for one where there is a doubt whether he was born in the seventh or eighth months – we do not circumcise him on Shabbat unless he has grown hair and nails (*Beit Yosef* according to the opinion of the *Rif*, the *Rosh*, and *Rambam*). And there are those of the opinion that we do circumcise him [on Shabbat, even without hair and nails] since there is uncertainty as to whether he was born in the seventh month, but we do not violate Shabbat for other matters (*Semag* and also the *Rif* and the *Rosh*). And in my view that is the law.”<sup>1</sup> *Shulhan 'arukh, Yoreh de 'ah, siman 266, se 'if 11*.

The glosses of Rabbi G'AL [Gur 'Aryeh Levi Finzi] there:<sup>2</sup> “I found a text concerning an incident that happened in Mantua in which twins were born and there was uncertainty as to whether they were born in the seventh or eighth months, and one of them died, and the one who lived was not circumcised even during the week, until 30 days had passed, even though the infant had already grown hair and nails. The reason for this was that twins draw sustenance from each other and it is dangerous until 30 days have passed.” See the *Rif, Ran*, chapter 19 of *Shabbat* page 155b, and the *Shiltei gibborim* there, comment 1.<sup>3</sup>

This incident that just I mentioned, we do not worry about it at all here in Ferrara, that we should push off the commandment of circumcision from its proper time.<sup>4</sup> This is because, after I ask forgiveness from his honor, the reason found in that text does not hold up. The scholars of dissection know that twins do not draw from each other, rather each one has its own placenta, its own pumping and non-pumping arteries, and veins, and arteries that bring water that are called *vasa lymphatica*,<sup>5</sup> and these emerge from the uterine placenta, some from this place and some from another place, which are as far away from each other as east from west. And what he [Finzi] said about the text that he found concerning this incident – we do not attribute any significance to it, because he did not see and did not know of this incident [first hand], he merely found the text. And even the sages of Mantua that came before him, as well as those who are still alive, did not know and had not heard of that case and do not practice according to it.

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<sup>1</sup> This paragraph is a quote from the *Shulhan 'arukh*, with the exception of the citations which Lampronti added. The last part, from “And there are those of the opinion” to “that is the law” is the Rema’s commentary on the *Shulhan 'arukh*.

<sup>2</sup> Gur Aryeh Levi Finzi, *Shulhan 'arukh, Yoreh de 'ah (Glosses)* (Mantua, 1721), Section 266, Comment 3.

<sup>3</sup> These sources are slightly off: it should be B.T., *Shabbat* 135b, *Shiltei gibborim* comment 2. The talmudic citation is correct in the previous paragraph, but the manuscript here clearly reads קנה and not קלה.

<sup>4</sup> There is again a small difference between the manuscript and printed text here. The transcription and translation are according to the manuscript.

<sup>5</sup> The manuscript reads לינפאטיצי while the printed text says לינפאטיסי.

And I recall two incidents that occurred here in Ferrara: The first was in the house of the great Rabbi Sabbatai Elhanan Recanati, whose son and my student, Moses Hai Recanati, some years ago had twins, a boy and a girl, who had grown hair and nails. The daughter died a day or two after birth, and the son was circumcised within thirty days and lived for four months. And the mohel was also a learned man and great rabbi, as R. Sabbatai Elhanan, who we mentioned before, can attest.

And in the year 1740/1, Rabbi 'Elish'a Benzion b. Ya'akov Menahem Meha-Adumim had twins in their eighth month, that had grown hair and nails. And the daughter died on the night of her eighth day and the boy was circumcised on his eighth day, that very same day, because the rabbinical court, meaning the rabbis of our yeshiva, ruled as such despite what we have read in G'AL's glosses. And after discussing and analyzing the matter we concluded that he should be circumcised in the correct time on the eighth day from birth, and so we did, with the approval of all the rabbis of the yeshiva.

### Example 2:

Isaac Lampronti, *Paḥad Yiṣḥak*, Vol. 2, p. 100r, s.v. "dam nidah" (Venice, 1750) (first printed edition); Paris, Bibliotheque Nationale de France, Ms. Hebrew 481, f. 266r (manuscript original).

דָּם נִדָּה עֵינַן פְּלִינִיּוֹ סֵפֶר תְּשִׁיעֵי פֶרֶק ט"ו בְּדַבְרֵי־הָאֱלֹהִים אֲבָל בְּלִשׁוֹן אַחֵרֶת: אֵינֶן דָּבָר פְּלֵא וּמִתְמִיָּה בְנִשְׁיִם יוֹתֵר מִדָּם נִדָּתָן יַעֲן כִּי הִתִּירוֹשׁ מִחֲמִיץ. פִּירוֹת הָאָרֶץ יְהִי עֲקָרִים מוֹת תְּמוֹתֶינָה, הַנְּטִיעוֹת וְצִיצֵי הַנְּנוֹת יִשְׂרָפוּ. וַיִּפְּלוּ לָאָרֶץ פִּירוֹת הָאָרֶץ אִם בְּמִקְרָה הַנְּשִׁיִם יִשְׁבוּ עֲלֵיהֶם. אִוֵּר נִגְגָה אֲשֶׁר בְּמִרְאוֹת יִהְיֶה אִפְּל מִפְּנֵי רֵאוֹת עֵינֵי הַנְּדָה, בְּהֵן חֲדוּד הַבְּרִזְל יְבוֹטֵל, וַיַּחֲשֶׁךְ מִרְאֵה שֶׁן הַפִּיל. שׁוֹטִיִּם יְהִי הַכְּלָבִים וְכַעֲסָנִים אִם בְּמִקְרָה יֵאָכְלוּ דָם נִדָּה, וְנִשְׁבַּתְּם נִשְׁכַּת לַעֲנָה וְרֵאֵשׁ לֹא תוֹכֵל לְהִרְפֹּא. וְחֲזוֹר הַחֲכָם הַנִּי"ל עַל כָּל הַדְּבָרִים הָאֱלֹהִים בְּסֵפֶר כ"ח פ"ו.

וּמְכַל פְּשָׁעִים אֲשֶׁר נִתְּנוּ לָדָם זֶה טְהָרָם וְהִלִּיץ בְּעֵדוֹ פְּאֵלוֹפִיּוֹ, רוֹדְרִיקוֹ מֵאֲקָסְטֵרוֹ, גּוֹלִיִּלְמוֹ בְּאֵלוֹנִיּוֹ, דְּנִיָּאֵל סִינִירִטִי, וְאַחֵרִים כְּאֲשֶׁר יוֹכֵל לְרֵאוֹת הַרְּוָאָה בְּסִפְרֵיהֶם.

וְעַם כָּל זֶה הַמְּעִשִׂים אֲשֶׁר אֵנּוּ רוֹאִים בְּכָל יוֹם הֵם מְלַמְּדִים אוֹתָנוּ כִּמְהָ חוֹלָאִים בְּאִים עַל הַנְּשִׁיִם שְׁאִין שׁוֹפְעוֹת דָּם נִדָּה וְכִמְהָ בְּאוֹתָן הַשׁוֹפְעוֹת בְּזִמְנֵי יִצִּיאָתוֹ. וּבְכָל יוֹם וְיוֹם רְאוּ עֵינֵינוּ וְאִזְנֵינוּ שְׁמַעוּ כִּי הַאֲנָשִׁים וְנִשְׁיִם אֲשֶׁר יֵאָכְלוּ הַדָּם בְּדֶרֶךְ פִּילְטָרוֹ אֵינֶן עוֹד לָהֶם זְכוֹרוֹן, מִרְהָ שְׁחֹרָה שׁוֹלֵטָת בְּהֶם, נַעֲשִׂים שׁוֹטִיִּם, וְשִׁטוֹתֵן רַבָּה וּמִתְמַעֲטָת כְּפִי מַעוֹט אוֹ רַבּוֹת הַלְּבָנָה, וְאַחֵרִים יַעֲשׂוּ מְצוֹרְעִים.

הַתְּרוּפָה לְחֹלִי זֶה הִיא עַל דְּרָכִים רַבִּים אֲשֶׁר תַּעֲשֶׂה עַל יְדֵי בְּקִיָּאִים בְּחִכְמָה דַּעַת וְתְּבוּנָה רַבָּה כְּכַתוּב בְּסִפְרֵי רְפוּאוֹת: הַפְּנִינִים דְּקִים כְּעִפְר דְּרֵא'מָה אַחַת עִם מִי מְלִיסָא פִּילְלוֹ; טְרַקִּישִׁי וַיִּפְּרִנִי מִסְקְרוֹפּוֹלוֹ אַחַד עַד שְׁנַיִם; הַקּוֹנְצִילֵאֲטוֹר מְזַכֵּר לְתְּרוּפַת יַחֲדָה הַבִּילְזוֹיָאֵר; וְגַם טוֹב מְאֹד הוּא זֶרַע קְאוּוִּילוֹ וְגַם קִיבַת אֲרַנְבַּת; תוֹעִיל מְאֹד הַתִּירִיָּאָק דְּרֵאֲקָמָאִס שְׁתִּים עִם מִי פּוֹמָרִיָּאָה. שְׁתִּיַּת הַחֹלָה תְּהִיָּה יִין מְבוּשֵׁל עִם עֵשֶׁב מְלִיסָא אוֹ יִין שְׁנִשְׂרָה בְּתוֹכּוֹ הַעֵשֶׁב הַנִּי"ל, וְעַל הַכָּל יִרְבֵּה לְרַחוּץ גּוֹפּוֹ תְּמִיד בְּמִים חֲמִים עִם עֵשֶׁבִים מְבוּשֵׁלִים בְּתוֹכָם.

*Dam nidah* - See Pliny Book 9, Chapter 15,<sup>6</sup> who says the following but in another language: “There is nothing more wondrous and amazing about women than their menstrual blood, for [contact with it] turns wine sour, [it causes] the fruit of the earth to become barren, [as well as] shoots to die and garden seeds to burn up. The fruit of trees falls off if the [menstruating] women happen to sit on them. The bright glimmer of mirrors becomes darkened from the glance of the menstruating woman, the sharpness of the iron is blunted, and the gleam of ivory dulled. Dogs become crazy and rabid if they happen to eat the blood of a menstruating woman and their bite is infected with a poison from which they cannot be cured.”<sup>7</sup>

The previously mentioned scholar [Pliny] returned to these words in Book 28, Chapter 6.<sup>8</sup> And all the iniquities attributed to this blood were absolved, and in agreement with him were

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<sup>6</sup> The correct citation is actually Book 7, Chapter 15. This is a printing error. The manuscript says Book 7.

<sup>7</sup> There are only a few small differences between the Latin original and Lampronti’s translation, namely the absence of the last few clauses about hives of bees, bronze and iron rusting, and a horrible smell filling the air. The structure of Lampronti’s rendition is otherwise faithful to the Latin.

Latin original: “sed nihil facile reperitur mulierum profluvio magis monstrificum. acescunt superventu musta, sterilescent contactae fruges, moriuntur insita, exuruntur hortorum germina, fructus arborum [quibus insidere] decidunt, speculorum fulgor adspectu ipso hebetatur, acies ferri praestringitur, eboris nitor, alvi apium moriuntur, aes etiam ac ferrum robigo protinus corripit odorque dirus aera, in rabiem aguntur gustato eo canes atque insanabili veneno morsus inficitur.”

Translation by WHS Jones: “But nothing could easily be found that is more remarkable than the monthly flux of women. Contact with it turns new wine sour, crops touched by it become barren, grafts die, seeds in gardens are dried up, the fruit of trees falls off, the bright surface of mirrors in which it is merely reflected is dimmed, the edge of steel and the gleam of ivory are dulled, hives of bees die, even bronze and iron are at once seized by rust, and a horrible smell fills the air; to taste it drives dogs mad and infects their bites with an incurable poison.”

<sup>8</sup> The printed text says Chapter 6, but the manuscript says Chapter 7. In Chapter 7, Pliny discusses the therapeutic use of saliva. Elsewhere in Book 28, however, he discusses the positive benefits of menstruation. For example, Book 28, Chapter 10 says: “Many kinds of illness are cleared up by the first sexual intercourse, or by the first menstruation; if they do not, they become chronic, especially epilepsy.” And in Book 28, Chapter 23 Pliny mentions that women are powerful and hailstorms are driven away by menstrual blood.

Fallopio,<sup>9</sup> Rodericus Ma-Castro [Rodrigo de Castro],<sup>10</sup> Guglielmo Balogno [Guillaume de Baillou],<sup>11</sup> and Daniel Sennert<sup>12</sup> and others, as one can see in their books.<sup>13</sup>

In spite of this, the instances that we see every day teach us how many sicknesses come to women who do not have a menstrual flow and also how many come to those who do at the time of their flow. And every day we have seen with our eyes and our ears have heard that the men and women who eat the blood by way of a *philtre* [magic potion] no longer have a memory, a bitter darkness [i.e. melancholy] controls them, they become mad, and their madness waxes and wanes according to the phases of the moon, and others become lepers.

The cure for this sickness can be accomplished in many ways that should be performed by experts in wisdom, knowledge, and understanding as is written in medical books: One *drama*<sup>14</sup>

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<sup>9</sup> Gabriele Fallopio (d. 1562) was a Paduan anatomist known for his anatomical studies of the reproductive organs, especially his identification of the uterine tubes.

<sup>10</sup> Rodrigo de Castro (d. 1627) was a converso physician who wrote an important two-volume gynecological work, *De universa mulierum medicina*, which was printed widely throughout Europe in the seventeenth century.

<sup>11</sup> I searched the following medical bibliographies and resources and Guillaume de Baillou is the only name that seems to possibly match the Italian version transliterated into Hebrew by Lampronti as seen in the text: James Ricci, *The Genealogy of Gynaecology: History of the Development of Gynaecology Throughout the Ages* (Philadelphia: The Blakiston Company, 1950); Wellcome Historical Medical Library, *A Catalogue of Printed Books in the Wellcome Historical Medical Library*, (London: Wellcome Historical Medical Library, 1962); Leslie T. Morton and Robert J. Moore, *A Bibliography of Medical and Biomedical Biography* (Brookfield, VT: Gower, 1989); Alain Besson ed., *Thornton's Medical Books, Libraries and Collectors: A Study of Bibliography and the Book Trade in Relation to the Medical Sciences* (Vermont: Gower, 1990). The exact work Lampronti may have referenced is: Guillaume de Baillou, *De Virginum et Mulierum Morbis liber, in quo multa ad mentem Hippocratis explicantur* (Paris, 1643). For a note on Guillaume de Baillou's role in the development of gynecology see: Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Uses of Sixteenth-Century Compendium* (Burlington, VT: Ashgate, 2007), 16.

<sup>12</sup> Daniel Sennert (d. 1637) was a German physician and prolific author of books on chemistry, alchemy, and medicine. He is chiefly known for his contributions to atomic theory, but his medical writings, including *Practicae medicinae* (Volumes 1-6) were also widely circulated. Book 4 of *Practicae medicinae* specifically covers female illnesses. In Book 4, Section II, Part 2 Sennert addresses a question as to whether menstrual blood is negative in its quantity or quality and he answers that it only offends in quantity (based on the Hippocratic/Galenic understanding that women have too much blood in their bodies), and that there is nothing inherently bad or toxic about the blood itself.

<sup>13</sup> As far as I can tell, none of these individuals made statements about the magical or toxic qualities of menstrual blood itself. They do, however, talk about female illnesses, some of which are closely related to menstruation, either caused by it or by the lack thereof.

<sup>14</sup> *Drama/dracma* is a measurement equal to 1/16 of an ounce.

of pearls thin like dust<sup>15</sup> with water of *melissa fillo*;<sup>16</sup> One to two *scrupolo*<sup>17</sup> of *trochisci viperni*;<sup>18</sup> The *Conciliator*<sup>19</sup> mentions only one remedy, the *belzoar*;<sup>20</sup> And also very effective is the seed of the *cavolo*<sup>21</sup> and the stomach of the rabbit;<sup>22</sup> Very helpful is the *theriaca*,<sup>23</sup> two *dracmas* with *fumaria* water.<sup>24</sup> The sick person's drink should be boiled wine with *melissa* herb or wine in which the previously mentioned herb has been steeped. Above all,<sup>25</sup> he should increase the washing of his body, always in warm water with boiled herbs in it.

### Example 3:

Isaac Lampronti, *Paḥad Yiẓḥak*, Vol. 6, p. 58r-58v, s.v. “*nital ha-lev*” (Lyck, 1864) (printed edition); Paris, Bibliotheque Nationale de France, Ms. Hebrew 528, f. 145r (manuscript original).

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<sup>15</sup> Giambattista Morgagni (d. 1771) mentions a substance containing extracts of pearls in one of the consultations he wrote to Lampronti. See: Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)* (Boston: The Francis A. Countway Library of Medicine, 1984), p. 155, see footnote 555 p. 389.

<sup>16</sup> *Melissa officinalis* (lemon balm) was a widely used medicinal herb, often prepared with water. Nicholas Lemery (d. 1715) discussed *melissa* water specifically in his pharmacological work, *Farmacopea Universale*. See: Lemery, *Farmacopea Universale* (Venice, 1720), p. 391. I reference this text because I have seen Lampronti mention it specifically on other occasions in the *Paḥad Yiẓḥak*.

<sup>17</sup> *Scrupolo* is a measurement equal to 1/3 dram.

<sup>18</sup> A preparation of viper meat, discussed in another Italian pharmacological work I have seen Lampronti mention elsewhere: *Antidotario Romano* (Rome, 1624) p.108. Morgagni also mentions the use of viper frequently in his consultations and even mentions it specifically with reference to menstrual ailments. See Saul Jarcho, ed., *The Clinical Consultations of Giambattista Morgagni: The Edition of Enrico Benassi (1935)* (Boston: The Francis A. Countway Library of Medicine, 1984), 73-4.

<sup>19</sup> The *Conciliator* is a scholastic medical written by Paduan physician Pietro d'Abano (d. 1313). In 1472, an edition of the *Conciliator* was printed together with Pietro d'Abano's short treatise on toxicology, *De veneris eorumque remediis*. There Abano discussed the therapeutic qualities of the bezoar stone.

<sup>20</sup> The bezoar stone (a small mass found in the stomach) was long considered an antidote to poison. A short article on the belzoar can be found in the 1743 edition of the *Giornale de'letterati: Giornale de'letterati, Della Pietra Belzoar; Articolo XXII*, (Rome, 1743), p. 274-5. Morgagni also mentions a substance containing the bezoar stone in his exchange with Lampronti: *The Clinical Consultations of Giambattista Morgagni*, p. 155, see footnote 555, p. 389.

<sup>21</sup> Lemery discussed *cavolo* (cabbage): Lemery, *Farmacopea*, p. 161.

<sup>22</sup> The stomach of the rabbit is mentioned in a medieval Hebrew translation of Galen's *Book on the Womb*. See Ron Barkai, *A History of Jewish Gynaecological Texts in the Middle Ages* (Leiden: Brill, 1998), p. 174.

<sup>23</sup> Theriaca was one of the most common ancient and medieval medicinal cures, often considered a universal cure-all. See Barkai, p. 221.

<sup>24</sup> *Fumaria officinalis* is a medicinal herb discussed by both Lemery and Morgagni.

<sup>25</sup> The manuscript reads: “יעל הכל ירבה לרחוק”.

ניטל הלב - בין ביד בין מחמת חולי טריפה ש"ע י"ד סי' א' סעיף ה'. בא בשיבתנו ע"א טווס בלא לב ואחרי העיון הטרפנוהו אע"ג שאחד מן המורים היה חוכך להקל מפני שמכאן ומכאן נמצאו בו קני הלב הנקראים בחולין שורשי וסחוס. כי לא דיינינו להו כלב עצמו כמ"ש מהרמב"ם פ"ו מה"ש וכו' ובי"ד. וכולם כתבו בשום שכל אלו אברים שאמרנו ניקב פסול; כך אם חסר וכו'.

ואם לפי שכלנו נראה דבר זה בלא יראה ובלא שאין בריה יכולה לחיות בלא לב, מ"מ רוח ה' דבר בחכמינו ז"ל ואינם מכחישים המציאות, וכפי הדין שכתב בין בידי אדם בין מחמת חולי זה וזה נתאמת בנסיון. ראיתיו בכתבי הרב הגדול מהטוב זצוק"ל, כי אשת הר"ר מהטוב, בת הרב בעל באר עשק, בת חבר ואשת חבר, ראתה בעיניה בלוג"י נכרי מסרס תרנגול לעשותו ברבור, ונגרר אחרי הביצים גם הלב. ועם כל זה הברבור לא מת. וכל בריה שכמוה אינה חיה י"ב חדש תוכל לחיות איזו שעה או איזה יום או חדש בלא לב. וכן מחמת חולי נתמסס וכלה מעט מעט.

ואע"ג דאין דברי רבותינו צריכים חזוק, מצאנו ראינו בספר מאפאמונדו איסטוריקו חברו מ"ע מ"ע הגלח פורסטי עיין שם בספר שני דף פ"ד ע"ב, ז"ל מוסב מלשון איטלקי ללשון קדש: "וכן הקיסר ביום אשר הומת מיד הקושרים בזבחו שני פרים אמרו כי שניהם נמצאו בלא לב, וכן לקרבן פירשו נאציס קיסר חסרו הלב והכבד ע"ש.

וכתב מהר"ר גא"ל ס"ק ג' על ש"ע י"ד סי' מ' ז"ל: מפני שראיתי מלעיגים על דברי חז"ל באמרם שא"א לבעל חי לחיות בלי לב ראיתי להעתיק דברי ארוסטו הביאם ספר גורן נכון שער ב' ח"ג ז"ל: ושמע אלכסנדר מאריסטו רבו כי הדאגה ממעטת הלב של אדם ומכלה אותו ורצה לעמוד אמיתת הדבר ולקח מקצת בהמה מה שהיא דומה אל האדם בטבעו ואסר אותה במשמר ימים רבים במחשכים וצוה לתת לה מן המזון כדי חיותה ואח"כ הוציאה ושחטוה ומצא לבה שכלה ונמס ע"כ ברוך שבחר בהם ובמשנתם.

ובתשובות מהר"ר צבי מאמטרדם סי' ע"ד ע"ו ע"ז וע"ח ראיתי שנתחבט להוכיח שאי אפשר להמצא בהמה או עוף בלא לב ויחיה עיין שם ראיותיו, אבל נפתלי כהן ומאן וסריב טרפות ניטל הלב בעוף בריא ושמן בניטל על ידי חולי וגם כשניטל בידי אדם אם לא כשנשחט תכף מיד.

אבר שאם ניטל טריפה.

*Nital ha-lev - Removal of the heart whether by hand or by sickness: terefah. Shulhan 'arukh, Yoreh de'ah: siman mem, se'if heh.*<sup>26</sup> The issue of a peacock without a heart came before our *yeshiva* and after discussion, we ruled it a *terefah* even though one of the teachers was inclined to rule leniently, for here and there we found the *kanei* [pipes] of the heart that are called in *Hulin* the *shorashei* and *seḥosei*. But we do not consider them the heart itself as Maimonides wrote in Chapter 6 of *hilkhot sheḥitah* and so forth, and in Chapter 14. And everyone wrote intelligently that if any of the organs we discussed is punctured, the animal is *pasul*; the same is true if one of the organs is missing, and so forth.

And even if logic makes this matter seem impossible, since no creature can live without a heart, nonetheless the spirit of God speaks through the sages of blessed memory and they do not contradict reality. And according to the rule that is written: regardless of whether [the absence of

<sup>26</sup> The printed text says *se'if aleph*, but this is a misprint. The manuscript clearly reads *mem*.

the organ occurred] by the hands of man or on account of sickness, this and that are proven through experience. I saw it in the writings of the great Rabbi Del Bene, that the wife of R. Del Bene, the daughter of the rabbi, the author of the *Be'er 'esek*,<sup>27</sup> thus the daughter and wife of a *haver*,<sup>28</sup> saw with her eyes in Lugo a gentile castrating a rooster to turn it into a capon<sup>29</sup> and the heart was pulled out along with the testicles. And in spite of this the capon did not die. And [this is because] any creature like this, even if it cannot live for 12 months, can live for an hour, a day, or a month without a heart. And also on account of illness it disintegrates and is destroyed little by little.

And even though the words of our rabbis do not need support, we found and saw in the book *Mappamondo Istorico* written by the priest Foresti,<sup>30</sup> see there Book 2, page 84v, and these are the words translated from Italian into Hebrew: “And also the Caesar, on the day of his death by the hands of his enemies [the conspirators] while offering two cows, said they both did not have a heart. And also of the sacrifice, Natus Ceasar explained that it was missing both a heart and a liver.” See there.

And Gur Aryeh Levi Finzi *se'if katan* 3, on *Shulhan 'arukh Yoreh de'ah siman* 40 wrote these words:<sup>31</sup> “Because I have seen people mocking the words of the sages saying it is impossible for any animal to live without a heart, I decided [saw fit] to copy the words of Aristotle found in the book *Goren nakhon* Part 2, Section 3:<sup>32</sup> ‘And Alexander heard from Aristotle his mentor that worry shrinks a person’s heart and destroys it, and he wanted to establish the truth of the matter so he took a type of animal that resembled a human in its nature and imprisoned it for several days in darkness and commanded it be given enough food for it to survive, and afterwards he took it out and slaughtered it and found the heart destroyed and disintegrated.’ Thus blessed be the one who chose them and their teaching.”

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<sup>27</sup> Shabbtai Be'er Fonte, *Be'er 'esek* (Venice, 1674).

<sup>28</sup> Lampronti is arguing here that the woman is a trustworthy witness because she is both the daughter of a rabbi and the wife of a rabbi.

<sup>29</sup> A capon is a castrated rooster, considered a delicacy because the hormonal and behavioral differences resulting from the castration make the meat more tender.

<sup>30</sup> The *Mappamondo Istorico* (Historical World Map), written by Italian Jesuit Antonio Foresti, was first printed in 1690 in Parma. In 1715, the Venetian printer Girolamo Albrizzi reprinted the work as the first part of a more comprehensive universal history; the later volumes of the collection were written by Apostolo Zeno, one of the founding editors of the *Giornale de' Letterati d'Italia*, Domenico Suarez, and Silvio Grande.

<sup>31</sup> Gur Aryeh Levi Finzi, *Shulhan 'arukh, Yoreh de'ah (Glosses)* (Mantua, 1721), Section 40, Comment 3.

<sup>32</sup> The *Goren Nakhon* is a sixteenth-century collection of three classic philosophical texts: *Tikun midot ha-nefesh* by Solomon Ibn Gabirol, *Sefer musrei ha-filosofim*, and the *Sefer ha-tapuah* attributed to Aristotle. The volume was edited by Joseph Ashkenazi of Padua and printed in 1562 in Riva di Trento. The specific quote here is found in Ibn Gabirol's *Tikun midot ha-nefesh: Goren nakhon, helek* 3, *sha'ar* 2 (Riva di Trento, 1562), p. 13v.

And in the responsa of the great Rabbi Zevi of Amsterdam #74, 76, 77, 78<sup>33</sup> I saw that he struggled to prove that it is impossible to find an animal or bird that can live without a heart, see there his proofs, but they are not irrefutable and experience proves this. And he [Hakham Zevi] of blessed memory wrote [once], and again a second and third time,<sup>34</sup> and he brought the responsum of Naftali Kohen. But who would deny the *terefut nital ha-lev* of a healthy and fat chicken when the *nital* occurred on account of illness? And even if the removal occurred by human hands, if it was not when it was slaughtered immediately [then who would ever deny its *terefut*]?

[Cross reference:] *'Ever she-'im nital terefah.*

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<sup>33</sup> Zevi Hirsch b. Jacob Ashkenazi, *She'elot u-teshuvot Hakham Zevi* (Amsterdam, 1712) #74, 76, 77, 78.

<sup>34</sup> This phrase is a quote from B.T., *Shabbat* 61a.