

Allocating resources fairly among group members: The medium of exchange matters

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## Abstract

All organized groups face the fundamental problem of how to allocate resources fairly. Managers often confront this challenge when deciding whether to reward individual or team performance. Building upon recent research that demonstrates the unique norms invoked by the resource of money, we propose that what individuals' judge to be a fair allocation principle among group members systematically varies as a function of whether the resource being distributed is money versus other resources that are allocated within organizations. We review prior research examining contextual variables influencing allocation preferences and attempt to identify the different characteristics of money as a resource that might influence conceptions of fairness. In light of the existing research, we argue that an egalitarian allocation principle will be understood to be less fair when the norms of the market are invoked by the distribution of a resource that is a medium of exchange (e.g., money) rather than an in-kind good (e.g. food). We conclude by discussing the implications of identifying the unique properties of money for a wide set of literatures. This novel perspective on the role the allocation medium plays in how groups allocate resources fairly will be of interest to scholars of justice.

## Introduction

In everyday life, we frequently make assessments about what's fair. It can be as mundane as the fairest way to pick teams on the playground. It can also be for high stakes that are hard for individuals to fully comprehend. Take for example the recent attention of the media, politicians, and the American public that focused on the unfairness of bonus payments made by the American International Group (AIG) to employees of its financial services division (Ritholtz, 2009). The bonus payments were in excess of \$165 million, but this amount paled in comparison to the more than \$170 billion provided in taxpayer bailouts of the company—a number whose magnitude is difficult to appreciate. Yet regardless of what was in each American tax payer's self-interest—the expedient recovery of the economy—it seemed impossible to have a sense of perspective amidst contractual bonuses given out in the face of horrendous performance outcomes. This violation of people's sense of fairness, however small in relative terms, dominated individuals' reactions to the larger economic recovery effort.

The problem of fairness is by no means new. Indeed, it is a fundamental challenge all organized groups face when allocating scarce resources. Most of the empirical research on what is perceived to be the fair allocation of resources comes from the distributive justice literature where judgments regarding fairness “represent the degree of equity or equality across parties' payoffs that are considered normatively acceptable or desirable within a situation” (Bazerman, Loewenstein, and White, 1992, p. 221). Allocating resources in terms of equity is generally one where the outcome received by the individual is proportional to his or her contribution, ability, or performance (e.g., Adams, 1965); whereas, allocating resources in terms of equality occurs when all individuals receive the same rewards regardless of individual differences in input (e.g.,

Deutsch, 1985). Of course, there are other allocation principles for distributing resources (e.g., based on need or hierarchy), but these have not been as extensively examined in the literature.

In line with the competing principles of equity and equality, a common dilemma organizations face with the use of teams is whether to reward individual or group performance. Typically, equity enhances the goal of performance output, whereas, equality promotes the goal of group harmony and solidarity (e.g., Kazemi and Eek, 2007). Rewarding group performance can lead to greater free-riding or social loafing among team members (e.g., Lazaar, 1998; Latane, Williams, and Harkins, 1979). Rewarding individual performance can have undesirable consequences, as well. For instance, one consequence of rewarding individual performance can be the potential for greater wage dispersion among team members. Research documents that dispersed pay distributions result in greater dissatisfaction, poorer quality work, less collaboration within divisions, and an increased propensity to leave an organization (Bloom, 1999; Pfeffer and Davis-Blake, 1992; Pfeffer and Langton, 1993).

One critical factor in determining the appropriate incentive scheme for teams is what allocation of rewards team members will accept as fair (Tyler and Blader, 2000). Although this question has been explored extensively in the distributive justice literature, we argue that prior investigations have done so by focusing narrowly on the allocation of monetary rewards. In this chapter, we argue that money is associated with particular norms that influence how individuals allocate resources. Specifically, we consider how monetary rewards may be associated with a view of fairness that is more consistent with rewarding individual performance rather than team performance. Importantly, we investigate whether other reward types might be associated with norms that are more consistent with rewarding team performance.

The central theoretical question this chapter endeavors to examine within the distributive justice literature is whether individuals define fairness in allocating rewards among team members differently depending upon the resources being allocated. The motivation behind this question comes from recent work in decision making that shows—despite the implicit assumptions of economists (e.g., Becker, 1965)—that people tend to think about their money differently than the resource of time when making decisions about how to allocate it in their everyday lives (e.g., Okada and Hoch, 2004; Soman, 2001). Organizational practices that highlight the monetary value of time (e.g., hourly payment), however, can cause individuals to apply the same mental accounting rules associated with money to the resource of time (DeVoe and Pfeffer, 2007). This literature leads us to ask the following question: What precisely is it about the resource of money that causes people to treat it differently than non-monetary resources?

In this chapter, we delineate some of the distinct characteristics of money and how those characteristics are likely to influence allocation preferences in comparison to non-monetary resources among team members. The distributive justice literature is an ideal platform on which to systematically think about how the resource itself may be associated with distinct norms that determine allocation preferences because the distributive justice literature directly examines the norms surrounding the allocation of scarce resources among group members within organizations, and within this domain there is extensive prior empirical work upon which to build. Understanding the role the allocation medium plays in how groups allocate resources is of great importance not just for its own sake but also because it may inform the study of human behavior much more widely.

## **Overview**

In this chapter, we begin by considering the set of contextual factors that have been identified as influencing preferences for equity and equality in the allocation of resources among group members. We then narrow our focus to the prior empirical work investigating the influence of resource type on allocation preferences. We review prior theoretical frameworks for understanding why and how the dimension of resource type might influence allocation preferences. We reevaluate this work from a relational models perspective and focus on the unique properties of money as a resource in allocation decisions. We propose that the essential characteristic of money as a medium of exchange in the market is a distinct causal factor in allocation preferences and review a set of preliminary studies testing this hypothesis. Finally, we speculate on some possible implications that this distributive justice perspective may have for a variety of different literatures.

## **Contextual factors influencing allocation preferences**

Perhaps one of the most important contextual distinctions made concerning the norms of distributive justice comes from Jennifer Hochschild's (1981) analysis of a heterogeneous population of Americans on the topic of fairness in their lives. The distinguishing characteristic of her analytic framework from those preceding it was the systematic consideration of the competing principles of equality and equity across three central spheres of life. In particular, she separated the categories of activity and thought of people's lives in terms of three domains: economic (markets and material goods), social (family, school, and neighborhood), and political (authority, rights, and taxes). In her careful interviews with a sample of Americans, Hochschild

observed that people generally drew upon the principle of equality in the social and political domains but drew upon the principle of differentiation (equity) in the economic domain.

Hochschild (1981) concluded that a major difficulty in the implementation of socialist ideals was that they are based in the political sphere, which draws upon principles of equality, but must be implemented within the economic domain where people see equity as the most legitimate allocation principle. Thus, “the political redistribution of economic goods, by definition straddles two domains and forces people to confront the disjunctions in their beliefs about distributive justice” (p. 48). In other words, this disjunction between norms presented a major barrier to the acceptance of redistributing wealth in society.

Several studies have empirically confirmed the preference for allocating resources according to equity over equality within the economic domain, especially when money is being distributed (e.g., Tornblom and Foa, 1983). However, the literature has identified two important exceptions within the economic domain. First, when the outcome for the distribution of the resource to be allocated is unrelated to individual inputs, people prefer to distribute monetary resources equally (McLean Parks et al., 1996). This is not surprising since without relevant differences in contribution, an equal allocation of resources is most consistent with an equity principle (i.e., individuals all contributed the same amount in terms of relevant inputs). The second exception is that when group goals are focused on something other than economic productivity or performance, preferences for equality emerge as dominant (Kazemi and Eek, 2007). Within the economic domain, socio-emotional or group harmony may be important goals that are more effectively accomplished by allocating resources equally.

Similar to identifying different goals within the economics domain, researchers have examined whether culture or cultural orientation influences allocation preferences for equity and

equality. Although early research found that individuals from more collectivist cultures (where the goal of harmony is more dominant) preferred equality more than Americans, who preferred equity (Leung and Bond, 1982), subsequent work has shown that preferences for equity are similar among cultures when the allocation decisions involve outgroup members (Leung and Bond, 1984). Moreover, cultural differences have been shown to be easily overridden by the saliency of group goals, such as productivity or solidarity (Leung and Park, 1996). Additional studies have also examined culture in conjunction with individual level measures of cultural orientation but have not found differences in allocation preferences (e.g., McLean Parks et al., 1996). A major constraint of this cross-cultural research is the limited number of countries examined in testing for potential variability.

In order to more fully examine whether the distribution of money within the economic domain of work, we attempted to observe cultural variation in the allocation preferences for equity and equality (DeVoe and Iyengar, in press). Specifically, we conducted a survey of employees from the same multinational organization (Citibank) in eight different countries (Argentina, Australia, Brazil, Mexico, Philippines, Singapore, Taiwan, and the United States). Employees imagined that they were a division manager of the bank who was in charge of distributing a large amount of unexpected monetary assets, and they evaluated the fairness of two different allocation plans. Participants rated both the fairness of allocating the money equally among each of the employees and of giving larger shares to those who made the greatest contributions to the division's success. The results showed that in every country sampled, respondents deemed it less fair to allocate the resource of money equally among individuals than according to inputs. This study clearly demonstrates that within the economic domain of the employment contract, there is a strong preference against allocating money equally among



individuals regardless of their inputs. With preliminary verification of the cultural generalizability of this finding, in the next section, we explicitly consider the contextual factor of resource type: When do allocation preferences change depending on the resource being distributed? Specifically, how do preferences for allocating money differ from other resources allocated in organized groups?

### **Prior findings on the influence of resource type**

The actual type of resource as a contextual characteristic of distributive allocations obviously varies by study, but it has rarely been a variable directly manipulated within the distributive justice literature. The few exceptions to this have relied exclusively upon Foa and Foa's (1975) Resource Theory of Social Exchange to make predictions about how different characteristics of the resource being distributed might influence allocation preferences. Importantly, Foa and Foa's theory was developed to describe resource *exchanges*, but researchers have attempted to adapt it to resource *allocations* where the emphasis on appropriate reciprocation is not relevant.

Foa and Foa (1975) specify six different categories of resources: money, goods, services, information, status, and love. Importantly, the theory proposes that these different resources may be classified by two dimensions: particularism and concreteness. Particularism refers to the extent to which a resource derives its value from the identity of the provider. Money is considered the least particularistic (i.e., it is the most universal) in that its value does not depend on the person providing it; conversely, love is the most particularistic in that its value is completely dependent upon the person providing it. Concreteness refers to the degree to which something is a "tangible activity or product" (Foa, 1993, p. 15). Information and status

exemplify the lowest level of concreteness (i.e., they are the most abstract), whereas goods and services demonstrate the highest level of concreteness.

Previous research using ~~the~~ these characteristics has examined people's preferences for reciprocating an exchange using a resource that is similar to the one received and has shown that satisfaction with the exchange diminishes as the similarity between the provided and received resource decreases along the dimensions of particularism and concreteness (for a review see, Tornblom and Kazemi, 2007). A few studies have examined resource allocation preferences using Foa and Foa's (1975) resource categories. For example, a sample of US business persons expressed a preference for equity rules when distributing money and status but preferred equality rules for other resources (Tornblom and Foa, 1983). Martin and Harder (1994) found that people preferred to allocate money with equity but preferred to allocate socioemotional rewards according to equality.

In terms of allocation preferences, the most systematic test of the Foa and Foa (1975) categorization has been conducted by McLean Parks and colleagues (Conlon, Porter, and McLean Parks, 2004; McLean Parks, Conlon, Ang, and Bontempo, 1999). Findings confirm some aspects of the Foa and Foa typology. McLean Parks et al. (1999) found that the tendency for using equality rules over equity rules occurred more often when allocating particularistic rather than universal resources. However, consistent differences in the application of equity and equality did not emerge across the concreteness dimension.

These results for the dimensions proposed by Foa and Foa led McLean Parks et al. (1999) to conclude that "future work may want to examine other underlying dimensions on which the six resource categories differ" (p. 750). Their main recommendation was to consider divisibility of the resource as a central dimension. From their perspective, the universality dimension on

which money was the exemplar was confounded with divisibility. In their studies, the resources that were particularistic were less divisible (services and goods), but importantly, in theory, these particularistic resources could be as equally divisible as money. McLean Parks et al. (1999) also mention other possible dimensions, such as cost, durability, and scarcity that may have varied.

In a much more recent study, Colon et al. (2004) make similar conclusions about the need to consider other dimensions than those posited by Foa and Foa (1975). They argue that money, in their studies, was not only confounded with divisibility but also with power/authority. Moreover, Colon et al. conclude that: “it appears that there is something about monetary resources that are not as straightforward as Foa and Foa’s scheme would suggest” (p. 344). Several questions follow from these conclusions. First of all, is it the fact that money is a resource that is the most universalistic and least particularistic that invokes the norms of allocating it according to equity? Tornblom and Kazemi (2007) conjecture that universalistic resources are more impersonal, whereas, particularistic resources are more social-emotional, making them less compatible with distributions that are economically oriented. Further, they argue that drawing upon the principle of equality “reflects the ‘softer’ aspects of people’s existence (e.g., cooperation, caring, nurture, and personal welfare) [that] appear more suitable for the distribution of particularistic resources.” (p. 44).

Our assessment of the prior literature is that ambiguities persist regarding why money might be allocated differently than other resources within the economic domain. Specifically, competing frameworks appear to make similar predictions. On the one hand, the single dimension of universalism appears to account for some of the uniqueness of money. However, universalism co-occurs with several other characteristics. This leads us to the central overriding

theoretical question of this chapter: What are the essential characteristics of money as a resource that makes it so distinctive when allocating it among group members?

### **The unique characteristics of money**

In order to evaluate a broader set of characteristics associated with money, we consider two seminal accounts on the emergence of money in society and how they relate to the modern view in economics regarding money's essential characteristics.

In John Locke's (1690/1980) *The Second Treatise of Government*, Locke directly discusses the emergence of money in society. Specifically, he argues that prior to the emergence of money, fairness and use naturally co-occurred. "Right and convenience went together; for as a man had a right to all he could employ his labor upon, so he had no temptation to labor for more than he could make use of." (p. 28). For instance, one would only take as much food as one needed, since taking more of it than was needed was self-defeating both because it was inconvenient and, in the case of food, highly perishable. "And thus came in the use of money—some lasting thing that men might keep without spoiling, and that by mutual consent men would take in exchange for the truly useful but perishable supports of life." (p. 29). Importantly, Locke cited the emergence of nonperishable goods (e.g., gold and silver) as a medium of exchange to be a critical factor in the emergence of both the motive to acquire more than one needed and inequality within society. "This partage of things in an inequality of private possessions men have made practicable out of the bounds of society and without compact, only by putting a value on gold and silver, and tacitly agreeing in the use of money" (p. 28). The key insight derived from Locke's treatise is that the emergence of a common medium of exchange is inextricably linked with inequality among individuals.

Another seminal treatise on the emergence of money in society is Adam Smith's (1776/2000) *The Wealth of Nations*. In his chapter, "On the Origin and Use of Money", Smith provides a detailed account of the emergence of money in society. As a direct consequence of the division of labor, Smith notes that exchange becomes a necessary part of each individual's life. Although this occurs first with the direct bartering of goods, the problem of the "double coincidence of wants" leads individuals ineluctably towards agreement upon a common medium of exchange. Historically, this medium of exchange has taken a variety of different forms (e.g., cattle, salt shells, cod, tobacco, sugar, leather, and nails), but eventually metals were preferred because of their durability and divisibility.

In determining the rules of exchange, Smith makes a key distinction between different meanings of value: value in *use* and value in *exchange*. Value in use is "the utility of some particular object", and value in exchange is "the power of purchasing other goods which the possession of that object conveys" (p. 31). This distinction highlights the important characteristic of money as its being highly exchangeable for goods and services.

The aspects of money described by Adam Smith portend the essential characteristics of money described by modern-day economists. Specifically, Frank and Bernake (2004) assert that the consensus among economists is that there are three essential characteristics of money: it is a medium of exchange (an asset used to purchase goods and services), it is a unit of account (standard and easily divided numerical unit of value), and it is a store of value (reliably saved and retrieved).

Although many have commented on the different unique attributes of money (e.g., divisibility), no empirical work to date has attempted to isolate the causality of one specific attribute of money. In the next section, we propose that one mechanism through which the

resource of money might be associated with different definitions of fairness has to do with its association with market exchanges, and the property of a resource being a medium of exchange is the most likely to activate market norms in allocation decisions.

### **The association of money with the norms of the market**

The theoretical framework that most directly speaks to the unique norms of market exchanges is Alan Fiske's (1991, 1992) Relational Models Theory, which distinguishes a market-pricing model where resources are allocated based on precise ratios of value in a market exchange from allocation models based on social relationships (i.e., norms of cooperation, hierarchy, and tit-for-tat exchange). While the allocation models based on social relationships are acquired first in human development, the acquisition of a market-pricing model begins as early as age 9. When inputs are heterogeneous, precise differentiation among individuals based on inputs is only possible within a market-pricing allocation model. Consequently, the predominant model for the organization of work and employment contracts is market-pricing. In reviewing Fiske's market-pricing model of allocation, Sondak (1998) notes that "socially meaningful ratios are used to think about and evaluate allocations. A medium of exchange (usually money) is used to distribute or trade goods according to supply and demand." (p. 84).

Research demonstrates that money is implicitly linked with the market-pricing model (McGraw and Tetlock, 2005; Vohs, Mead, and Goode, 2008). Studies show that having people subconsciously think of money decreases the application of social relationship models in terms of cooperation and communal behavior (Vohs, Mead, and Goode, 2006). Moreover, Heyman and Ariely (2004) found that the introduction of money into requests for assistance can undermine the degree of help individuals offer in return. When individuals are paid for their

help with money, a market-pricing model is invoked where individuals adjust their helping effort in a direct relationship to the amount of money they were offered as a gift for the activity; whereas, when individuals are asked to provide help in exchange for either no money or for non-monetary gifts, social relationship models are invoked where individuals' helping efforts are independent of what they received in return. Irrespective of individuals' motivations to help others, it is a violation of the market-pricing model to distribute goods independently of relevant inputs.

Given that norms associated with market-pricing may be activated by the resource of money, an important question is whether there is an essential property of money that is sufficient to activate these norms. It may very well be that the presence of all the properties of money is necessary, but this is an empirical question.

One property of money that prior literature has considered is the characteristic of divisibility. Money is generally the most divisible resource available. Interestingly, even within the resource of money, perceptions of divisibility can be detected. In what Raghurir and Srivastava (in press) call the denomination effect, people are less likely to spend 20 dollars when they have this amount in the form of 1 \$20 bill versus when they have the identical amount in the form of 20 \$1 bills. Importantly, this effect is due to the perceived fungibility of the money in these different forms.

Although divisibility might appear to be a key characteristic that may cue marketplace norms, it does not distinguish money for goods that have value in use. Importantly, goods can come in a form where they are just as easily divisible among individuals as money. In the next section, we review some empirical attempts to show that a distinguishing causal factor in determining the norms of fairness in allocating the resource of money in the economic domain is

the property of it being a medium of exchange independent of divisibility. We argue that it is the property of exchangeability that causes the norms of the market to be cued rather than other essential properties of money. Importantly, this is a property that distinguishes money from other in-kind goods that are allocated within organizational settings.

### **Review of studies testing the medium of exchange hypothesis**

We have conducted several of our own experiments to further identify the unique norms that surround the allocation of money within the employment context where the preference for allocating money equally within groups is likely to be evaluated as less fair than allocating money according to individual inputs. Whereas the Citibank study reviewed in the previous section established the robustness of individuals viewing it as less fair to allocate the resource of money equally within the economic domain of a work bonus, we continued to use this context to experimentally manipulate the resource being allocated. Specifically, we directly tested the hypothesis that the more a resource invokes the market-pricing model by being a medium of exchange, the less fair individuals will view an equal allocation of resources independent of inputs. We modified the vignette used in the Citibank study by providing concrete individual performance information for 10 members of the same division that received a windfall for their division's performance over the last year.

In order to identify the effect of the medium of exchange as invoking market-pricing as being separate from the norms that money invokes, we utilized the phenomenon of credit card reward points. These credit card points only have value in terms of that for which they can be exchanged, and we first stated that they were exchangeable for goods and services (the definition of a medium of exchange). In our first study, we compared these two resources that are



mediums of exchange with two other in-kind goods that have value in use. Drawing upon the literature that shows that people think about the resource of money differently from time, we selected time as one of these resources (operationalized as vacation days). Building off the Heyman and Ariely (2004) studies that compared compensation in payment in terms of money against candy, we used food as the other in-kind good (operationalized as boxes of chocolate).

Using the same general vignette as we did with the Citibank study, we asked participants to imagine that a division manager had allocated the resource equally across 10 employees from the same division who differed in their individual performances. The findings suggest that people viewed it as significantly more fair to allocate the resources equally when the resource was food or time than when the resource was credit card points or money. Participants treated credit card points in a manner that was indistinguishable from money. Importantly, when the resource being allocated was a medium of exchange, it was rated as less fair to distribute it equally among employees who differed in their inputs.

In a follow-up study, we replicated the results of the previous study. Again, a clear pattern emerged where equality as an allocation principle was considered less fair when the resource was a medium of exchange (money or credit card points) than when the resource had value in use (time or food). In this study, we also manipulated the quantities of the resources to be divided among 10 division members ( $x$  vs  $2x$ ), and this did not significantly influence allocation preferences. This provided some initial evidence that the value of the resource being distributed, or the number of units being allocated, was independent of how people made their judgments as to what was the fairest way to allocate the resource among team members. This is important as it is possible that participants might have assumed that each additional in-kind good has a greater diminishing marginal return to each individual as compared to an additional unit of

a medium of exchange. This alternative is less likely given that allocating a larger pool of these resources failed to increase preferences for equality.

In the final experiment, we used the phenomenon of credit card points in a different way to get at the essential characteristic of a resource being a medium of exchange. We manipulated the extent to which a resource was a medium of exchange. Specifically, we manipulated a resource's exchangeability. We did this by directly manipulating the degree to which credit card reward points were a medium of exchange in the market in a manner that held all other properties of the resource constant (i.e., unit of account and a store of value). In order to directly test whether the degree to which a resource is a medium of exchange is a causal variable in allocation preferences, we built upon the consistent finding that people understood it to be less fair to allocate both money and credit card points according to an equality principle. Credit card reward points are a medium that we can directly manipulate the extent to which the resource may be exchanged for goods and services. The vignette from the previous studies was modified to compare participants' allocation preferences for equal distributions among 10 employees independent of inputs in experimental conditions that varied exclusively in terms of which 2,000 credit card reward points were exchangeable and participants were told that each point had a purchasing power of \$1. By using credit card reward points as the resource to be allocated, we were able to precisely vary the extent to which the points were a medium of exchange in the market while holding constant the degree to which the resource was a unit of account and a store of value.

In the high exchangeability condition, the credit card reward points were exchangeable for 4 different types of goods (i.e., all books, music, movies, and electronics). In the low exchangeability condition, the same number of credit card rewards points were exchangeable for

only 1 type of good (e.g., only for books, only for music, only for movies, or only for electronics). Consistent with our exchangeability hypothesis, participants viewed it as more fair to allocate the credit card reward points equally among 10 group members when the points were only exchangeable for 1 resource type in comparison to when the points were exchangeable for 4 resource types.

To assess whether the value participants placed on the resource influenced their allocation preferences, after eliciting allocation preferences, participants indicated the most they would bid for 2,000 credit card points described in the scenario in an Ebay style auction. Consistent with the previous study, which showed the value of the resource was unrelated to allocation preferences, the monetary bid values for the credit card reward points were uncorrelated with participants' preference for equal allocations. This study suggests that the more a resource exhibits the properties of being a true medium of exchange in a market, the less fair it is perceived to be to allocate the resource equally among individuals independent of their inputs.

### **Theoretical and Practical Implication**

In the final section of this chapter, we will examine some potential theoretical and practical implications of the properties of money and the norms of the market invoked by a resource that is a medium of exchange.

#### *Rewarding individual vs team performance*

The finding that allocating the resource of money activates marketplace based norms where rewarding individual performance is understood to be fairer than rewarding team members equally has direct implications for the management of groups and teams. When work has strong

interdependencies and the objective is dependent upon cooperative effort, the egalitarian distribution of rewards among team members may be desirable (Bloom, 1999). The current theoretical perspective on resource allocation suggests that if management wants to distribute rewards equally to promote group harmony and solidarity, this may be more likely to be accepted as fair by distributing these rewards through a resource that has its value in use.

Although we have examined equity and equality allocations in the context of bonuses, these findings for rewarding performance may have relevance to the allocation of compensation cutback, as well. Is it fairer to cut back the salaries of individuals who contribute the least to performance or to make equal cutbacks for all team members? Related to the distinction between value in exchange versus value in use, in the current economic downturn, companies can make cutbacks that are either directly related to monetary compensation or make cutbacks to resources that have value in use. Cutback on items that have value in use may have a precise monetary value (e.g., a 4 day work week in lieu of the standard 5 day work week) but, nevertheless, might be associated with different conceptions of fairness. Following our theoretical perspective, we would expect that if management needs to cut costs in a manner that is perceived to be fair, it might consider giving employees all the same time off (e.g., 4 day work week) rather than making equal pay cuts across the board that could potentially lead to disgruntlements from a sense of unfairness.

Although we have primarily considered variations in what is a fair allocation of economic goods within groups and teams—comparing economic goods that have value in exchange with economic goods that have value in use—many other types of goods that are more social in nature and are allocated within teams are worth examining as well. For instance, Huo (2002) has explicitly examined three different types of goods: economic goods (money), procedural goods

(procedural protection), and relational goods (fair and respectful treatment). Interestingly, she found that people preferred that the latter two types of goods that are more social in nature be distributed according to egalitarian principles. It may be that the results found for goods that have value in use might be even more pronounced when compared to non-economic goods such as fair and respectful treatment.

### *Redistribution of wealth literature*

The present perspective suggests that when resources invoke the market by being a medium of exchange, there is a diminishing preference for egalitarian distributions among group members. A very important implication for this finding is that when managers seek to have individuals accept egalitarian distributions of resources among group members as fair, it may be more effective to have group members focus on the distribution of specific goods that have value in use.

There do appear to be examples of greater preferences for egalitarianism when individuals consider the distribution of in-kind goods. As a contemporary example, in an unprecedented stimulus package that is approaching a trillion dollars, President Obama shored up support from the American public by focusing on just a small percentage (5%) of how the stimulus will be spent—on infrastructure for roads and schools. Again, the proportion of how this money is spent does not appear to be the determining factor in how people evaluate the fairness of the policy. However, focusing on money's value in use appears to be more effective in influencing individuals' approval of the policy.

Although, Hochschild (1981) was accurate in describing the challenges of redistributing wealth in the United States, it is worth looking at the examples where wealth redistribution

programs have been successfully adopted. One of the most successfully adopted programs is food stamps. The present work suggests that an important reason why people may view it as fair is that it is a good that has value in use rather than in exchange. Thus, the norms of the market are less likely to be invoked when individuals consider the fairness of this reallocation.

This preference for redistributing wealth through goods that have value in use is by no means limited to the United States. A surprisingly similar amount of gross domestic product in both developed and developing countries is redistributed through in-kind transfers, such as food stamps or housing subsidies (Currie and Gahvari, 2008). Often, it is assumed that people prefer the redistribution of wealth to occur through in-kind transfers so that the proper use of funds can be ensured even in cases where cash transfers are more efficient (Currie and Gahvari, 2008; Murray, 1994). However, the theoretical perspective we have brought to this issue suggests that the relational models associated with the resource being distributed may play an important role in how both government officials and the public at large understand fairness.

To a large degree, healthcare is another type of in-kind transfer used to redistribute wealth in society. Indeed, the lack of universal healthcare in the United States is the exception that proves the rule. Every other industrialized nation redistributes wealth through some form of universalized healthcare (Reid, 2009). Although the US does redistribute wealth via healthcare to those in society with the greatest need (i.e., Medicare and Medicaid), the market tradition for healthcare in the US has presented a barrier. While many in the US understand healthcare as a right, an extensive system of privatized healthcare that is often linked with one's employment contract does appear to exhibit more market based norms in its allocation than does the food stamp program. However, it is worth pointing out that within organizations, most employees (part-time employees being an important exception) receive the same healthcare plan. In other

words, it is rare that individuals' performance differences are directly rewarded with better or worse health benefits. This is highly consistent with our study findings that people understand it as fair to allocate resources that have value in use equally among group members.

We have highlighted several aspects of wealth redistribution through in-kind goods that are widely accepted as fair by group members. However, this does not speak to the manner in which these resources are initially procured by the government through different forms of taxation. Of course these resources are typically procured occurs through taxing a medium of exchange and within the US the progressive taxation structure on personal income imposes a higher percentage of an income tax on those with higher income than those with less income. Importantly, taxation on personal income typically allows for at least some differentiation among individuals. We would expect that a taxation of a medium of exchange that entirely removed differentiation amount individuals' personal income would be rejected as unfair within the norms of the market. While countries vary dramatically in the form of taxation levied on citizens, some differentiation is required to fit with norms of the economic sphere.

### *Gift-giving literature*

One important literature that has examined the differences between money and in-kind goods is that on gift-giving. In an influential paper entitled "The Deadweight Loss of Christmas", Waldfogel (1993) describes the high loss of value that occurs when one individual spends money on a gift to another person instead of directly transferring the money as a cash gift. Specifically, the amount that the gift receiver would spend of their own money to purchase that same good for themselves is significantly lower than it costs (typically 20% less).

Recent work on gift exchange by Fynn and Adams (2009) has found that gift givers focus on the amount of money they spend on a gift in order to gauge the amount of appreciation the gift receiver will experience. However, gift receivers are insensitive to the amount of money spent on the gift and are uniformly appreciative of the gift. This asymmetry is reminiscent of the Heyman and Ariely (2004) study in which payment with money caused people to focus on the magnitude (input) of the gift; whereas, payment with candy caused people to focus on the good, and they were insensitive to the amount. Thus, one possible explanation for Flynn and Adams finding is that different relational models are activated when a person is purchasing a gift instead of receiving one. In general, the gift giver must directly engage with exchangeability in the market and use a medium of exchange to procure the gift, whereas the gift receiver only engages with the good itself.

Because gift-givers deal directly with the medium of exchange to purchase a gift, they may be more likely to view the interaction through a market-pricing relational model where ratio and magnitude are essential properties. Conversely, gift receivers only receive a gift, which has value in use (unless it is a gift certificate), so they are more likely to view it through relational models that are more socially based. Future research can determine whether relational models are at play in gift giving. Specifically, it would be expected that the gift giver would be less sensitive to the magnitude when a medium of exchange is not involved in procuring a gift for someone else. This happens when someone makes a gift themselves or gives an heirloom or some other previously owned good. Similarly, the receiver should evaluate their appreciation for a gift in terms of magnitude or ratios if the gift is a medium of exchange (e.g., gift certificate). We believe that different relational models are one mechanism that this literature should consider.



Another literature that has examined the properties of in-kind goods is that on the endowment effect. This is the well studied phenomenon where people demand more money to give up a good than they are willing to pay to receive that same good (e.g., a mug). Some interesting moderators of the endowment effect bear upon the present work. For instance, when a person holds multiple goods (e.g., several chocolates) versus a single good (e.g., one box of chocolates containing the same number of chocolates that are in the multiple good condition), the endowment effect is greatly attenuated (Burson, Faro, and Rottenstreich, 2009). Even more relevant is Kahneman's (1992) proposition that the endowment effect does not exist for goods that are held exclusively for exchange, since in the economic transaction, the good is thought of in terms of its exchangeability for money. Consistent with the role of relational models in this process, McGraw, Tetlock and Kristel (2003) have shown that the endowment effect is stronger in non-market-pricing relational frames than in a market-pricing relational frame. That the endowment effect disappears when the good is held for the purpose of exchange (and is thus more similar to a medium of exchange), is consistent with the important characteristic of a medium of exchange invoking market norms rather than the norms of social exchange. Thus, behavior becomes more consistent with rational market behavior than it does normally. Some insights into this literature might come from using credit cards or gift certificates as a good to examine the endowment effect. Additionally, gifts from stores that have an explicit exchange policy might be seen as having a lower monetary value, as individuals might treat the gift more like a medium of exchange. Based on our experiments, this should be more true for stores that sell a wide variety of goods (department stores) as compared to speciality stores that sell one type of good (e.g., shoes).

Interestingly, our manipulation of the degree to which a resource can be exchanged for goods mimics the properties of exchange department stores imposed around gift certificates when they were first introduced at beginning of the 20<sup>th</sup> century. In order to distinguish the gift certificate as a resource distinct from a cash transfer, the first gift certificates designated a specific type of merchandise (e.g., gloves and shoes) for which the certificate could be redeemed (Zelizer, 1994). In gift exchange, there does seem to be a strong desire to distinguish the act of gift giving from a cash transfer. Recently, an intriguing phenomenon of functional gift cards has emerged where the gift certificate for a camera is itself a disposable camera (Walker, 2008). Given the increased use of gift certificates, this may represent a way of causing individuals to focus on the value of use of the gift rather than the value in exchange.

#### *Money as a confound in social science research*

Finally, an important implication of the unique norms invoked by the resource of money deals with the fact that often, in experimental research, money is used in the design of studies to avoid potential confounds linked with other resources. However, to the extent that money invokes distinct norms of fairness that link inputs and outputs that are not invoked for non-monetary resources, our observations about human behavior may be impoverished.

This bias is most existent in economic experiments where the use of money is a hallmark and a primary attribute that distinguishes it from psychological experiments. For instance, Camerer and Hogarth (1999) report that between 1970-1997 there was no one single published paper reporting an experiment in economics where individuals were not paid for their performance. Explicit attempts to show the differences between using money versus not using money have shown that whenever monetary incentives are in place, people adhere more to the predictions of

economics (e.g., Hertwig and Ortmann, 2001; Smith and Walker, 1993). Economists traditionally argue that this is because participants are paying more attention due to the use of monetary payments, but we would like to suggest that this could also be due to the norms of the interaction that are invoked by the very use of money in the experiment. If the resource of money invokes norms of market-pricing, it is likely to induce behavior more consistent with the assumptions economics makes about behavior (e.g., self-interest). Indeed, Ferraro, Pfeffer and Sutton (2005) have recently argued that economic theory can often have self-fulfilling effects.

To examine this possibility in light of our present focus on fairness, we ran a traditional economic game designed to look at individuals' preferences for fairness—the Dictator Game. In this game, one individual is randomly assigned to decide how to allocate ten dollars between themselves and another participant. The person assigned to the dictator role can decide to leave however much of the money they want for the other participants in the game. In cases of high anonymity, participants assigned to the dictator role will frequently not take all the money for themselves, which has been interpreted as individuals having some preference for fairness. Generally, in these experiments, about one quarter of participants simply split the amount evenly between themselves and the other participant (Forsythe, McCabe, Shachat, and Smith, 1994; Hoffman, McCabe, and Smith, 1996). Interestingly, Forsythe et al. (1994) have observed that when real monetary payoffs are absent in the game (i.e., people are just asked how they would allocate the monetary resource), the percentage of people splitting the resource evenly doubles.

In order to explore whether behavior in the Dictator Game might vary as a function of the resource, we re-ran this experiment with a real endowment of 10 dollars and replicated this small percentage of people who split the resource equally. Despite the fact that this game has been run thousands of times, we are aware of no published study using the Dictator Game to examine a

resource other than money. When we changed the resource to be real endowments of 10 minutes or 10 chocolates, we observed that the percentage of people splitting the resource equally between themselves and the other participant more than doubled from the rate observed for participants' splitting the money evenly.

Although money is used as the resource for the legitimate reason of avoiding potential confounds (e.g., it is completely liquid and fungible), if used exclusively to test theoretical ideas (even in economics), it may introduce confounds, as money itself can invoke specific norms of the market that may not generalize to the allocation of other resources. In everyday life, people confront situations where they must allocate all types of different resources. Therefore, these economic games may not accurately reflect preferences and behaviour within those domains as accurately.

## **Conclusion**

In this chapter, we have attempted to think more systematically about the allocation of money in group contexts. Building off a rich literature in distributive justice, we have applied a new theoretical perspective to the understanding of how the resource itself influences allocation preferences for egalitarianism. We have focused on the norms that are invoked by a resource that is a medium of exchange in the market and have contrasted this with the norms invoked by in-kind goods that have their value in use. We believe that this is a fruitful distinction for research in groups and teams to consider since egalitarian norms tend to foster harmony and solidarity among group members. From both a theoretical and applied standpoint, future research should conceptualize more explicitly the role that the allocation medium plays for

understanding preferences and behavior. Moreover, when determining what is fair, we need to consider not only how resources are being allocated but also what those resources are.

## References

- Adams, J. S. (1965), "Inequality in social exchange", Berkovitz, L. (Ed.), *Advances in experimental social psychology* (Vol. 2), Academic Press, New York.
- Bazerman, M. H., Loewenstein, G. F., and White, S. B. (1992), "Reversals of preference in allocation decisions: Judging an alternative versus choosing among alternatives", *Administrative Science Quarterly*, Vol. 37, pp. 220-240.
- Becker, G. S. (1965), "A theory of the allocation of time", *Economic Journal*, Vol. 75, pp. 493-517.
- Bloom, M. (1999), "The performance effects of pay dispersion on individuals and organizations", *Academy of Management Journal*, Vol. 42, pp. 25-40.
- Burson, K., Faro, D., and Rottenstreich, Y. (2009), "Providing Multiple Units of a Good Attenuates the Endowment Effect", Working paper, New York University.
- Camerer, C. F. and Hogarth, R. M. (1999), "The effect of financial incentives in experiments: A review and capital-labor-production framework", *Journal of Risk and Uncertainty*, Vol. 19, pp. 7-42.
- Conlon, D. E., Porter, C.O.L.H., and McLean Parks, J. (2004), "The fairness of decision rules", *Journal of Management*, Vol. 30, pp. 329-349.

Deutsch, M. (1985), *Distributive justice: A social-psychological perspective*, Yale University Press, New Haven, CT.

DeVoe, S. E., and Iyengar, S. S. (in press), "The medium of exchange matters: What's fair for goods is unfair for money", *Psychological Science*.

Ferraro, F., Pfeffer, J., and Sutton, R. I. (2005), "Economic language and assumptions: How theories can become self-fulfilling", *Academy of Management Review*, Vol. 30, pp. 8-24.

Fiske, A. P. (1991), *Structures of social life: The four elementary forms of human relations*, Free Press, New York.

Fiske, A. P. (1992), "The four elementary forms of sociality: Framework for a unified theory of social relations", *Psychological Review*, Vol. 99, pp. 689-723.

Flynn, F. J., and Adams, G. S. (2009), "Money can't buy love: Asymmetric beliefs about gift price and feelings of appreciation", *Journal of Experimental Social Psychology*, Vol. 45, pp. 404-409.

Foa, U. G. (1993), "Interpersonal and economic resources", Goa, U., Converse, J., Tornblom, K., and Foa E. (Eds.), *Resource theory: Explorations and applications* (pp. 13-30), Academic Press New York.

Foa, U. G., and Foa, E. B. (1975), *Resource theory of social exchange*, General Learning Press, Morristown, NJ.

Forsythe, R., McCabe, K., Shachat, K., and Smith, V. (1994), "Fairness in simple bargaining experiments", *Games and Economic Behavior*, Vol. 6, pp. 347-369.

Frank, Robert H. and Bernake, B. S. (2004), *Principles of Economics* (2<sup>nd</sup> edition). McGraw-Hill, New York.

Hertwig, E., and Ortmann, A. (2001), "Experimental practices in economics: A methodological challenge for psychologists?", *Behavioral and Brain Sciences*, Vol. 24, pp. 383-403.

Heyman, J., and Ariely, D. (2004), "Effort for pay: A tale of two markets", *Psychological Science*, Vol. 15, pp. 787-793.

Hochschild, J. L. (1981), *What's fair: American Beliefs about Distributive Justice*. Harvard University Press, Boston, MA.

Hoffman, E., McCabe, K., and Smith, V. L. (1996), "Social distance and other-regarding behavior in dictator games", *The American Economic Review*, Vol. 86, pp. 653-660.



Huo, Y. J. (2002), "Justice and the regulation of social relations: When and why do group members deny claims to social goods?", *British Journal of Social Psychology*, Vol. 41, pp. 535-562.

Kahneman, D. (1992), "Reference points, anchors, norms, and mixed feelings", *Organizational Behavior and Human Decision Processes*, Vol. 51, pp. 296-312.

Kazemi, A., and Eek, D. (2007), "Effects of group goal and resource valence on allocation preferences in public good dilemmas", *Social Behavior and Personality*, Vol. 35, pp. 803-818.

Latane, B., Williams, K. D., and Harkins, S. G. (1979), "Many hands make light the work: The causes and consequences of social loafing", *Journal of Personality and Social Psychology*, Vol. 37, pp. 823-832.

Lazear, E. P. (1998), *Personnel economics for managers*, Wiley and Sons, New York.

Leung, K., and Bond, M. H. (1982), "How Chinese and Americans reward task-related contributions: A preliminary study", *Psychologia: An International Journal of Psychology in the Orient*, Vol. 25, pp. 32-39.

Leung, K., and Bond, M. H. (1984), "The impact of cultural collectivism on reward allocation", *Journal of Personality and Social Psychology*, Vol. 47, pp. 793-804.

Leung, K., and Park, H. J. (1986), "Effects of interactional goal on choice of allocation rules: A cross-cultural study", *Organizational Behavior and Human Decision Processes*, Vol. 37, pp. 111-120.

Locke, J. (1690/1980), *Second Treatise of Government*. Hackett Publishing, New York.

Martin, J., and Harder, J. W. (1994), "Bread and roses: Justice and the distribution of financial and socioemotional rewards in organizations", *Social Justice Research*, Vol. 7, pp. 241-264.

McGraw, P., and Tetlock, P. E. (2005), "Taboo trade-offs, relational framing, and the acceptability of exchanges", *Journal of Consumer Psychology*, Vol. 15, pp. 35-38.

McGraw, A. P., Tetlock, P. E., and Kristel, O. V. (2003), "The limits of fungibility: Relational schemata and the value of things", *Journal of Consumer Research*, Vol. 30, pp. 219-229.

McLean Parks, J., Boles, T., Conlon, D., DeSouza, E., Gatewood, W., Gibson, K., Halpern, J., Locke, D., Straub, P., Wilson, G., and Murnighan, J. K. (1996), "The fair distribution of adventitious outcomes", *Organizational Behavior and Human Decision Processes*, Vol. 67, pp. 191-200.

McLean Parks, J., Conlon, D. E., Ang, S., and Bontempo, R. (1999), "The manager giveth, the manager taketh away: Variation in distribution/recovery rules due to resource type and cultural orientation", *Journal of Management*, Vol. 25, pp. 723-757.

Murray, M. P. (1994), "How inefficient are multiple in-kind transfers?", *Economic Inquiry*, Vol. 32, pp. 209-227.

Okada, E. M., and Hoch, S. J. (2004), "Spending time versus spending money", *Journal of Consumer Research*, Vol. 31, pp. 313-323.

Pfeffer, J., and Davis-Blake, A. (1992), "Salary dispersion, location in the salary distribution, and turnover among college administrators", *Industrial and Labor Relations Review*, Vol. 45, pp. 753-763.

Pfeffer, J., and Langton, N. (1993), "The effect of wage dispersion on satisfaction, productivity, and working collaboratively: Evidence from college and university faculty", *Administrative Science Quarterly*, Vol. 38, pp. 382-407.

Raghubir, P., and Srivastava, J. (in press), "The denomination effect", *Journal of Consumer Research*.

Reid, T. R. (2009), *The healing of America: A global quest for better, cheaper and fairer health Care*, Penquin Books, New York.

Ritholtz, B. (2009), "How greeet and easy money corrupted Wall Street and shook the world economy", John Wiley and Sons, New York.

Smith, A. (1776/2000), *The wealth of nations*. The Modern Library, New York.

Smith, V. L. and Walker, J. M. (1993), "Monetary rewards and decision costs in experimental economics", *Economic Inquiry*, Vol. 31, pp. 245-261.

Soman, D. (2001), "The mental accounting of sunk time costs: Why time is not like money", *Journal of Behavioral Decision Making*, Vol. 14, pp. 169-185.

Sondak, H. (1998), "Relational models and organizational studies: Applications to resource allocation and group process", Cooper, C. L. and Rousseau, D. M., *Trends in Organizational Behavior*, Vol. 5, Wiley, Chichester, UK.

Tornblom, K.Y., and Foa, U.G. (1983), "Choice of a distribution principle: Crosscultural evidence of the effects of resources", *Acta Sociologica*, Vol. 26, pp. 161-173.

Tornblom, K.Y., and Kazemi, A. (2007). "Towards a resource production theory of distributive justice.", Tornblom, K. and Vermunt, R. (Eds.), *Distributive and procedural justice: Research and social application* (pp. 39-66), Ashgate, London, UK.

Tyler, T. R., and Blader, S. (2000), *Cooperation in groups: Procedural justice, social identity, and behavioral engagement*, Psychology Press, Philadelphia, PA.

Vohs, K. D., Mead, N. L., and Goode, M. R. (2006), "The psychological consequences of money", *Science*, Vol. 314, pp. 1154-1156.

Vohs, K., Mead, N. L., and Goode, M. R. (2008), "Merely activating the concept of money changes personal and interpersonal behavior", *Current Directions in Psychological Science*, Vol. 17, pp. 208-212.

Waldfogel, J. (1993), "The deadweight loss of Christmas", *The American Economic Review*, Vol. 83, pp. 1328-1336.

Walker, R. (2008, December 21), Card Tricks, *New York Times Magazine*, retrieved April 7, 2009, from New York Times online archives.

Zelizer, V. (1994), *The social meaning of money: Pin money, paychecks, poor relief, and other Currencies*, Basic Books, New York.