

“It’s alright not to be all right” –
Grace as a catalyst for everyday political talk

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Abstract

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The escalation of political polarization in the U.S. has permeated all aspects of life, where engaging in casual political, social, and moral discussions can risk jeopardizing professional careers and personal relationships. Although popular psychology has brought attention to grace as a solution to encourage constructive, deliberate conversations with others for a healthy democracy, its role in everyday political talk has never been empirically studied. Furthermore, definitions and existing psychometric measurements have largely neglected human grace as distinct from religious grace. This research agenda addresses this gap by developing and validating new measures of human grace in political talk and investigating its impact on everyday political discourse.

First, a pilot study was conducted consisting of an open-ended survey ($N = 100$) to form a grounded definition of human grace. Results of this study identified three central theoretical dimensions: Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change. From the pilot study’s findings, Study 1 sought feedback from subject matter experts ($N = 7$) to develop and assess the content validity of three Human Understanding of Grace (HUG) to Self, to Others, and Perceived from Others measures. Study 2 ($N = 401$) and Study 3 ($N = 402$) then utilized a longitudinal design to empirically validate these HUG scales in political discussions. The findings exhibited good content, convergent, discriminant, predictive, and incremental validity for the effects of grace in everyday political talk within one’s social circles. Finally, Study 4 used a 2 (target high/ low grace) x 2 (political match/ mismatch) experimental design ($N = 239$) to assess whether individuals were significantly more willing to

communicate about politics with strangers who were perceived to offer more grace, regardless of whether their political affiliations were matched or opposed. The findings across these five studies contribute to the theoretical understanding of human grace and are the first to empirically demonstrate its potential to foster constructive, deliberate political dialogue.

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Dedication

To all the professors that inspired me to become one
and believed in me even when I did not

Chapter 1: Introduction

Despite its foundational role in sustaining healthy democracies (Gärtner et al., 2021), four in five Americans do not engage in everyday political talk (Copeland, 2024). Everyday political talk is defined as the act of engaging in casual, unstructured conversations with others about topics related to politics, news, and social issues (Conover & Miller, 2018). Participation in these discussions, especially with those of an opposing view, can influence citizens' ways of acquiring political knowledge (Eveland & Thomson, 2006; Pattie & Johnston, 2008), their willingness to take part in public discussions (Schmitt-Beck & Grill, 2020), and engagement in political actions (Russo & Amnå, 2016). Yet, despite the evident benefits and citizens' desire to be more engaged (Pew Research Center, 2024), political discussions have become more exhausting, stressful, and extreme (Pew Research Center, 2023), deterring participation from the majority of Americans in the middle of the political spectrum (Burnett et al., 2022). In fact, it has become common advice to avoid talking about politics and social issues, in an attempt to maintain harmony in both personal and professional lives (Schmitt-Beck & Schnaudt, 2023).

Research over the past decade has identified a number of barriers to engaging in everyday political talk. On a group level, the intensity of intergroup tensions and social norms against bipartisan exchanges can hinder people's openness to discuss politics (Garimella et al., 2018; Wells et al., 2017). In contentious times, people might be exposed to a wider array of dissenting and extreme viewpoints (i.e., a hostile opinion environment), which demobilizes socio-political participation for groups with low social trust (Lee, 2022; Matthes, 2013). On an individual level, potential negative social consequences (i.e., fear of social isolation, desire to maintain positive relationships; Chan, 2018; Kligler-Vilenchik, 2021; Peacock, 2019), demographic factors (i.e., gender; Jacobs et al., 2009; Neumann, 2021), and personal dispositions (i.e., conflict avoidance

tendencies, a lack of political knowledge, fear of being seen as incompetent and wrong, and little interest in politics; Peacock, 2019; Schmitt-Beck & Neumann, 2023) greatly influence the degree to which people engage in everyday political talk. In fact, a study done in 2017 found that most people would rather forfeit their chance of winning more money than engage with opposing opinions on divisive matters (Frimer et al., 2017). Although there are a number of studies exploring *what* the barriers are to participating in everyday political talk (see Gil de Zúñiga et al., 2016; Morey & Yamamoto, 2020), less research has been done on *how* to mitigate these barriers to openly discussing socio-political issues.

We propose that the presence of grace can increase participation in everyday political talk. Our conceptualization of human grace follows the framework of political grace as theoretically proposed by Scarre (2011) as an alternative to forgiveness in reconciliation efforts across polarized societies. This kind of grace is free from self-righteousness, willing to acknowledge faults on both sides where applicable, seeks to understand others' perspectives, is sustained through mutual enactment, requires accountability alongside acceptance, and can be offered by and to anyone (Scarre, 2011). In deeply divided societies, it offers a path for engagement in good faith when neither side holds an uncontested moral high ground, where retaliations that caused harm to one another were committed. Enacting grace in this case can help people gain mutual understanding, develop more complex views of issues, and thus can encourage different parties to engage in peacebuilding efforts. Although the political grace discussed is focused on the community level, it can be applied on an interpersonal basis (Scarre, 2011).

Similar arguments advocating for grace's role in navigating contentious discussions have emerged in popular psychology (e.g., Helgeson, 2014; Holland & Silvers, 2019; Putnam &

Campbell, 2012), positing that offering interpersonal grace can shift conversations from a competitive drive to “win” to an openness to learning about oneself, others, and the issues at stake (Helgeson, 2014; Holland & Silvers, 2019). When discussions over moral, social, and political topics embrace complexity rather than oversimplification, even those with strong opposing viewpoints can experience positive and constructive outcomes (Kugler & Coleman, 2020; Ripley, 2019).

Yet, despite these propositions that grace might be a viable intervention in difficult conversations, to our knowledge to date, there is no empirical research on the effectiveness of grace in political dialogue,¹ raising questions about the merit of these solutions. More generally, the grace construct is understudied, especially within the field of psychology (Bufford et al., 2017; Peterson & Seligman, 2004). Even within religion and theology, as outlined in Chapter 2, there is no consensus on the definition of grace, making scale development for grace a daunting task. Finally, within the scarce psychological literature on grace, most existing studies have focused on divine grace (i.e., grace from God), often neglecting the concept of human grace in interpersonal interactions (Hodge et al., 2022). As grace becomes increasingly applicable beyond religious contexts, current empirical definitions and measurements fail to fully capture its essence in interpersonal relations.

The current research addresses this gap in the literature in two ways. First, it develops and empirically validates psychological measures of human grace in difficult conversations. By developing theoretically-based and construct-valid measures of human grace, this research adds to the current psychometric understanding of this broad, encompassing construct. Second, and more importantly, it seeks to answer whether grace can positively impact openness to engage in

¹ The literature search from both the author and a librarian at Teachers College identified no empirical studies on grace in conflict or political settings (see Appendix A for the search query matrix).

everyday political talk, becoming an antidote to our growing ideological polarization in the U.S. and other democracies around the world.

Chapter 2: Literature Review

This chapter first summarizes the scholarly and empirical literature on grace, starting with definitions in religious, secular, and psychological contexts. It then examines existing measures of grace and the current challenges in studying this construct, especially in an interpersonal context. Third, the design and results of the pilot study on a grounded definition of grace are presented. The fourth part of the chapter provides an overview of everyday political talk as important outcomes and its antecedents. Finally, the theoretical rationale for studying human grace in political talk is discussed.

2.1 Definitions and Conceptualizations of Grace

Grace in Religion & Theology

As a concept rooted in religion, grace is present in multiple religious contexts, including but not limited to Buddhism, Christianity, Judaism, Hinduism (John, 1970; McGlashan, 2002), and Islam (Custodio, 2015). For example, in Hinduism, grace is mentioned to describe the virtues of Lord Vishnu, one of the principal deities (Frenz, 1975; Gowack & Valle, 1998). In the context of the U.S. specifically, grace is intricately linked to Christianity, although there exist slight variations among interpretations of grace across different Christian theological traditions (Bassett et al., 2020). Historically, grace refers to the divine assistance from God to intellectual creatures for their eternal salvation and is a crucial facet of God's relations with humans (Graves, 2017; Pohle, 1909). From this perspective, Bassett and colleagues (2017) defined grace as "the unmerited favor of God," underlying the belief that humans were sinful creatures; thus, only through God's grace could they be saved.

Starting in the mid-twentieth century, many theoretical contributors argued for the existence and manifestations of grace in human-to-human relations (see Schellekens et al.,

2024). This secular interpretation is referred to as human grace - grace exchanged and enacted between people - and is an empirically distinct concept from divine grace (Hodge et al., 2022). Here, human grace is considered to be an extension of grace from God (i.e., enacted grace; Blackburn et al., 2012; Sisemore et al., 2011). Thus, giving grace is no longer an exclusive act from God but a virtue that can be practiced by both mortals and immortals. Consistent with this understanding, a few scholars in psychology expanded on the grace definition, describing it as a voluntary gift of acceptance bestowed upon an undeserved being (Bufford et al., 2015; Emmons et al., 2017).

Grace in Everyday Use

The use of grace outside of religious contexts is not new, dating back to 1706 when grace was used to describe an aesthetic quality in art that “appeal[ed] rather to the heart than to the head” (Monk, 1944). In recent decades, the mentioning of grace in daily life can refer to sophisticated movements (e.g., dancing gracefully like a swan), a desirable characteristic (i.e., someone is graceful), honoring people by taking part in something (gracing others with one’s presence), providing leeway (e.g., a grace period for late payments), or giving someone “the benefit of the doubt.” For example, behaving gracefully can imply kindness, compassion, and the ability to handle challenging situations with dignity. Considering the breadth of applications, more studies in applied settings are crucial to expanding our understanding of grace (Hodge et al., 2022).

Grace in Empirical Studies

In his recommendations of theologically informed studies on grace, Tjeltveit wrote, “A psychology that takes grace seriously should also employ scientific methods to understand the impact of grace on human lives. Although we can’t measure the reality of grace, we can measure

people's experience of, and beliefs about, grace, and then empirically establish what other measurable dimensions of human life correspond to those experiences and beliefs" (p. 110; Tjeltveit, 2004). Although scarce, scholars and practitioners in the past two decades have offered their definitions and measurements of grace from psychological and theological perspectives.

Grace Conceptualizations

Informed by religious interpretations, one of the most widely used and accepted psychological definitions is that grace is "the gift of acceptance given unconditionally and voluntarily to an undeserving person by an unobligated giver" (p. 277; Emmons et al., 2017). Emmons and colleagues (2017) pointed out that this conceptualization outlined five features of grace: 1. The gift is given even though the recipient might not be worthy, 2. The person giving grace can be either a human or a supernatural entity, 3. Grace-giving and receiving are dyadic in nature, 4. The giver is under no obligation to act with grace, and 5. Giving grace requires the conscious and intentional will of the giver.

In addition to theoretically based definitions, two qualitative studies explored how lay people see grace in their lives. A study of 456 Belgian adults using open-ended questions found that grace consisted of three main themes: 1. Grace involved enacting virtuous qualities (i.e., forgiveness, compassion) to an undeserving recipient, 2. Grace could be experienced or enacted in different contexts through common gestures (e.g., empathetic listening, providing financial assistance, showing appreciation) by both divine and human presence, and 3. Grace led to freedom, new beginnings, and personal growth (Schellekens et al., 2021). While this study aimed to examine grace in a secularized context, the authors acknowledged that only 9.2% of the respondents identified as non-religious, therefore limiting the generalizability of their results.

A second study explored expressions of grace in the workplace by conducting a semi-structured interview with thirty participants (O’Connell, 2022). The interview first asked participants to list what came to mind when they heard the word grace. They were then asked to provide examples of grace in the workplace along with potential outcomes of giving and receiving grace. The resulting definition was “Workplace grace is a gift given unconditionally and voluntarily by an unobligated giver, the giver being human or divine, in a work context” (p. 370; O’Connell, 2022). However, this study also faced an over-representation of believers in their sample; only six participants (20%) did not identify as Christians but of other spiritual orientations (i.e., Hindu, agnostic).

Grace Measurements

With its strong roots in religion, the majority of studies have focused on divine grace in religious contexts (see Table 1 for an overview of empirical measures). The earliest studies on grace date back to the late 1980s and are based on theological and psychological frameworks (Schellekens et al., 2021). For example, Watson and colleagues (1985) introduced a measure of religiosity called the Grace/Sin scale. The later refinements of the Grace/Sin scale included 11 items across three factors, namely Grace, Self-Guilt, and Other-Guilt with items such as “Grace entered my life when I was forgiven for my sins” and “At the final judgment we can be sure that those who sin in this life will be exposed” (Watson et al., 1988a, 1988b). The scale showed significant correlations with self-reflectiveness, assertiveness, hopelessness, depression, and anxiety.

Although scarce, subsequent efforts have been made to create a reliable and valid measure of grace. The Grace Scale (Payton et al., 2000; Spradlin, 2002), the Richmond Grace Scale (Blackburn et al., 2012; Sisemore et al., 2011), Dimensions of Grace Scale (DGS; Bufford

et al., 2015, 2017) are among the most prominent ones. Recognizing the lack of cohesion between established measures, the DGS was the first attempt to unite existing scales utilizing factor analyses, resulting in 36 items across five dimensions: Experiencing God's Grace, Costly Grace (i.e., believing that one must satisfy certain conditions to receive grace), Grace to Self, Grace from Others, and Grace to Others. The subscales were found to be related to mental health measures, gratitude, internalized shame, and religious and spiritual well-being to different degrees and effects (Bufford et al., 2017). However, all of these studies were conducted within a heavily Christian context and population and none were applied in conflict resolution and political polarization, limiting the generalizability of the findings.

To address the limitations of samples used in previous research, Rush and colleagues (Rush et al., 2023) established the Perceptions and Experiences of Grace Scale (PEGS) in a series of cross-sectional studies with a sample of 1,244 U.S. participants. By revising the DGS and adding items generated by non-religious participants, the authors found that grace was comprised of six factors with good internal reliability: God's Grace (8 items), Grace to Self (6 items), Grace Received from Works (4 items), Unconditional Grace to Others (4 items), Conditional Grace to Others (3 items), and Conditional Grace from Parents (4 items). Overall, the PEGS was related to psychological variables such as compassion, gratitude, mood, self-regulation, perceived stress, and adaptive beliefs and behaviors. However, despite having a more representative sample for religious backgrounds, the distribution was not as balanced in terms of gender, race, and political affiliation of study participants (Rush, 2022; Rush et al., 2023).

Finally, the Experiencing Grace Scale (EGS; Schellekens et al., 2024) was developed by employing an inductive approach. This approach involved assessing laypeople's perceptions of grace using open-ended questions which then served as the basis for constructing a scale for

empirical validation (Schellekens et al., 2021). Based on the initial qualitative data they collected, the authors constructed the 14-item EGS with 4 subscales: Appraising Grace, Giving Grace, Receiving Grace, and Divine Grace. Most of the factors showed good reliability and validity, except for Receiving Grace. Furthermore, addressing the limitation of their foundational research in 2021, Schellekens and colleagues (2024) were able to recruit a wider range of religious backgrounds to validate their scale.

Despite these developments in measurements, human grace and the study of interpersonal grace have yet to be the sole empirical focus of previous research (Hodge et al., 2022; see Table 1). Instead, validated scales in prior literature have tended to focus on both human and divine grace. However, while divine grace is undoubtedly a central part of grace, including both divine and human grace together can prime respondents to see this construct in a religious context. An exception to this approach is the Global Relational Attitudes Conflict Exam (GRACE) developed by Beckenbach and colleagues (Beckenbach et al., 2010). Focusing on a human grace in the context of romantic relationships (Sells & Yarhouse, 2011), this measure consisted of 13 self-measure items using a yes/ no response format. However, the original study that led to the creation of the GRACE scale suffered from several noticeable limitations, including a lack of systematic and clear descriptions of how the items were formed, an extremely small sample size of five couples, and low internal reliability ($\alpha = .48$). Subsequent research that used the GRACE scale established higher reliability ($\alpha = .78$) and was positively related to empathy, forgiveness, and relational justice (Patrick et al., 2013). The GRACE scale was finally modified into a 4-point Likert scale and showed better internal reliability in three doctoral dissertations (Cook, 2013; Khalaf-Moughabghab, 2019; McCarthy, 2012). Sample items included “My partner will do kind things for me without me asking” and “It is common for my partner to do

good things for me that I don't deserve." However, none of these findings have been published in peer-reviewed sources. Finally, despite improvements in internal reliability, the GRACE scale remained unvalidated,² raising concerns about its applicability (Patrick et al., 2013).

Table 1

Overview of Psychometrics Measures of Grace

Name	Purpose of Measure	Items & Factors	Divine/ Human	Religious Sample?	Fully Validated?
Grace/ Sin Scale (Watson et al., 1988a&b)	Beliefs about grace and sin	3 factors; 11 items total	Divine	Yes	Yes
Global Relational Conflict Attitudes Conflict Exam (GRACE; Beckenbach et al., 2010; Cook, 2013)	Experience of interpersonal grace in romantic relationships	2 factors; 10 items	Human	No	No
Richmont Grace Scale (Sisemore et al., 2011; Watson et al., 2011)	Measuring grace in Christian counseling & psychotherapy	4 factors; 35 items	Both	Yes	No
The Amazing Grace Scale (Bassett, 2013)	Beliefs about divine grace	2 factors; 16 items	Divine	Yes	Yes
Dimensions of Grace Scale (DGS; Bufford et al., 2017)	Uniting existing grace measures	5 factors; 36 items	Both	Yes	Yes
Perceptions & Experiences of Grace Scale (PEGS; Rush, 2022; Rush et al., 2023)	Creating a more comprehensive measure, building on DGS	6 factors; 29 items	Both	No	Yes

² Cook (2013)'s dissertation started the validation process. However, the study only ran exploratory factor analysis and acknowledged that confirmatory factor analysis needed to be run for further validation.

Experiencing Grace Scale (Schellekens et al., 2024)	First bottom-up lay conceptualization of grace	4 factors; 14 items	Both	No	Yes
Grace at Work Scale (O’Connell & Adams, 2024)	Expressions of grace-giving and receiving at work; building on DGS	3 factors; 22 items	Both	No	Yes

2.2 Challenges in Defining and Measuring Human Grace

Love takes off the masks that we fear we cannot live without and know we cannot live within. I use the word ‘love’ here not merely in the personal sense but a strange state of being, or a state of grace - not in the infantile American sense of being made happy but in the tough and universal sense of quest and daring and growth. - James Baldwin, *The Fire Next Time* (1995).

Unsurprisingly, given its abstract and encompassing nature, the past three decades saw even less consensus about the definition of grace and the notion of an “undeserved” recipient. Many current prominent scholars and theologians argue that grace is subjective, focusing on the multitude of ways that grace manifests within and between individuals (see Jones, 2020; Ó Tuama, 2022). For example, Serene Jones’ interpretation of grace explicitly contested that grace was reserved for the “unmerited”: “Grace is free; we don’t earn it nor are we required to deserve it. That’s what makes grace *grace*. It comes unbidden to us all” (p. xxi, 2020).

In applied nonreligious contexts, some theoretical definitions of grace have excluded the concept of “deserving.” The first example is a reflection piece by Rogers and Soyka (Rogers & Soyka, 2004) on receiving grace while being on “Ground Zero” in New York City after the 9/11 tragedy. In their writing, they recalled the freedom of access to the site, their connections to rescue workers, and the mutual compassion among those at the World Trade Center at the time

as various forms of grace. The second example is a review paper on grace in leadership (Thomas & Rowland, 2014), where they equated grace with kindness and compassion. However, using these terms interchangeably can be problematic: while grace encompasses kindness and compassion, these constructs are conceptually and empirically distinct (Emmons et al., 2017).

Two recent empirical studies also offered alternative definitions of grace without consideration of merit. The only peer-reviewed study using an interpersonal measure of grace (i.e., the GRACE scale) defined it as “an act of kindness that is given without duty to respond as a preconceived requirement” (p. 293; Beckenbach et al., 2010). However, as discussed above, the original GRACE scale was not rigorously validated, and the items were developed on a definition that deemed the recipient as not deserving of grace. The second empirical definition came from a qualitative study conducted by O’Connell (2022) about grace at work. In their focus group interviews on current definitions of grace, some participants expressed concerns about the word “undeserving,” questioning how a potential grace-giver could determine whether someone was worthy of grace. This prompted the author to revise their definition of workplace grace by removing “deserving.” However, despite this refinement, O’Connell and colleagues (2024) eventually built their measure on the Dimensions of Grace Scale (Bufford et al., 2017), whose definition labeled recipients as unmerited.

Another challenge in defining grace extends to a lack of rigor in methodologies and measurements for grace (Emmons et al., 2017), starting with the operationalization of grace as a trait or a state (Bufford et al., 2017). Both traditional definitions and psychological conceptualizations have mostly considered grace as an inherent virtue (i.e., trait) that everyone possesses and that varies between individuals. However, there is no empirical evidence showing that grace is relatively stable over time (Emmons et al., 2017). Furthermore, Rush and colleagues

(Rush et al., 2023) found that two dimensions of the PEGS, Grace Received from Works and Conditional Grace to Others, varied when retested with the same sample three weeks later, indicating that they could be state-based factors. Putting this in context, while a person might have a stronger disposition to give grace in general, they might be less likely to give grace to a stranger who hurt them than to a friend telling a white lie.

Lastly, prior literature has mostly categorized human grace based on its relational aspects: grace to self, others, and from others (Bufford et al., 2017; O’Connell & Adams, 2024b; Rush, 2022; Rush et al., 2023) but has not considered a variety of “others.” For example, the Grace from Others subscale only included items measuring grace from a parental figure (e.g., “As a child, one parent tended to withhold love when I misbehaved”). This issue was addressed in later articles that acknowledged the existence of different grace-givers (e.g., Conditional Grace from Parents; Rush et al., 2023; or Grace from Coworkers; O’Connell et al., 2024). We propose that these various forms of grace based on relational dimensions (i.e., to self, to others, and from others) should be treated as distinct yet interrelated measures, sharing an overarching definition. There has been initial evidence supporting that the grace to self, to others, and from others are separate constructs. Prior findings indicated showed either non-significant or small to moderate relationship among grace to self, to others, and from others factors (Bufford et al., 2017; Rush, 2022), suggesting differentiation among them. For example, some people are more likely to give grace to others but hold themselves to much higher standards. This argument parallels self-compassion and other-compassion literature (Neff, 2003; Quaglia et al., 2022), where compassion towards self and others were developed as two separate scales.

2.3 Pilot Study: Human Grace as a Multi-Dimensional Construct

The pilot study was conducted to add to the current literature on interpersonal grace. Two research questions guided the development of the pilot study: 1. How do everyday people define and enact human grace, especially in difficult conversations around moral, social, or political issues? And 2. What are the underlying theoretical dimensions of human grace? Results from the pilot study were used as the foundation for developing a reliable and valid human grace scale in subsequent studies.

As previously discussed, two prior research studies were conducted to develop a lay definition of grace. Schellekens and colleagues' definition (2021) acknowledged the use of grace in an increasingly "secularized world," and O'Connell's (2022) definition was based on workplace grace. However, these prior studies focused on both human and divine grace. The current research is the first to focus exclusively on human grace, acknowledging that divine and human grace are empirically distinct and deserve separate examinations (Hodge et al., 2022). Additionally, consistent with researchers' recommendations (Hodge et al., 2022), this research explores grace in a context - difficult conversations over social, moral, and political issues – that it has to be studied.

Methods

Sample

The original sample included 119 participants recruited via Prolific, an online recruitment platform found to yield higher quality data than other sites such as Amazon's Mechanical Turk and Qualtrics Panel (Douglas et al., 2023). Additionally, Prolific provided bot detection and ensured participants were compensated at a fair rate (Bradley, 2018). Nineteen respondents dropped out before completing the survey, resulting in a final sample of 100 participants ($N =$

100). Almost one-third of participants identified as Black/ African/Caribbean (29%), 27% as White/ Caucasian, 19% as East/ South/ Southeast Asian, 13% as Hispanic/ Latino, 5% as Native/ Indigenous People, and 7% as Others (i.e., Middle-Eastern/ North African, Mixed). There was an even representation of male (52%) and female (46%) respondents, and two people identified as non-binary/ third gender. In terms of political affiliation, Republicans were the biggest group at 38%, followed by 35% of Democrats and 27% of Independents. For religion, more than half of the respondents were Christians (55%), and 32% did not identify with any specific religion. When asked about the importance of religion in their lives, 44% selected “Not at all” or “Slightly important,” and 42% felt that religion was very or extremely important to them.

Procedures

The pilot study was conducted from December 2024 to January 2025 on the Qualtrics survey platform and received approval from the Institutional Review Board at Teachers College, Columbia University (Protocol ID: 25-088). Before taking the survey, participants were presented with introductory information along with information about their rights. Participants who consented to the study and completed the full survey were compensated \$2.50 for their time (median completion time was 12 minutes).

Adapting O’Connell’s (2022) study questions on workplace grace, considering the strong association of grace with religion, the survey started with an open-ended question to prompt respondents to think about interpersonal grace instead of divine grace (Q1): “People often talk about allowing others some grace or wishing to be given some grace. What does giving or being given grace mean to you?” To probe people’s implicit interpretation of human grace, the second part of the survey asked participants to engage in an automated writing task for 4 minutes with the following prompt (Q2): “Think about the last difficult conversation you had about a moral,

political, or social issue. What would grace and/or lack of grace have looked like in this context? Write whatever comes to mind without stopping for the next 4 minutes.” In the third section, participants were asked to provide examples of when they gave grace to themselves and others (Q3) and received grace from others in a difficult conversation (Q4). Finally, the study ended with demographic questions (i.e., religion, gender, race, political affiliation).

Analysis

Content analyses were conducted on MAXQDA Analytics Pro version 24.7 through an iterative process where responses were read multiple times (Burnard, 1991). As the definition of human grace has not been studied in prior empirical research (Hodge et al., 2022), an inductive process was appropriate to form a working definition of grace (Elo & Kyngäs, 2008). From the first two questions (i.e., Q1, Q2) of what giving or being given grace to someone meant, all written words and phrases used to describe grace were extracted through open coding (i.e., writing notes and headings as the responses were read; Elo & Kyngäs, 2008). We coded as many unique initial headings as possible for a total of 19 subcategories and then condensed these subcategories by grouping them by similarity and dissimilarity (Burnard, 1991; Downe-Wamboldt, 1992), resulting in three main dimensions that formed human grace conceptualization (see Appendix B for a visualization of the abstraction process; Elo & Kyngäs, 2008). Prior literature identified three main categories of human grace - Grace to Self (31 anecdotes), Grace to Others (84 anecdotes), and Grace from Others (82 anecdotes; Bufford et al., 2017). Next, a deductive process was applied to organize the specific behaviors of grace in difficult conversations that participants generated in Q3 and Q4 of the survey (Elo & Kyngäs, 2008). As redundancy is important for the initial item generation step (DeVellis & Thorpe, 2021), all cognitive, affective, and behavioral examples mentioned by at least three participants were

retained (Elshout et al., 2015; Schellekens et al., 2020). For example, making mistakes as part of being human was mentioned by seven different respondents and, thus, was kept as one of the themes. In contrast, the theme of escaping accidents was only mentioned by one participant and subsequently removed from the final pool (see Figure 1 for the Word Cloud representing the top 30 most frequently mentioned words).

Figure 1

Word Cloud for Definitions of Human Grace



Preliminary evidence suggested that Artificial Intelligence (AI) systems such as ChatGPT are effective at producing descriptive themes with qualitative data and can be a helpful inclusion in the analysis process (Bryda & Sadowski, 2024; Morgan, 2023). To avoid being primed by the AI outputs, we first completed human coding before feeding the raw data to MAXQDA’s AI system for analysis. The AI produced an overall definition of grace and grace subcategories (see Appendix C for a side-by-side comparison of the author’s first working definition and MAXQDA’s AI definition of grace). As human coding can contain biases (Collier & Mahoney, 1996), the AI system was utilized as another coder to cross-check whether there were missing

subthemes or overinflation of dimensions. The results from our work and the AI showed minor differences, supporting the convergence of the definitions from both approaches. Finally, lemmatization - a natural language processing method that reduces words to their base form (e.g., “empathize” and “empathy” converted to “empath”) - was conducted to identify related constructs most frequently mentioned. The top five themes were understanding (35), forgiveness (33), kindness (24), patience (15), and compassion (14).

Results

The first half of the survey sought to conceptualize human grace in general and in political conversations through both explicit (Q1; untimed open-ended question) and implicit (Q2; automatic writing task) approaches. The second half of the survey (i.e., Q3, Q4) was used to generate items for the grace in political talk scales in Study 1, as discussed in Chapter 3. Based on the pilot responses and prior empirical definitions (e.g., Emmons et al., 2017; O’Connell, 2022; Schellekens et al., 2021), we define human grace as a *voluntary gift of understanding and acceptance to self, others, and from others*. Three interrelated cognitive dimensions underlie grace: 1. the ability to see things from others’ perspectives (i.e., Empathy & Perspective-Taking), 2. the acceptance of imperfections and mistakes as inherent to being human (i.e., Forgiveness & Acceptance), and 3. the willingness to create opportunities for change and growth (i.e., Allowing for Growth & Change). This definition of grace considers it a psychological orientation that influences behaviors. However, due to the dyadic nature of grace (Emmons et al., 2017; Schellekens et al., 2021), the degree to which a person enacts this virtue can be greatly influenced by contextual factors and the identity of the recipient (e.g., giving a friend grace versus giving a stranger grace).

The first dimension, *Empathy & Perspective-Taking*, involves the ability to see things from others' perspectives, "put yourself in others' shoes," and recognize that external factors might influence how someone acts at any given moment. One participant wrote about extending grace to their friend who was suffering from alcoholism, which put a strain on their relationship. Although they disapproved of the self-sabotaging behaviors, they understood that the loss of two close family members within the past year was the underlying cause. They reflected: "I'd still like her to stop drinking so much and make healthy choices, but everyone has their own way of dealing with grief, and I do believe she can be helped through rehab and/or therapy." Ultimately, this dimension includes the assumption that people generally have good intentions, even if their actions might not align with them at the moment.

The second dimension, *Forgiveness & Acceptance*, is rooted in the capacity to forgive - both oneself and others - and the acceptance that making mistakes is human. It also involves letting go of negative emotions, resentment, harsh judgment, or the desire to be "right" in difficult conversations. However, forgiveness and acceptance do not equate to suppressing negative feelings but rather acknowledging, embracing, and processing these emotions. One participant highlighted this, "[...] once I understood that my anger was self-inflicted and that it wasn't the necessary reaction, I gave myself grace and the ability to feel what I feel and honor it."

The final dimension, *Allowing for Growth & Change*, aligns with Scarre (2011)'s characterization. Giving grace does not mean ignoring wrongdoings and past mistakes but is rooted in the belief that people can learn from their mistakes and evolve into better versions of themselves. This parallels past research conducted in the Israel-Palestine conflict, which showed that the belief that groups are malleable (versus fixed) can lead to higher motivation for

reconciliation and cooperation (Halperin et al., 2011; Kammrath & Dweck, 2006). Offering grace, in this sense, can reflect the act of creating a safe environment that encourages people to express themselves without fear of judgment, be vulnerable, and positively change themselves and others. One participant shared: “[...] but at the same time, since people contain multitudes, and good people can do bad things and bad people can do good things, it's hard to give that grace easily. I know it in my head, but it's hard in the moment to do that. I would say talking to my dad, and he says some terrible [political] stuff. At the same time, he helps people out, including me...” Even though it can be challenging, this quote highlights the acknowledgment that people are multifaceted and have the capacity for positive growth.

Discussion

The pilot study added to the literature by proposing a definition of human grace as *a voluntary gift of understanding and acceptance to self, others, and from others*. Three interrelated dimensions underlie human grace, distinguishing it from divine grace: 1. the ability to see things from others’ perspectives (i.e., Empathy & Perspective-Taking), 2. the acceptance of imperfections and mistakes as inherent to being human (i.e., Forgiveness & Acceptance), and 3. the understanding and willingness to create opportunities for change and growth (i.e., Allowing for Growth & Change). This conceptualization introduced human grace as a multidimensional construct, adding to their relational aspects reflected in previous studies (e.g., O’Connell, 2022; Scarre, 2011; Schellekens et al., 2021).

More importantly, by identifying these dimensions to inform the development of scale items, the findings allow for a more evidence-based and rigorous approach missing from the grace measurement literature (Emmons et al., 2017). As previously discussed, the intra- and interpersonal aspects of this construct have received little empirical attention. Thus, the current

research can lay the foundation for establishing one of the first fully validated measures of human grace, contributing to future research that wishes to examine secular expressions of this virtue.

2.4 Talking Politics

Before discussing our empirical effort to develop measures for human grace, it is crucial to establish one context in which human grace can be applied - political talk. One oversight for most studies on political talk is neglecting to define “political” itself, discounting the fact that what encompasses politics varies widely between citizens (Fitzgerald, 2013; Morey & Eveland, 2016). A study conducted in 2000 identified that political talks consisted of four categories: national government, local/ state government, foreign happenings, and economy (Wyatt et al., 2000). However, the political landscape has shifted since then, expanding on people’s views of politics: a growing percentage of the population now considers controversial topics surrounding social and cultural issues as part of this category (Fitzgerald, 2013). Findings also suggested that the broader people’s definitions of political topics were, the higher their political engagement was (Fitzgerald, 2013). although the causal direction of this relationship remains unclear. To mitigate confusion, the current research adopts the approach of Moy and Gastil (2006) by explicitly outlining politics as matters concerning national government, local/ state concerns, foreign happenings, economics, and broad cultural and social issues to respondents in the studies.

Everyday political talk refers to the “spontaneous, unstructured face-to-face conversation between citizens that deals with political matters” (p. 380; Conover & Miller, 2018). This phenomenon involving the political discursive space among citizens has received a multitude of labels throughout the years, including political discussion (e.g., Conover et al., 2002; Eveland & Thomson, 2006; Hardy & Scheufele, 2009; Kleinman, 2013), political conversation (e.g., Jacobs

et al., 2009; Rojas, 2008), and political talk (e.g., McClurg, 2006; Morey et al., 2018; Morey & Yamamoto, 2020). Two key assumptions underlie everyday political talk: 1. The conversations take place organically, outside of formal boundaries, and 2. They are different from online discussions that tend to be anonymous, asynchronous, and in written form (Conover & Miller, 2018; Valenzuela et al., 2012). Evidence shows that everyday political talk is a common occurrence in the U.S., often taking place in private settings such as at home and social gatherings, but less frequently at work (Conover et al., 2002; Jacobs et al., 2009). In terms of conversational partners, people tend to have political discussions with romantic partners, family members, and friends (Conover & Miller, 2018; Wyatt et al., 2000), although everyday political talk can take place with strangers (Schmitt-Beck & Schnaudt, 2023). Thus, this research agenda seeks to explore political discussions with both people within and outside of one's social circles.

The following subsections describe two aspects of interests in the current research: frequency and level of disagreements within political conversations.

The Importance of Engaging in Everyday Political Talk

There has been ample evidence of the positive effects of talking politics frequently (for a review of the literature, see Schmitt-Beck & Lup, 2013). First, talking politics is an effective way to exchange and gain more political knowledge (Bennett et al., 2000; Eveland & Thomson, 2006; Pattie & Johnston, 2009; Searing et al., 2019). People's political discussion is also linked to their increased political engagement (Kwak et al., 2005; Russo & Amnå, 2016; Schmitt-Beck & Grill, 2020), especially when one is surrounded by those deemed to have "political expertise" (McClurg, 2006). Talking politics can also influence people's voting decisions (Johnston & Pattie, 2006; Pattie & Johnston, 2002; Pattie & Johnston, 2000; Sinclair, 2012; Zuckerman et al., 1994). Finally, engaging in political talk can help individuals elevate their understanding of their

social identities and their relationship to politics (Harris-Lacewell, 2007; Walsh, 2010). However, despite these positive effects of frequent engagement in political talk, the past few decades have seen increasing divisions, intolerance, and affective polarizations in political discourse at an unprecedented rate (Dimock & Wike, 2020; Iyengar & Krupenkin, 2018; Pew Research Center, 2023). Many people simply no longer like discussing politics (Schmitt-Beck & Neumann, 2023; Sun & Slepian, 2020).

Disagreements within Political Discussions

Equally vital as the frequency of everyday political talk is the nature of these political conversations (e.g., constructive disagreements versus rumination of extreme beliefs), which can significantly impact the quality of outcomes and the degree to which people learn new information (see Nir, 2014). Everyday political disagreement, also referred to as exposure to disagreement, network heterogeneity, network ambivalence, and diverse discussion (see Eveland & Hively, 2009; Nir, 2017; Scheufele et al., 2006), is defined as “conversations where individuals are exposed to viewpoints that are different from their own” (Klofstad et al., 2013, p. 121). Previous literature showed that exposure to ideological disagreements increased awareness of opposing views, tolerance of other social groups, and reduced affective polarization (Huckfeldt et al., 2004; Mutz, 2002; Mutz & Mondak, 2006). Moreover, there is mixed evidence on whether disagreements deter people from political engagement; in certain situations, exposure to dissenting opinions might in fact encourage involvement (Bello & Rolfe, 2014; Pattie & Johnston, 2000). Other literature on everyday political talk found that no evidence of a negative impact of disagreements within one’s network on political participation (Pattie & Johnston, 2009).

Does talking politics with friends and family mean that people mostly surround themselves with politically like-minded individuals? While empirical research has established that birds of a feather do tend to flock together (McPherson et al., 2001) and that people often hold similar views and values as those around them (Mutz, 2006), it is quite uncommon and rather impossible to have a politically homogeneous network (Eveland & Kleinman, 2013; Huckfeldt et al., 2002). After all, people have little control over their birth families, neighbors, and coworkers, and do not purposefully choose their discussion partners based on political similarities, implying that different political opinions can take place naturally (Bello & Rolfe, 2014; Minozzi et al., 2020; Morey et al., 2012; Shafranek, 2021). Thus, it is crucial that this research agenda accounts for the level of disagreements within political discussions in addition to frequency of these conversations.

Predictors of Everyday Political Talk

To assess whether human grace can meaningfully add to the current literature of everyday political talk, it is vital to discuss known predictors previously identified in the literature. Losing friends and cutting contact with family members over politics has become much more common than before (Smith, 2020), strongly diminishing the appeal of engaging in political discussions for many. Research on barriers to political talk can be divided into societal, group, interpersonal, and individual levels. On a societal level, cultural factors and norms can determine how acceptable it is to bring up politics. For example, the frequency of casual political discussions is relatively high in parts of North America and Europe (Conover et al., 2002) but is lower in other regions of the world (i.e., the Middle East and Africa; see Schmitt-Beck & Lup, 2013). On a group level, the us-versus-them mentality and social norms against bipartisan exchanges can hinder people's openness to discuss politics (Boland & Davidai, 2024; Garimella

et al., 2018; Wells et al., 2017). Garimella and colleagues (2018) found that bipartisan content and opinions that spoke to diverse perspectives had significantly lower engagement than more polarizing narratives, suggesting that engaging in bridge-building efforts could cost people social currencies such as connections and endorsement from others.

A handful of studies exploring interpersonal dynamics underlying political discussions have produced mixed findings. Kleinman (2013) found that perceived personality trait similarity between an individual and another had no significant effect on their willingness to discuss politics. However, Knöchelmann and Cohrs (2024) found that individuals were more likely to approach targets perceived to be more intellectually humble for political discussions. Thus, considering the importance of social dynamics in political talks (Eveland et al., 2011; Knöchelmann & Cohrs, 2024), it is worth examining not only people's level of grace but also their perceptions of the conversation partner in the current research.

On an individual level, potential negative social consequences such as fear of social isolation and desire to maintain positive relationships are deterrents to bringing up politics (Chan, 2018; Kligler-Vilenchik, 2021; Peacock, 2019). Due to the perception that political conversations are uncomfortable and difficult, individuals are motivated to be intentional in their choice of topics, issues, or opinions (Hayes et al., 2005) to avoid offending or hurting others. In addition, demographic factors (i.e., gender; Jacobs et al., 2009; Neumann, 2021), personality traits (i.e., extraversion, openness, agreeableness, emotional stability; Hibbing et al., 2011; Mondak & Halperin, 2008), and personal dispositions (i.e., conflict avoidance tendencies, lack of political knowledge, zero-sum beliefs, fear of being seen as incompetent and wrong, regulatory modes, and little interest in politics; Boland & Davidai, 2024; Coleman & Phan, 2024; Peacock, 2019; Schmitt-Beck & Neumann, 2023) are factors that might determine individuals' willingness

to engaging in political conversations. Including these factors in the studies will allow us to assess whether human grace meaningfully adds to our current knowledge.

2.5 Human Grace in Everyday Political Talk

As previously discussed, prior research has primarily operationalized human grace through its relational aspects: grace to self, to others, and received from others (Bufford et al., 2017; O’Connell & Adams, 2024b; Rush, 2022; Rush et al., 2023), overlooking whether there were important theoretical dimensions within each relational aspect. Building on the conceptual foundations from the pilot study, this research proposes three multidimensional Human Understanding of Grace (HUG) to Self, to Others, and Perceived from Others scales³ in the context of everyday political talk. As such discussions most often occur with familiar people such as friends and families (Conover & Miller, 2018; Wyatt et al., 2000), the scales are written and initially focused on political talk within one’s social circles. The subsequent sections elaborate on the theoretical dimensions of each scale and their relationships to everyday political talk.

Grace to Self

Giving grace to self comprises only two dimensions: Forgiveness & Acceptance and Allowing for Growth & Change. The first dimension, Forgiveness & Acceptance, frames mistakes and disagreements as a central component of the human experience, encouraging individuals to be kind to oneself regardless of outcomes. This perspective can mitigate perfectionistic tendencies (Quaglia et al., 2022; Richardson et al., 2020; Sierra-Swiech et al., 2024) and embraces messy interactions that characterize difficult political conversations. As

³ This is an original name and acronym created for the measures. Giving and receiving grace, in this context, can evoke feelings of connectedness and warmth similar to those of a hug.

such, giving grace to self may lower individuals' likelihood of withholding their contributions by self-censoring, even when they are faced with others whose opinions oppose theirs.

The second dimension, Allowing for Growth & Change, reaffirms that this kind of grace does not equate to a lack of accountability (Scarre, 2011). Instead of trying to erase one's mistakes, grace-giving reflects an openness to change and learn from one's experiences. Thus, individuals high in this dimension may both engage in political discussion more frequently and seek out more conversation partners with opposing political viewpoints to deepen their understanding.

A third dimension, related to Empathy & Perspective Taking, is included in grace to others and from others. Because this dimension is relevant to "others" and not to the "self", it was not included in grace to self.

Grace to Others

Grace to others is proposed to encompass all three dimensions from the pilot study. The first dimension, Empathy & Perspective-Taking, involves putting oneself in others' shoes and trying to see from their perspective. While empathy is sharing an emotional understanding of a counterpart's experience (Decety & Jackson, 2004), perspective-taking is trying to see from others' perspectives when processing information or situations (Batson & Shaw, 1991; Stotland, 1969). Individuals high on this dimension tend to seek joint solutions, engage in prosocial behaviors, and express favorable attitudes towards reconciliation in intergroup settings (Hodges et al., 2011; Klimecki, 2019).

The second dimension, Forgiveness & Acceptance, entails the ability to refrain from labeling others based on their worst moments. It is accompanied by the understanding that no

one is completely faultless, including oneself, hence providing more complex views of people and issues (Scarre, 2011).

The final dimension, Allowing for Growth and Change, creates opportunities for oneself and others to learn from interactions. Empirical studies suggested that believing in others' ability to change shaped individuals' willingness to extend grace and their openness to engage with members of opposing political affiliations (Goldenberg et al., 2018; Halperin et al., 2011, 2012, 2014). Although reflection and change are not prerequisites for offering grace, the potential for improvement from all parties negates recurring patterns of harmful behaviors and ensures giving grace can be sustained long-term (Scarre, 2011). Altogether, these dimensions can promote engagement in political discussions, even with those holding opposing views.

Perceived Grace from Others

Parallel to grace to others, perceived grace from others is proposed to have all three theoretical dimensions: Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change. When individuals believe that discussion partners will empathize and see from their point of view, they tend to feel a stronger liking and more comfortable bringing up challenging topics without jeopardizing their relationships (Goldstein et al., 2014; Kindt et al., 2017). In addition, if people believe their mistakes will not be held against them by their conversation partners, they may be more open to engaging in the future. Finally, people are more incentivized to approach someone willing to revise their stance and learn from difficult conversations, even if they disagree politically (Knöchelmann & Cohrs, 2024). Perceived grace given from romantic partners is found to be negatively correlated with hostile, aggressive, and degrading thoughts (Cook, 2013; McCarthy, 2012). The current research

suggests that perceived grace from others is also likely to encourage greater willingness to engage in political talk.

Despite promising theoretical reasons suggesting that grace can be crucial in conflict and reconciliation in both academic theory and popular culture (Campbell & Putnam, 2011; Helgeson, 2014; Holland & Silvers, 2019; Putnam & Campbell, 2012; Scarre, 2011), the relationship between human grace and everyday political talk remains unexplored empirically. Furthermore, there is a dearth of measures focusing solely on human grace across different contexts (Hodge et al., 2022). Finally, existing grace scales have not explored other theoretical dimensions beyond relational ones (i.e., to self, to others, from others). To address this gap, Studies 1, 2, and 3 seek to develop and validate three multidimensional measures of grace that can be used as tools to help foster cross-partisan engagement. In tandem with the development and validation efforts, Study 4 expands on the findings by testing causal effects of human grace on political discourse. Most importantly, this series of studies demonstrates the first empirical investigation of the relationship between human grace and everyday political talk, potentially offering a positive solution to counter the escalating divisive narratives (Urahn & Dimock, 2023).

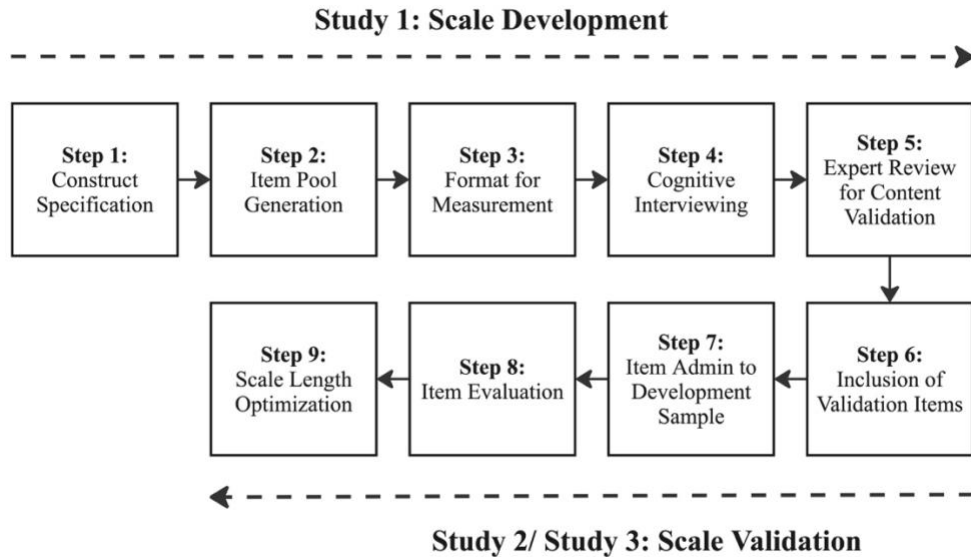
Chapter 3: Empirical Studies

To establish the quality and applicability of the three Human Understanding of Grace (HUG) scales, we should demonstrate that they have good reliability, as well as construct, content, and criterion validity. The studies discussed in this chapter contributed to the evaluation of content validity, construct (i.e., convergent and discriminant) validity, and criterion validity (i.e., predictive, and incremental).

Studies 1, 2, and 3 adopted the nine-step process outlined by DeVellis and Thorpe (2021; see Figure 2 for a visualization of all steps) to empirically develop and validate the HUG scales developed from the pilot study. Study 1, an expert review panel study established content validity through the first five steps. Utilizing a longitudinal design, Study 2 implemented the remaining Steps 6 to 9 to assess the measures' construct validity (i.e., convergent and discriminant). However, only Perceived HUG from Others demonstrated good factor structure in this study, indicating that the HUG to Self and to Others scales required additional refinements. Thus, Study 3 replicated the design and procedures of Study 2 with the aim of improving these two scales. Additionally, Studies 2 and 3 assessed criterion validity of the three HUG scales, assessing whether human grace predicted the frequency, level of disagreement, and the willingness to engage in everyday political talk with others in one's social circles. Finally, Study 4 employed an experiment to explore the application of Perceived HUG from Others scale in having political discussions with strangers.

Figure 2

DeVellis and Thorpe's Nine-Step Process for Scale Development (2021)



This chapter is organized by study with discussions of the methodological considerations corresponding to the steps in DeVellis and Thorpe's model.

3.1 Study 1: Scale Development

Following the first five steps of DeVellis and Thorpe's model (2021), Study 1's goal was to develop content valid items (i.e., the items adequately represent the underlying variables of grace) for the three HUG scales. This purpose was accomplished by defining the construct of interest, generating various items that captured the construct using quotes from the pilot study, deciding on the format of the measure, pilot testing the item clarity with a non-expert sample, and conducting an expert panel study for content validity.

Pre-Study Considerations based on DeVellis and Thorpe’s Model

Step 1: Construct Specification

The first step in the scale development process is establishing clearly what was being measured (DeVellis & Thorpe, 2021). Although not always possible, the definition of the construct should be as clear as possible (Kyriazos & Stalikas, 2018). Thus, the definition of human grace as a *voluntary gift of understanding and acceptance to self, others, and from others*, and its three underlying dimensions (i.e., Empathy & Perspective-Taking; Forgiveness & Acceptance, and Allowing Space for Growth & Change) were used as the basis. Moreover, specifying the context for the measure could further increase clarity (DeVellis & Thorpe, 2021): The HUG scales were designed to measure how individuals perceived and enacted grace to self and others during difficult conversations across political, moral, and social issues. The items for the HUG scales captured cognitive, affective, and behavioral aspects. Lastly, the target population was U.S. adults aged 18 and older, with no additional exclusion criteria.

Step 2: Item Pool Generation

The item-generation process combined both deductive and inductive approaches. Deductively, prior literature on grace provided an initial framework by categorizing human grace into three subscales: grace to self, to others, and grace from others (Bufford et al., 2017). However, despite sharing an overarching definition, the current study conceptualized these as distinct constructs necessitating separate measures. Particularly, some people may frequently give others grace yet hold themselves to higher standards, and vice versa. This argument paralleled the self-compassion and compassion literature, where two distinct scales were formed for compassion towards self versus others (Neff, 2003; Pommier et al., 2020).

Results from the pilot study, lay participants' responses to open ended questions related to grace, were used inductively to identify three dimensions of grace (Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change). These three dimensions and existing measures (i.e., Bufford et al., 2017; Hackett et al., 2017; Krumrei-Mancuso & Rouse, 2016; Leary, 1983; Neff, 2003) guided the formulation of items. Based on methodological recommendations, five to eight items were generated for each dimension (MacCallum et al., 1999; Velicer & Fava, 1998). Additionally, both positive and negative worded items were used to avoid agreement bias - respondents' inclinations to agree with the statements irrespective of the actual content (DeVellis & Thorpe, 2021). Moreover, using mixed wording could distinguish genuine responses (i.e., agreeing with positive items and disagreeing with negative items) from participants who straight-lined their answers (i.e., rating all items as "4 = Somewhat agree" regardless of content; Podsakoff et al., 2003).

The initial HUG to Self scale included 14 cognitive, affective, and behavioral items across two dimensions: Self-Forgiveness & Self-Acceptance and Allowing for Self-Growth & Change. As Empathy & Perspective-Taking were constructs strictly concerned with others beyond the self, this dimension was excluded from the HUG to Self scale. HUG to Others included 20 cognitive, affective, and behavioral items across all three theoretical dimensions. For clarity, the statements referred to "Others" as political conversation partners within respondents' social circles (i.e., family members, friends, coworkers) rather than strangers, as the majority of everyday political talk tend to be with people in the former categories (Conover & Miller, 2018; Wyatt et al., 2000). Finally, Perceived HUG from Others items were developed across all three dimensions (i.e., Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change). Unlike the other two HUG scales that measured one's own tendencies, all 16

items from this scale were observable behavioral statements about a specific person. However, unlike HUG to Others that generalized to people within one's social circles, the target for Perceived HUG from Others targeted a single individual.

Step 3: Format for Measurement

This next step outlined how the scales should be presented to respondents. A 5-point Likert scale was used as the format, with options ranging from 1 = Strongly Disagree to 5 = Strongly Agree. For the HUG to Self and to Others scales, participants were asked to rate the degree to which each statement was true for them. The final scale, Perceived HUG from Others, was highly dependent on the "other" being evaluated. Thus, this scale asked respondents to reflect on a specific conversation partner and score them on a 5-point Likert scale under the following series of prompts.

"Think about the most recent social, moral, or political conversation that you had with someone in your life. What was their relationship to you (romantic partner, family member, friend, coworker, neighbor, other)? What was the conversation topic? How much did you align with this person's opinions on the topic? Now indicate the degree to which you agree that each statement might be true for this person."

Step 4: Cognitive Interviewing/ Initial Pilot Testing of Items

Cognitive interviewing uses qualitative data to examine how potential respondents understand the items (DeVellis & Thorpe, 2021; Willis, 2004).⁴ A scale should be accessible and interpretable to the intended target population. As many scale items were already developed based on laypeople's definition of grace, cognitive interviewing was not formally conducted. A brief pilot test of items was administered to non-expert U.S. citizens ($N = 6$) from the primary

⁴ The order for Steps 4 and 5 were accidentally switched from the recommendations from DeVellis & Thorpe (2021). However, the order did not affect the outcomes significantly and was presented how it was conducted.

author's network. No demographic information was collected to ensure anonymity. Respondents received instructions to think about their experiences with difficult conversations across social, moral, and political issues; intentionally omitting that the scale sought to measure grace. Participants were asked to mark any items that were unclear or confusing to them (adapted from Neff, 2003). The survey ended with an open-response question for participants to elaborate on their feedback. Only one item from HUG to Self, "I am hard on myself when I struggle to articulate my views in political conversation," was flagged by more than one participant for being challenging to answer. As a result, it was revised to "I tend to be critical of myself when I don't handle a political conversation well" for better readability. No other changes were made to items of any of the scales.

Step 5: Expert Review for Content Validity

Expert validation is crucial to ensure that the HUG scales were measuring grace (DeVellis & Thorpe, 2021). Experts were asked to evaluate the following aspects of the items from each of the three scales: 1. The relevance of the items, 2. Whether there were any missing yet relevant dimensions, and 3. Additional feedback or items suggestions. For this process, a minimum of three subject matter experts (SMEs) are recommended, but no more than ten are needed (Lynn, 1986). To be considered eligible for this process, all experts had to hold a doctorate in their respective fields, have at least 10 years of experience in related-topics (i.e., grace, religion, political conflict) or methodology (i.e., scale development, experimental design) through their roles as faculty in academic institutions and/ or prior publications in peer-reviewed journals. Experts participated in one of two phases of Study 1. One sample provided qualitative feedback on the items generated and a second sample provided feedback on a quantitative measure created based on experts' responses to the initial items in the first phase.

Samples

In the first phase, the definition of human grace and the initially generated scale items were presented to three experts in the fields of conflict resolution, organizational psychology, and religion to establish content validity. The experts were identified through the dissertation committee's network and experts were asked to provide qualitative feedback on the three HUG Scales and their respective items.

In Phase 2, seven SMEs who developed and published their own measures of grace or wrote about grace in a political context were contacted to participate in a content validation survey for the HUG scales. As the authors did not have prior relationships with any of the SMEs in Phase 2, an invitation email was sent out through the contact information provided in their respective published papers. Six experts started the survey (87% response rate). However, two did not complete the questionnaire, and thus, only four responses (2 female, 2 male) were considered for the final analysis (57% completion rate; see Appendix D for the prompt provided to experts in Phase 2).

The final sample size was seven SMEs throughout the entire expert validation process: the three experts from the first phase (qualitative feedback) and four (quantitative survey) from the second phase. Three participants identified as female (43%), and four as male (57%). Six participants identified as White/ Caucasian, and one identified as Black/ African American. On average, participants had over 27 years of expertise in their respective fields ($SD = 7.02$).

Procedures

In the first expert validation phase, three SMEs received an invitation for feedback through an email containing an editable Word document. The document provided a one-page overview of the human grace definition from the pilot findings, along with the proposed scale

items, categorized into different theoretical dimensions (i.e., Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change) for the three HUG Scales. After receiving the SMEs' feedback, the principal investigator made adjustments to the scale items and sent them back to the same SMEs for further evaluation. This iterative process was repeated four times, where revisions were administered based on the experts' suggestions and the author's discretion (DeVellis & Thorpe, 2021).

Although the three SMEs in Phase 1 provided methodological and content-relevant insights, none of them had specifically worked with the grace construct before. To further validate the content of the measures, SMEs who had previously conceptualized and developed measures of grace were contacted in the second phase. This new set of SMEs received an email with a brief description of the purpose, the individualized reasons why they were invited, and a Qualtrics link to participate in the content validation study (see Appendix E for recruitment email format, adapted from Li, 2021; Nguyen, 2020). They were informed that their responses would be confidential, the survey would take 10-15 minutes, and their responses would inform the development of the scales. Upon entering the survey, participants were provided with the definition of human grace used in the study and were asked to rate a series of statements on their relevance to the provided definition on a four-point scale (1 = Not at all relevant; 4 = Highly relevant). Moreover, an open-ended feedback box was provided after every seven to eight items for participants to give qualitative feedback on any of the items. Although there was no monetary compensation, the SMEs were thanked for their valuable contribution upon their completion of the survey.

Analysis

Phase 1 employed the qualitative feedback from the three subject matter experts (SMEs) to arrive at the HUG to Self, to Others, and Perceived from Others measures that included 14, 20, and 16 items, respectively. Phase 2 analyzed the quantitative survey responses of four experts related to these items, meeting the minimum requirements of at least three experts (Lynn, 1986). The validity of items was evaluated using item content validity index (I-CVI), modified kappa statistic (k^*), and scale content validity index - universal agreement (S-CVI/UA; Polit et al., 2007; Wynd et al., 2003). First, the responses were dichotomized, with ratings of 1 and 2 coded as 0 (not relevant) while 3 and 4 ratings were coded as 1 (relevant). The formula used for calculating the item content validity index was:

$$\text{I-CVI} = \frac{\text{Number of experts giving the item rating 3 or 4 (relevant)}}{\text{Total number of experts}}$$

To illustrate, the total number of experts in this case was four, so three experts agreeing on a rating of 3 or 4 would yield an I-CVI of $3/4 = .75$. For a panel of four experts, I-CVI higher than .75 was considered good, allowing for one SME to disagree on the relevance of each item (Polit et al., 2007).

Second, SCVI-UA was calculated to test the overall relevance of the entire scale. Following the guidelines for S-CVI/UA (Polit et al., 2007), we first computed the proportion of items rated relevant from each expert. For example, Expert 2 rated 11 items out of 14 as 3 = quite or 4 = highly relevant, resulting in their individual S-CVI of .79. The final S-CVI/UA for the scale was the average of all SMEs' S-CVI. The scale development literature considered S-CVI/UA of .80 or higher acceptable (Davis, 1992; Grant & Davis, 1997).

The final index, the modified kappa statistic k^* , was added to control for random chance agreement among expert ratings (Polit et al., 2007; Wynd et al., 2003; Wynd & Schaefer, 2002).

Adapting Fleiss' Kappa (Fleiss, 1971), the k^* was introduced by Polit and colleagues (2007) under the following formula:

$$k^* = \frac{I-CVI - p_c}{1 - p_c}$$

Where I-CVI was computed using the previous formula, and p_c denoted the probability of raters agreeing with one another by chance: $p_c = [N!/A!(N-A)!] * 0.5^N$, where N represented the total number of experts and A was the number of experts agreeing that the item had good relevance. For a panel of four experts, a modified kappa k^* of 1.00 was considered excellent, and .63 was deemed as good (Cicchetti & Sparrow, 1981; Fleiss et al., 2003; Harris-Lacewell, 2007). Items that did not meet the requirements for any of the three indices should either be removed or modified until the scale achieved acceptable ratings (Lynn, 1986; Polit et al., 2007; Polit & Beck, 2006).

Results

Human Understanding of Grace to Self

Phase 2's expert ratings on the initial 14 HUG to Self items are presented in Appendix F. A numerical value of 0 indicated that the expert rated the items as not relevant, and 1 as relevant. The "Agree Count" column represented the total number of SMEs considering the item as relevant. Across the four experts, S-CVI ranged from 0.20 to 0.93, with S-CVI/UA of 0.70 for the HUG to Self. This S-CVI/UA did not meet the minimum acceptable requirements of .80 (Davis, 1992; Grant & Davis, 1997). Thus, removal and revision of items were required as the next step.

To account for item validity, the I-CVI and modified Kappa statistic k^* for each item were calculated (see Table 2). The I-CVI scores ranged from 0.25 to 1.00, and modified Kappa k^* scores were from 0.00 to 1.00. Among the 14 items, 2 items had a 100% relevancy agreement,

9 with 75%, 1 with 50%, and 2 remaining items with 25% agreement. As three SMEs had already provided their input in Phase 1 of the validation process, more lenient standards were applied during quantitative evaluations of items in Phase 2 to account for previous insights. Following the recommendations from Polit and colleagues (2007), 11 items that satisfied both I-CVI ($> .75$) and k^* ($> .63$) requirements were kept, one item with 50% agreement was revised based on expert feedback, from “I am disappointed with myself whenever I get emotional during a political conversation” to “It is hard to forgive myself when I say something inappropriate in a political conversation.” The remaining two items that did not meet the standard were dropped. After the modification, the new S-CVI/UA for the 12-item HUG to Self scale was at a satisfactory level of .80 (Davis, 1992; Grant & Davis, 1997).

Table 2

I-CVI and Modified Kappa k^ on 14 HUG to Self Items*

Item	I-CVI	Kappa k^*	Decision
1. I accept that I don't always have all the answers in political discussions.	1.00	1.00	Keep
2. I tend to be critical of myself when I don't handle a political conversation well (R).	0.25	0.00	Drop
3. After a political conversation, I tend to obsess and fixate on things I should have said (R).	0.25	0.00	Drop
4. I am disappointed with myself whenever I get emotional during a political discussion (R).	0.50	0.20	Revise
5. When I say something inappropriate in a political conversation, I remind myself it is part of being human.	1.00	1.00	Keep
6. I recognize that external circumstances, such as stress or fatigue, can cause me to communicate poorly in political discussions.	0.75	0.67	Keep
7. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect.	0.75	0.67	Keep

8. I believe I can learn and grow from political conversations, even when they are difficult.	0.75	0.67	Keep
9. I allow myself the time and space to reconsider my views after engaging in a political discussion.	0.75	0.67	Keep
10. I remain open to the idea that my political beliefs may change over time.	0.75	0.67	Keep
11. When I reflect on a political conversation, I focus on what I can learn rather than dwelling on what I should have done.	0.75	0.67	Keep
12. I remind myself that it's okay to walk away from a heated conversation and revisit the discussion later.	0.75	0.67	Keep
13. I try to understand why I might have reacted emotionally or defensively during a political conversation.	0.75	0.67	Keep
14. I often reflect on how my personal experiences shape my political views.	0.75	0.67	Keep

Note: (R) denotes reverse-coded items

Human Understanding of Grace to Others

The SMEs ratings in Phase 2 on the 20-item HUG to Others scale proposed are reflected in Appendix F, with 0 indicating “not relevant” rating and 1 “relevant.” Across the four experts, individual S-CVI ranged from 0.20 to 0.95. The S-CVI/UA for HUG to Others was below the recommended .80 level at 0.64 (Davis, 1992; Grant & Davis, 1997). The items were then under evaluation for retention.

Similar to HUG to Self, more lenient standards were applied during quantitative examination of items, as they were formerly reviewed by three experts in a qualitative process in Phase 1 of this study. The I-CVI and modified Kappa statistic k^* for each item were calculated to check for content validity (see Table 3). The I-CVI scores ranged from 0.00 to 1.00, and modified Kappa k^* scores were from -0.07 to 1.00. Out of 20 items, 3 items were considered relevant by all 4 experts, 11 items were relevant by 3 experts, 1 with 50%, and five items had less than 25% agreement. Subsequently, one item with 50% agreement was revised based on

feedback, and five items with low I-CVI and k^* were dropped (Polit et al., 2007), increasing HUG to Others' S-CVI/UA to .80.

Table 3

I-CVI and Modified Kappa k^ on 20 HUG to Others Items*

Item	I-CVI	Kappa k^*	Decision
1. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it.	0.75	0.67	Keep
2. I believe that people around me have good intentions, even if I find their political opinions difficult to accept.	0.75	0.67	Keep
3. Friends who disagree fundamentally with me on political issues are uninformed (R).	0.25	0.00	Drop
4. I seek to understand why certain political issues matter deeply to people around me, even if they don't resonate with me in the same way.	0.75	0.67	Keep
5. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others' opinions.	0.75	0.67	Keep
6. When discussing politics with a friend I disagree with, my goal is to win (R).	0.25	0.00	Drop
7. I understand that everyone has different viewpoints, and I try to approach political discussions with that in mind.	0.75	0.67	Keep
8. I try to be patient with others in political discussions, even when they make mistakes or misunderstand key points.	0.75	0.67	Keep
9. If my friend attacks me personally during a political conversation, it is only fair that I verbally fight back (R).	0.50	0.20	Revise
10. I feel annoyed when people around me get emotional during a political discussion (R).	0.25	0.00	Drop
11. If my friend offends me during a political discussion, they need to apologize (R).	0.25	0.00	Drop
12. I am willing to forgive people in my life for expressing a political view that I find offensive or uninformed.	0.75	0.67	Keep

13. I will stop talking with my friends who fundamentally disagree with me on moral, social, or political issues in my life (R).	0.25	0.00	Drop
14. I try to remain respectful even when there are political disagreements with my friends.	0.75	0.67	Keep
15. I believe the political opinions of people around me can change and evolve.	0.75	0.67	Keep
16. I encourage people around me to reflect on their political views without forcing them to agree with mine.	0.75	0.67	Keep
17. I am willing to discuss politics with my friends and family, even when they've offended me in past political discussions.	0.75	0.67	Keep
18. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other.	1.00	1.00	Keep
19. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements.	0.75	0.67	Keep
20. I try to create a safe space for people around me to express their thoughts without fear of judgment from me.	1.00	1.00	Keep

Note: (R) denotes reverse-coded items

Notably, the items that did not meet the I-CVI and k* standard for good relevancy were all reverse-coded items. This could be a result of unclear instructions from the survey and a few SMEs' unfamiliarity with reverse-coding in scale development. Thus, to ensure that there were relevant reverse-coded items, two new items were created as an addition to the HUG from Others scale. They were "I tend to dismiss my friends whenever they express moral, social, or political views I fundamentally disagree with," and "My friends who made political mistakes or misstatements in the past have lost all of their credibility and respect from me." The final 17 items were used in Study 2.

Perceived Human Understanding of Grace from Others

For the final scale, the S-CVI/UA for the 16-item Perceived HUG from Others was .86, exceeding the .80 minimum recommendation (Davis, 1992; Grant & Davis, 1997). Across the four experts, individual SMEs' S-CVI ranged from 0.63 to 1.00 (see Appendix F for all items individual ratings).

Similar to HUG to Self and Others, less stringent standards were applied during quantitative examination of items. The I-CVI and modified Kappa statistic k^* for each item were calculated to check for content validity (Table 4). The I-CVI scores ranged from 0.50 to 1.00, and modified Kappa k^* scores were from .20 to 1.00. Nine items had 100% inter-rater agreement, and five items with 75%. The remaining two items with 50% agreement were revised based on qualitative feedback. The new replacement items were: “This person often cuts me off if I say something they disagree with politically” (reverse-coded) and “This person will stop talking to me if I say something they find politically inappropriate or offensive” (reverse-coded).

Table 4

I-CVI and Modified Kappa k^ on Initial Perceived HUG from Others Scale Items*

Item	I-CVI	Kappa k^*	Decision
1. This person tends to ask thoughtful questions to better understand my perspectives, even if we disagree.	1.00	1.00	Keep
2. This person extends patience and understanding toward me if I struggle to articulate my views.	1.00	1.00	Keep
3. This person often dismisses me if I say something they disagree with (R).	0.50	0.20	Revise

4. This person often tries to respond with empathy, especially if I am frustrated or emotional during a political discussion.	1.00	1.00	Keep
5. This person often patiently listens to me when I take the time to explain my perspective.	1.00	1.00	Keep
6. This person will be mad at me for days if I offend them (R).	0.50	0.20	Revise
7. This person tends to look down on me if I say something politically incorrect (R).	0.75	0.67	Keep
8. This person tends to reference my past political mistakes or misstatements to discredit me in a conversation (R).	1.00	1.00	Keep
9. This person often allows me to explain my perspective, even when I've misspoken or misunderstood an issue.	0.75	0.67	Keep
10. This person often becomes defensive or hostile when I present political opinions that challenge their beliefs (R).	0.75	0.67	Keep
11. This person tends to shame and ridicule me if I change my political opinions (R).	0.75	0.67	Keep
12. This person often encourages me to reflect on my views without pressuring me to agree with theirs.	1.00	1.00	Keep
13. This person often focuses on learning new perspectives rather than trying to "win" the conversation.	1.00	1.00	Keep
14. This person often uses mistakes made in political discussions as opportunities for dialogue and learning instead of criticism.	1.00	1.00	Keep
15. This person would never admit that they were wrong in political conversations (R).	0.75	0.67	Keep
16. This person tries to create a safe space for me to express my political opinions without judgment from them.	1.00	1.00	Keep

Note: (R) denotes reverse-coded items

Brief Discussion

The purpose of Study 1 was to consult subject matter experts in order to establish the content validity of each of the three HUG scales, ensuring that the items adequately represented the construct and theoretical dimensions underlying human grace (Lynn, 1986). Based on the

experts' feedback, items deemed irrelevant were omitted or revised. The resulting measures, HUG to Self, to Others, and Perceived from Others, consisted of 12, 17, and 16 items, respectively. Findings from the expert review process indicated that these three new HUG scales demonstrated sufficient content validity to proceed onto empirical validation in Study 2.

3.2 Study 2: First Scale Validation

Study 2 adhered to suggestions outlined by DeVellis and Thorpe (2021) through Steps 6 to 9 to examine the construct and criterion-related validity of the three HUG scales from Study 1. Step 6, Inclusion of Validation Items, suggested adding measures to control for response bias and test for construct validity (i.e., convergent and discriminant). Step 7, Item Administration to a Development Sample, involved designing and conducting this study. After data collection concluded, Step 8, Item Evaluation, included factor analyses and regression to test reliability, dimensionality, predictive, and incremental validity. Lastly, evaluations were made on whether the scales could be shortened without sacrificing reliability and validity in Step 9. Considerations for each step are first outlined below, followed by an overview of Study 2's methodology, analysis, and results.

Pre-Study Considerations from DeVellis and Thorpe's Model

Step 6: Inclusion of Validation Items

The purpose of Step 6, Inclusion of Validation Items (DeVellis & Thorpe, 2021) was to help establish the construct and predictive validity of the HUG scales. First, we include a measure of social desirability to control for bias that may otherwise negatively impact the validity of the HUG scales. Social desirability refers to when individuals prioritize responding in ways that make themselves look good according to societal standards rather than true to themselves (Crowne & Marlowe, 1960; Grimm, 2010). For example, a person might say that

they volunteer for a charitable cause every week despite never participating in one in their entire life to appear more altruistic. To address this potential bias, ten items from the short-form version of the Marlowe-Crowne Social Desirability Scale by Strahan and Gerbasi (Strahan & Gerbasi, 1972) were included among the three HUG scales items to control for potential noise in establishing criterion-related validity caused by this phenomenon.

Second, we included existing measures of related constructs to help establish the HUG scales convergent validity. Specifically, as the HUG scales claimed to measure grace, they should be positively related to other existing grace scales. The Study 2 included three grace scales to test for convergent validity, as detailed below. Additionally, we included measures of personality constructs (i.e., extraversion, neuroticism) that the HUG scales should not correlate highly with to establish the scales' discriminant validity.

Third, to establish predictive validity, the HUG scales should be related to important political outcome measures such as frequency, level of disagreement in political discussions, willingness to self-censor, and willingness to communicate about politics. Finally, a few factors impacting everyday political talk identified in prior literature was included as control variables for incremental validity (Hodge et al., 2022). Figure 3 presents the validation measures used for each HUG scale.

Figure 3

Validation Measures for Human Understanding of Grace Scales

	HUG to Self	HUG to Others	Perceived HUG from Others
Convergent & Incremental Validity	PEGS to Self (5 items)	PEGS Unconditional Grace to Others (4 items)	GRACE's Grace-Receiving (4 items)

Discriminant Validity	Social desirability (10 items), Extraversion (2 items), and Neuroticism (2 items)		
Control Variables	Political interest (2 items), Internal political efficacy (2 items), Openness (2 items), Gender, and Level of education		
Predictive Validity	Frequency of everyday political talk (5 items), Level of disagreement, Willingness to self-censor (8 items)	Frequency of everyday political talk (5 items), Level of disagreement (5 items)	Willingness to communicate about politics (6 items)

Step 7: Item Administration to a Development Sample

The purpose of this step was to establish the construct and predictive validity of the three HUG scales. This was done by administering the scales at two points in time; Time 1 data was used to establish the construct validity of the scales while Time 2 data was used to establish the predictive validity of the scales. DeVellis and Thorpe (2021) emphasized administering the item pool to a “sufficiently large sample.” Multiple guidelines have been offered regarding determining a good enough sample size. Nunnally (1978) suggested that a sample size of 300 should be sufficient regardless of the number of items (DeVellis & Thorpe, 2021), although a smaller sample size is acceptable if there are fewer than 40 items. Others have suggested that the best way to decide on the number of participants is the sample-to-item ratio ($N:p$), where N denoted the sample size and p represented the number of items (Williams et al., 2010). The ideal sample-to-item ratio varies across recommendations, ranging from 3:1, 6:1, 10:1, and 20:1. As the longest HUG scale had 20 items, 200 participants would allow for factor analysis with a ratio of 10:1.

The second consideration for sample size was the type of analyses required. None of the items from the three HUG scales had been empirically tested; thus, exploratory factor analyses were needed to test the theoretical propositions. To further empirically validate the scale items,

confirmatory factor analysis was conducted with different participants to avoid model overfitting (Fokkema & Greiff, 2017). A minimum sample size of 400 was adopted for factor analysis for the first survey (Time 1), which was large enough to split into two subsamples (DeVellis, 2003): 200 responses for the exploratory factor analysis and the remaining 200 for the confirmatory factor analysis.

To establish the predictive validity of each of the three HUG scales, a smaller second survey measuring outcomes that the three HUG scales proposed to predict was conducted at a later time (Time 2). Priori estimation from G*Power 3.1 indicated a minimum of 55 participants for linear multiple regression with a medium effect size ($f^2 = 0.15$), $\alpha = .05$, and power of .80 (Faul et al., 2009). A subset of 180 participants from $N = 400$ participants from Time were randomly sampled for the Time 2's survey ($N = 180$).

Step 8: Item Evaluation

The purpose of this step was to analyze the data from Step 7 with a focus on the performance of the items in each scale. Specifically, this step focused on how each item statistically performed in relation to the others. It involved examining inter-item correlations, item-scale total correlations, and each item's mean and variance within each HUG scale. Moreover, whether items loaded onto their theoretically proposed factors within the scale and each scale's internal reliability were evaluated.

Step 9: Scale Length Optimization

This last step sought to assess whether shorter HUG scales could be developed that had sufficient reliability and validity (DeVellis & Thorpe, 2021). While a shorter scale could reduce the cognitive load on respondents, brevity should not compromise the quality of the measures.

Overview

Study 2's main goal was to empirically validate the three Human Understanding of Grace scales. As part of establishing the predictive validity of these scales, we assessed whether the HUG scales predicted a higher willingness to engage in everyday political talk with others within their social circles using a longitudinal design. Data for this study was collected at three different points in time - Time 1, Time 1.5, and Time 2, chronologically – that each served a different purpose in the development and validation of the three HUG scales (see Figure 4). Time 1 included the three HUG scales from Study 1 and measures that allowed us to assess convergent and discriminant validity. Time 2 included criteria related measures, related to political talk, that allowed us to assess the predictive and incremental validity of the three scales.

Data was also collected between Time 1 and Time 2 data (referred to as Time 1.5). Based on results from Time 1, changes were made to the the HUG to Self and to Others in an attempt to improve them. A week after the Time 1 data were collected, the Time 1.5 survey was conducted with revised items for the HUG to Self and to Others scales. The data were collected from a random subset ($N = 201$) of Time 1 participants. However, due to potential bias caused by participants taking some of the HUG to Self and to Others items twice, these two revised scales were not included in empirical validation in this study.⁵ Instead, Time 1.5 provided an opportunity to preliminarily evaluate test-retest reliability for HUG to Self and to Others scales.

⁵ This was not a concern for the Perceived HUG from Others scale, which showed promising results the first time and was not repeated in Time 1.5.

Figure 4

Study 2 Measures and Analyses

Time 1, N = 401	Time 1.5, N = 200	Time 2, N = 180
Measures	Measures	Measures
HUG to Self (12 items) HUG to Others (17 items) Perceived HUG from Others (16 items) PEGS' Grace to Self PEGS's Unconditional Grace to Others GRACE's Grace-Receiving Extraversion Neuroticism Social Desirability Bias Attention Check Demographics	Revised HUG to Self (14 items) Revised HUG to Others (19 items) Attention Check	Willingness to Self-Censor Frequency of Everyday Political Talk Level of Disagreement in Political Discussion Willingness to Communicate about Politics Political Interests Internal Political Efficacy Openness Attention Check Demographics
Purpose/Analysis	Purpose/Analysis	Purpose/Analysis
Dimensionality (Exploratory and Confirmatory Factor Analyses) Convergent Validity Discriminant Validity	Revise HUG to Self and HUG to Others Items Preliminary Test-Retest Reliability	Predictive Validity Incremental Validity

Note: The total number of different participants was $N = 401$.

Samples

Due to the nature of the research questions, only participants who were at least 18 years old, resided in the U.S. at the time of the survey, and were American citizens for voting eligibility were included. The data quality was controlled via attention checks, completion time,

and bot detection using Google ReCAPTCHA integration within Qualtrics. One attention check, “Please select strongly disagree for this question,” was included to ensure participants were reading the statements carefully. Additionally, assuming that each question would take at least 3 seconds, any participant completing the survey faster than the product of 3 seconds multiplied by the total number of questions was removed.

Time 1. Seven participants flagged as bots were contacted via Prolific messaging to check for authenticity. After confirming that they were real participants through their responses, the seven responses were retained. Time 1 included a total of $N = 401$ participants after removing participants with: incomplete responses ($n = 12$), attention check failures ($n = 11$), and response times below 267 seconds ($n = 2$). Among the 401 participants (see Table 5 for all demographics), 47.1% identified as women, 51.4% as men, and 1.2% as non-binary or third gender. The largest racial category was White/ Caucasian (40.1%), followed by Black/ African-American at 22.4%, East Asian/ South Asian/ Southeast Asian at 19.2%, 8.0% identified as Mixed/ Multiracial, 6.0% as non-White Hispanic/ Latino, and 2.5% as other racial groups (i.e., Indigenous People, Middle Eastern/ North African). For political affiliation, 36.2% were Democrats, 27.9% were Independents, and 35.4% were Republicans. More than half of the respondents identified with various branches of Christianity (59.6%), 27.7% were not religious, and 8.5% from other religions (e.g., Buddhists, Muslims, Hindus). Lastly, for the highest level of education achieved, 0.2% had less than a high school degree, 29.2% held a high school or Associate’s degree, 39.4% had a Bachelor’s, and 30.2% had a graduate degree (i.e., Master’s, J.D., Ph.D.).

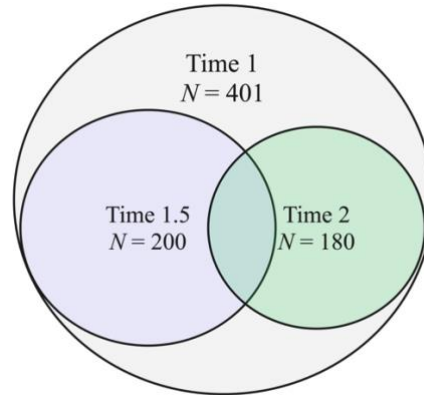
Time 1.5. For Time 1.5 survey, 201 participants were randomly recruited from the Time 1 sample. Only one participant was removed for attention check failure; the remaining 200 responses passed with reasonable completion time ($N = 200$). Similar to Time 1, the gender

distribution was fairly balanced between male and female participants (see Table 5). The largest racial groups were: White/ Caucasian at 34.4%, Black/ African-American at 23.9%, and East Asian/ South Asian/ Southeast Asian at 21.4%. For political affiliation, 37.6% were Democrats, 27.2% were Independents, and 33.7% were Republicans. More than half of the respondents identified with various branches of Christianity (55.7%) while almost a third did not consider themselves religious (29.2%). Finally, for education, 34.6% held a high school or Associate's degree, 39.2% had a Bachelor's, and 25.9% had a graduate degree.

Time 2. Finally, for the Time 2 survey, a random subset of 188 participants who took the Time 1 survey were sampled. Two participants who had incomplete responses and six who failed the attention checks were removed ($n = 8$ total removed). All remaining participants passed the minimum completion time (longer than 168 seconds), making the final count $N = 180$ participants. Of the 180 Time 2 respondents, 55 participated in all three surveys, and thus, took the HUG to Self and Others twice, while 125 participants only participated at Times 1 and 2 (see Figure 5 for a Venn diagram of the samples). In terms of demographics in Time 2, 47.3% identified as women, 51.6% as men, and 1.1% as non-binary or third gender. Many participants identified as White/ Caucasian (36.7%), followed by East Asian/ South Asian/ Southeast Asian at 20.7%, Black/ African-American at 20.6%, Mixed/ Multiracial and non-White Hispanic/ Latino each took up 9.4%, and 13.2% identified with other racial groups. For political affiliation, participants were somewhat evenly distributed across Democrats, Independents, and Republicans (see Table 5 for demographics). More than half of the respondents identified with various branches of Christianity (57.1%), 28.9% were not religious, and 10.0% from other religions. Lastly, for education, 27.2% held a high school or Associate's degree, 40.1% had a Bachelor's, and 31.7% had a graduate degree.

Figure 5

Venn Diagram of Study 2's Samples



Note: The number of overlapping participants between Times 1.5 and 2 was 55.

Table 5

Study 2's Demographics across Times

Category	Time 1 (N = 401)	Time 1.5 (N = 200)	Time 2 (N = 180)
<i>Race</i>	%	%	%
Black/ African-American	22.4	23.9	20.6
East Asian/ South Asian/ Southeast Asian	19.2	21.4	20.7
Hispanic/ Latino	6.0	4.3	9.4
Mixed/ Multi-Racial	8.0	7.5	9.4
White/ Caucasian	40.1	34.4	36.7
Other (i.e., MENA, Indigenous People)	2.5	7.9	13.2
<i>Gender</i>			
Female/ Woman	47.1	49.1	47.3
Male/ Man	51.4	50.1	51.6

Non-Binary/ Third Gender	1.2	0.2	1.1
<i>U.S. Political Affiliation</i>			
Democrat	36.2	34.4	35.5
Independent	27.9	36.2	31.7
Republican	35.4	28.9	32.8
<i>Age</i>			
18-29	26.7	26.2	21.7
30-39	28.9	29.9	27.8
40-49	20.4	19.4	20.5
50-59	15.5	15.0	18.3
60 years old and above	8.2	9.0	11.7
<i>Religious Affiliation</i>			
Christian	59.6	55.7	57.1
Non-Religious	27.7	29.4	28.9
Other Religion (i.e., Buddhist, Muslim, Hindu)	8.5	13.9	10.0
<i>Education</i>			
Less than a High School Degree	0.2	0.0	0.2
High School/ Associate's Degree	29.2	34.6	33.7
Bachelor's	39.4	39.2	37.2
Graduate Degree	30.2	25.9	27.8

Procedures

Overview. The data collected at Time 1, 1.5, and 2 served to help establish the validity of each of the three HUG scales in different ways. The purpose of Time 1 data was to provide evidence of construct validity. The Time 1 survey included: the three HUG scales, existing grace to self, to others, and from others measures to establish convergent validity, and social

desirability, extraversion, and neuroticism for discriminant validity. The Time 1.5 data collected a week later provided an opportunity to preliminarily evaluate test-retest reliability for the HUG to Self and to Others measures. The Time 2 survey, conducted three weeks after the first, assessed predictive and incremental validity of the three HUG scales. This required measuring criteria variables related to political talk (i.e., frequency, level of disagreement, and willingness to communicate) and control variables likely to influence the criteria variables (i.e., internal political efficacy, political interest, openness).

Across all three surveys for Times 1, 1.5, and 2, participants were informed that the study sought to explore beliefs and behaviors in political discussions and would take approximately 18, 7, and 10 minutes, respectively. To mitigate bias caused by participants' different definitions of politics (see Conover & Miller, 2018; Fitzgerald, 2013), all three surveys opened with, "In this study, we define politics as matters concerning national government, local/ state concerns, foreign happenings, economics, and broad cultural and social issues" (adapted from Wyatt et al., 2000).

Time 1. Two versions of the Time 1's survey were implemented to control for the order in which the three HUG scales were presented. In the first version, participants completed measures in the following order: HUG to Self, Perceptions & Experiences of Grace Scale (PEGS)'s Grace to Self, Extraversion, Neuroticism, Social Desirability Bias, HUG to Others, PEGS' Grace to Others, and attention check. Items within each measure were presented in a randomized order. The next section asked respondents to think about their most recent political conversation with someone in their lives. To prime participants, they were then asked to specify their relationship with their latest conversation partner, the topic of their conversation, and how much their opinions aligned on that topic. This was followed by: Perceived HUG from Others,

another attention check, and GRACE's Grace-Receiving subscale. The second version of the Time 1's survey presented the perceived grace from others first, followed by grace to self, to others, convergent, and divergent measures. The scales within each section were presented in the same order as the first version. Lastly, both versions of the survey ended with demographic questions, and upon completion, participants were compensated \$2.75 for their time.

Time 1.5. A week after the Time 1 survey was conducted, Time 1.5's survey was launched consisting of the HUG to Self and to Others scales that included a mix of initial and new items. Respondents were asked to rate the degree to which each statement was true for them. Fourteen items for HUG to Self were presented first, followed by the 19 HUG to Others scale. The order of the items within each HUG scale was randomized. Participants who completed the survey were thanked for their time and rewarded with \$1.00.

Time 2. Finally, the Time 2 survey was conducted three weeks after the Time 1 survey to establish the predictive and incremental validity of each of the three HUG scales. Similar to the Time 1 survey, participants were first provided with the same definition of politics. The survey then asked participants to rate the measures presented in the following order: control variables (i.e., Political Interests, Internal Political Efficacy, Openness), outcome variables (i.e., Willingness to Self-Censor, Frequency of Everyday Political Talk, Level of Disagreement in political discussion), attention checks, and a final outcome variable (i.e., Willingness to Communicate about Politics with a specific person in their social circle). The final section was the demographic questionnaire. Participants were then directed to receive their payment of \$2.00 for finishing the survey.

Measures

Human Understanding of Grace (HUG) in Political Talk. All 45 items from the initially proposed three HUG Scales from Study 1 were administered in the Time 1 survey, with HUG to Self, to Others, and Perceived from Others consisting of 12, 17, and 16 items, respectively. In the Time 1.5 survey, the HUG to Self and to Others scales were slightly revised, resulting in 14 and 19 items accordingly (see Appendix I for all items). For HUG to Self and to Others, participants were asked to indicate the extent to which they agreed with the statements on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree. For Perceived HUG from Others, participants were asked to think about the person they most recently had a political discussion with and rate how true each statement might be for that person on the same 5-point Likert scale.

The following measures were included to test for convergent, discriminant, predictive, and incremental validity (see Appendix G for all items). All convergent, discriminant, and control measures were rated on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree.

Convergent and Incremental Measures (Time 1)

Perceptions and Experiences of Grace Scale (PEGS). The PEGS was a recently developed and validated multi-dimensional measure of grace (Rush, 2022; Rush et al., 2023). Two subscales measuring human grace from the PEGS were included to test for convergent and incremental validity for HUG to Self and Others. The two subscales were Grace to Self (5 items; Cronbach's alpha = .90) and Unconditional Grace to Others (4 items; $\alpha = .77$) including items such as "I accept myself even though I am not perfect" and "I am generous to others, even when I know they cannot repay me," rated on a 5-point scale.

Global Relational Attitude Conflict Exam (GRACE). The GRACE's Grace-Receiving subscale (4 items; $\alpha = .84$; Cook, 2013) was included to assess convergent and incremental validity for Perceived HUG from Others scale. Although the measure was developed for romantic relationships, the items could be applied to others within one's social circles. Additionally, the Grace-Receiving subscale did not mention a specific context and was generalizable to political conversation partners. Participants were asked to indicate their degree of agreement with statements such as "This person will do kind things for me without me asking."

Discriminant Validity Measures (Time 1)

Big Five Inventory (BFI). To assess the discriminant validity of the three HUG scales, two subscales from the Big Five Inventory (BFI; John et al., 1991; Rammstedt & John, 2020) were used: Extraversion (2 items; $\alpha = .51$) and Neuroticism (2 items; $\alpha = .65$). In addition, the Openness subscale from the BFI was tested and discussed in the control variable section. Despite being a concise measure, the BFI had been validated in numerous studies and generalizable across cultural contexts (Rammstedt & John, 2007).

Social Desirability Bias. Social desirability refers to participants' inclinations to respond in ways that would improve their social image (Crowne & Marlowe, 1960; Grimm, 2010). Following recommendations from DeVellis and Thorpe (2021), all 10 items from the short-form version of the Marlowe-Crowne Social Desirability Scale ($\alpha = .76$; Strahan & Gerbasi, 1972) were included in the Time 1 Survey.

Control Variables (Time2)

As discussed, all control variables were rated on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree. The variables represented constructs that were identified by prior literature to affect everyday political talk.

Openness. As part of the Big Five personality traits, openness has received an abundance of scholarly attention but has not been studied along with grace. Openness to Experience describes the willingness to encounter a wide variety of feelings, ideas, and activities (McCrae & Greenberg, 2014) and was strongly correlated with discussing politics with friends (Hibbing et al., 2011). People who give interpersonal grace will likely try to understand where the other person is coming from and, thus, are likely to be high on openness and interested in learning from diverse political perspectives. Two items representing Openness to Experience from the BFI ($\alpha = .54$; Rammstedt & John, 2007) were included as control variable.

Political Interest. Political interest is a strong predictor of everyday political talk (Schmitt-Beck & Neumann, 2023). As there is little consensus on a valid measure of political interests (Dubois & Blank, 2018; Eveland & Thomson, 2006; Park, 2019), this research agenda combined two items to measure this variable. One item was “I am interested in politics” (Eveland & Thomson, 2006) and the other was “I often keep up with political news and information.” The mean of the two items was used as measure of political interests ($\alpha = .85$).

Internal Political Efficacy. Internal political efficacy has been found to influence political participation (Park, 2019). The survey included two items from the American National Election Studies to measure internal political efficacy “I feel that I have a pretty good understanding of the important political issues facing our country” and “I think I am more

informed about politics and government than most Americans” on a 5-point Likert scale ($\alpha = .72$; adapted American National Election Studies, 2025; Park, 2019).

Outcome Measures (Time 2)

Four outcome measures were used to assess the predictive validity of the three HUG scales.

Frequency of Everyday Political Talk. Adapting approaches used in prior studies of everyday political talk (e.g., Eveland & Thomson, 2006; Gerber et al., 2012; Schmitt-Beck & Schnaudt, 2023), respondents were asked “How often do you talk about politics (both in-person and texting) over the past six months with 1. Romantic partner, 2. Family members; 3. Friends; 4. Neighbors; 5. Coworkers,” with responses ranging from 1 = Never, 2 = Once a month or less, 3 = Once a week, 4 = A few times a week, and 5. Daily or more than daily ($\alpha = .73$ and $\alpha = .77$).

Level of Disagreement in Political Talk. As a general measure of the level of disagreement in political conversations within their social circles, participants were asked how often they disagreed with 1. Romantic partner, 2. Family members, 3. Friends, 4. Neighbors, and 5. Coworkers when they talked about politics on a 5-point scale ($\alpha = .64$ and $\alpha = .81$; 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always; adapted from Wojcieszak, 2010).

Willingness to Self-Censor (WTSC). Self-censorship, individuals’ inclination to withhold their true opinions from those who might disagree, was also explored as an outcome criterion (Hayes et al., 2005). Utilizing the WTSC scale ($\alpha = .82$; Chan, 2018; Hayes et al., 2005), participants were asked to rate on a 5-point scale (1 = Strongly Disagree, 5 = Strong Agree) on eight questions to indicate their willingness to self-censor politically. Some of the items were: “It is difficult for me to express my political opinion if I think others won’t agree with what I say”; “There have been many times when I have thought others were wrong

politically but I didn't let them know"; and "It is easy for me to express my political opinion around others who I think will disagree with me" (reverse-coded). Higher scores on the WTSC scale indicated individuals' lower engagement when disagreement in opinions arose.

Willingness to Communicate About Politics (WTCAP). Developed by Kleinman and Kleinman (2015), the WTCAP measured participants' likelihood of actively engaging in an informal political discussion with a specific other in their social circles. Thus, this validated scale was suitable as a predictive measure for the Perceived HUG from Others scale. The WTCAP included 6 items (e.g., "Suppose you run into [this person] at a party. How likely would you be to engage in a conversation with this person about the topic of politics?") on a 5-point Likert scale from 1 = Very Unlikely to 5 = Very Likely ($\alpha = .93$).

Other Measures

Attention Checks. Two attention checks were included in all three surveys to test whether participants read the questionnaire carefully to inform their answers: "Please choose strongly disagree for this statement," and "For quality control, please select strongly agree for this question." Participants who failed one or both checks were removed from final analyses.

Demographics. Participants were asked to provide their demographic information, including race/ ethnicity, gender, age, religion, political affiliation, and highest education level achieved (see Appendix H for demographic questionnaires).

Analysis

The three HUG scales were analyzed and validated separately using only Times 1 and 2 data. However, the HUG to Self and to Others scales in Time 1 did not perform as well in factor analysis and excluded from further validation steps. Hence, test-retest reliability results using the

Time 1.5 survey will be discussed in the next study. Perceived HUG from Others were empirically validated with the following analyses.

The first step was to examine the mean, standard deviation (SD), variance, normality, inter-item, and item-total correlations of all items from each HUG scale for preliminary analysis. To establish construct validity, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted. As none of the HUG scales items had been previously tested, EFA was needed to statistically test the theoretically proposed factor structures. CFA was then used to confirm the factor model on a separate sample to avoid overfitting (Fokkema & Greiff, 2017); thus, the datasets were randomly split into two equal subsets for EFA and CFA.

For EFA, principal axis factoring with oblique rotation (i.e., Promax; Hendrickson & White, 1964) was utilized. This allowed for factors to be correlated, theoretically assuming that people high in one factor of Perceived HUG from Others (e.g., Forgiveness & Acceptance) would tend to score high in the other dimension(s) of the same scale (e.g., Perceived HUG from Others' Allowing Space for Growth & Change; Finch, 2020). To consider the number of factors, scree plots, parallel analyses, and eigenvalues were considered. For item retention, the .40-.30-.20 rule was applied, keeping only items with loadings $>.40$ in their main factor, alternative factor loadings $<.30$, and the loading differences between the main and alternative factors were $>.20$ (Howard, 2016).

A series of competing CFA models was conducted to identify the best-suited for each HUG scale. They were the correlated-factor, uncorrelated-factor, unidimensional, second-order, and bifactor models. To assess and compare the fit of the CFA models, chi-square test (χ^2), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Residual (SRMR), Akaike Information

Criterion (AIC), and Bayesian Information Criterion (BIC) were examined (West et al., 2012, 2023).

Correlations were used to examine convergent and discriminant validity, another type of construct validity. Predictive validity was investigated using both simple linear and stepwise regressions to account for control variables. Finally, stepwise regressions were also employed to examine incremental validity.

The following sections of this chapter displays the results of the first scale validation of the three Human Understanding of Grace (HUG) scales in everyday political talk within *individuals' social circles*. Although all three scales were developed simultaneously using the same analytical methods, for ease of interpretation, the results are presented by scales rather than by validation steps.

Results: Perceived Human Understanding of Grace from Others

Preliminary Analysis

The mean, SD, variance, and normality for all 12 items from HUG to Self were examined. Kurtosis between -2 and +2 was considered acceptable to demonstrate a normal univariate distribution (George & Mallery, 2024). All items passed the normality check. The inter-item correlations ranged from .04 to .72, indicating no item pairs correlated at .80 or higher. Considering that there were fewer items, they were written to prioritize covering as many different aspects of Perceived HUG from Others as possible over repetition. Thus, no items were removed to control for multicollinearity (Beavers et al., 2013; DeVellis & Thorpe, 2021). Finally, to account for items that were not statistically relevant, items with item-total correlations (correlations between the item and the mean of the remaining items) lower than .40 were removed from the Perceived HUG from Others scale (DeVellis & Thorpe, 2021; Ladhari, 2010;

Loiacono et al., 2002; Wolfenbarger & Gilly, 2003). One item, “Q65. This person often uses mistakes made in political discussions as opportunities for dialogue and learning instead of criticism,” was dropped at $r_{drop} = .25$. Exploratory factor analysis was conducted on the remaining 15 items.

To prepare for construct validity tests, the sample ($N = 401$) was randomly split into two subsets, $n_1 = 198$ for EFA and $n_2 = 203$ for CFA. Chi-square statistics for categorical variables (i.e., gender, age, education, religion, and survey version) with the *tableone* R package indicated no significant difference across the two samples with the exception of race. Although there was a significant difference by race across the samples, $p < .001$, it has not been found to be empirically related to everyday political talk. As a result, this difference was not a major concern.

Construct Validity: Exploratory Factor Analysis (EFA)

After removing one item from preliminary analysis, an EFA using principal axis factoring extraction with oblique rotation was conducted on the remaining 15 items. Adhering to the steps outlined by Shrestha (2021) for assessments of suitability of the data, the Perceived HUG from Others achieved good Kaiser-Meyer-Olkin (KMO) results of .93 (suggested cut off $>.60$; Cerny & Kaiser, 1977; Kaiser, 1974; Nkansah, 2018), and significant Bartlett’s test of sphericity, $\chi^2(120) = 2049.85, p < .001$, indicating that the sample data was appropriate for EFA ($n_1 = 198$).

To determine the number of factors, eigenvalues, scree plot, and parallel analysis were considered. The general cutoff for eigenvalues is equal to or greater than 1 (Kaiser, 1960). Given that the rule for evaluating eigenvalues is somewhat rather arbitrary (Cliff, 1988; Turner, 1998), two other approaches were also considered. The scree plot, which suggested the optimal number

of factors around its break or “elbow” point, was also assessed (Figure 6; Cattell & Vogelmann, 1977). Finally, parallel analysis (Horn, 1965) has been found to outperform both former methods in determining the number of factors to retain (Haslbeck & van Bork, 2022). All three methods suggested a two-factor solution for Perceived HUG from Others, diverging from the theoretical proposition of three factors.

All items in the two-factor solution with Promax rotation passed the .40-.30-.20 rule (Howard, 2016). However, the items did not load on the three theoretically based distinctions but rather on whether they were positively or negatively worded, a common occurrence found in prior scale development work (e.g., Dodeen, 2023; Finney, 2001; Neff, 2003; Zhang et al., 2016). Per recommendations from the literature, the factor solution should account for at least 60% of the variance, although some have suggested a lower threshold of 50% (Hair, 2011; Shrestha, 2021). The two factors, labeled Presence of Grace and Absence of Grace, explained 61% of the cumulative variance (see Table 6 for item loadings).

Figure 6

Perceived HUG from Others EFA Scree Plot

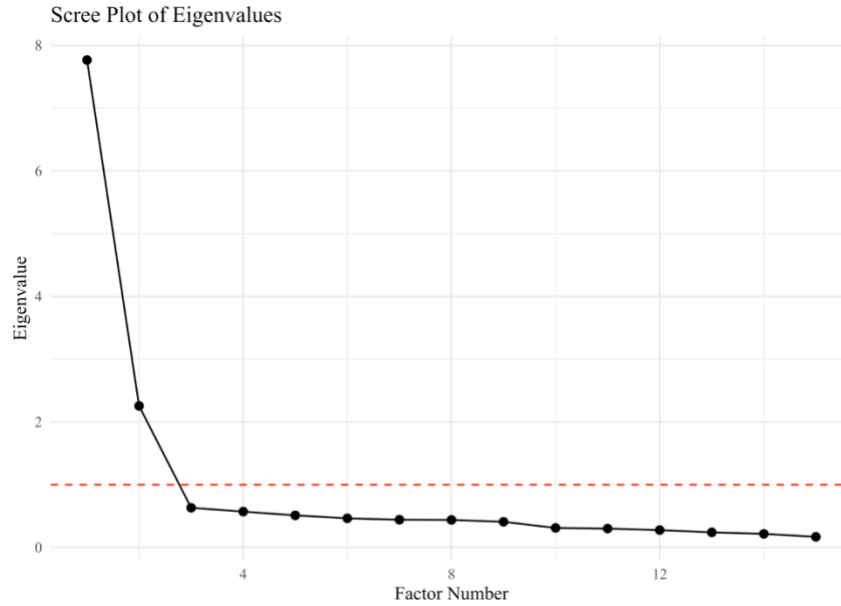


Table 6

Study 2 EFA Loadings, Perceived Human Understanding of Grace from Others

Perceived HUG from Others Items	Factor Loadings		Proposed Dimension
	1	2	
<i>Presence of Grace</i>			
Q52. This person tends to ask thoughtful questions to better understand my perspectives, even if we disagree.	.88		E&P
Q55. This person often tries to respond with empathy, especially if I am frustrated or emotional during a political discussion.	.84		E&P
Q67. This person tries to create a safe space for me to express my political opinions without judgment from them.	.83		G&C
Q56. This person often patiently listens to me when I take the time to explain my perspective.	.83		E&P

Q63. This person often encourages me to reflect on my views without pressuring me to agree with theirs.	.83	G&C
Q64. This person often focuses on learning new perspectives rather than trying to “win” the conversation.	.82	E&P
Q60. This person often allows me to explain my perspective, even when I’ve misspoken or misunderstood an issue.	.64	F&A

Absence of Grace

Q58. This person tends to look down on me if I say something politically incorrect (R).	.84	F&A
Q59. This person tends to reference my past political mistakes or misstatements to discredit me in a conversation (R).	.80	F&A
Q62. This person tends to shame and ridicule me if I change my political opinions (R).	.76	G&C
Q66. This person would never admit that they were wrong in political conversations (R).	.66	G&C
Q61. This person often becomes defensive or hostile when I present political opinions that challenge their beliefs (R).	.66	E&P
Q54. This person often cuts me off if I say something they disagree with politically (R).	.59	E&P

Eigenvalue	7.84	2.42
Variance Explained (%)	36	25
Cronbach’s Alpha	.92	.89
McDonald’s Omega	.94	.93

Note: G&C = Allowing for Growth & Change, F&A = Forgiveness & Acceptance, E&P = Empathy & Perspective-Taking; (R) marked reverse-coded items.

The first factor from EFA contained eight items from all three theoretical dimensions and described observable, grace-giving behaviors from another person. For longer scales, DeVellis and Thorpe (2021) recommended removing items to shorten them without compromising quality. One item, “Q53. This person extends patience and understanding toward me if I struggle to articulate my views,” was dropped as it was theoretically similar to another higher loading item, “Q56. This person often patiently listens to me when I take the time to explain my perspective,” from the Empathy & Perspective-Taking dimension; $r_{\text{inter-item}}(401) = .72; p < .001$ (see Appendix I1 for all factor loadings). Furthermore, dropping Q53 did not significantly affect the reliability of the factor, adhering to Step 9 of the DeVellis and Thorpe’s model (2021). Presence of Grace with seven items achieved excellent reliability of $\alpha = .92$ and $\omega = .94$, accounting for 36% of the variance.

The remaining seven items loaded onto the second dimension, Lack of Grace. This dimension accounted for 25% of the variance, describing behaviors that were not considered grace offered from another person. Item Q57, “This person will stop talking to me if I say something they find politically inappropriate or offensive,” was removed to shorten the scale while maintaining good reliability ($\alpha = .89$ and $\omega = .93$ with six items). The six items for Lack of Grace represented all theoretical dimensions of Forgiveness & Acceptance, Empathy & Perspective-Taking, and Allowing for Growth & Change.

The correlation between the two factors were high at .56, suggesting that they were tapping into similar constructs but not so high ($>.80$) that there were concerns of overlap and redundancy (Rönkkö & Cho, 2022).

Construct Validity: Confirmatory Factor Analysis (CFA)

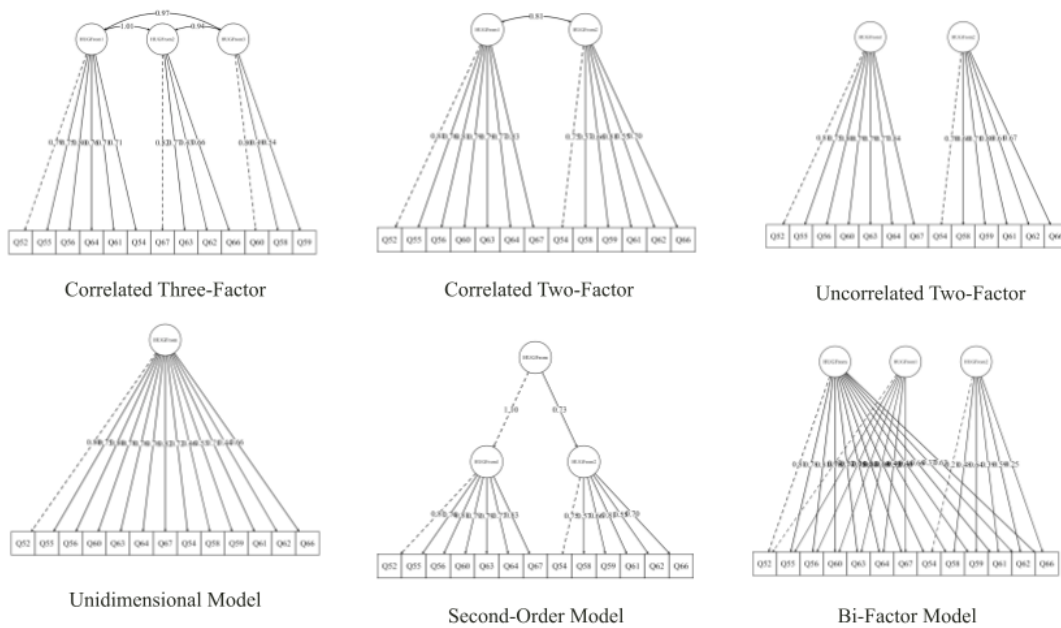
CFA Overview and Assumptions Check. A CFA of this HUG scale was conducted using Time 1's second subsample ($n_2 = 203$) to confirm the factor structure from EFA results. The sample was found to be adequate for factor analysis with KMO = .90 and a significant Bartlett's test, $\chi^2(136) = 1180.09, p < .001$. However, the data did not pass the normality test on both Mardia's multivariate and Anderson-Darling's univariate tests at $p < .001$. Considering non-normal data can lead to erroneous inference for the maximum likelihood method in confirmatory factor analysis (Yuan, 2005), the Robust Maximum Likelihood (MLR) was utilized. The MLR, compared to regular maximum likelihood, was found to outperform other methods for a sample size of 200 on non-normal data (Li, 2016).

CFA Models. Following suggestions from Credé and Harms (2015), six competing CFA models were conducted on the Perceived HUG from Others scale (see Figure 7 for a visualization of all models; $n_2 = 203$). First, a correlated three-factor model based on the theoretical proposition was generated. Second, the next model tested was the oblique (i.e., correlated) two-factor model identified from the EFA result: Presence of Grace and Absence of Grace. The third model tested an orthogonal (i.e., uncorrelated) two-factor model, which assumed there was no relationship between the factors by setting their correlations to zero. Next, the fourth model was a unidimensional model, which assumed that all 13 items loaded onto a single underlying factor representing perceived grace from others. The fifth model was a second-order model, similar to a mediation model. This model proposed that the 13 items first loaded onto two first-order factors, and these two factors then loaded onto another single second-order factor of perceived grace to others. The second-order factor explained why these two first-order factors were correlated, while the first-order factors acted as mediators for the second-order

factor and each of the 13 Perceived HUG from Others items. Finally, the sixth model tested a bifactor model, which allowed the 13 items to load simultaneously on a general factor consisting of all items and their specific group factors. The general factor represented the shared variance across all items, while the group factors captured the remaining variance that did not represent the perceived grace from others construct.

Figure 7

All CFA Models, Perceived Human Understanding of Grace from Others



Model Fit Evaluation. Model fit answers the question of whether the hypothesized model fits the observed data adequately (West et al., 2012, 2023). Several fit indices were used to calculate fit across the models (see Table 7). A significant chi-square test (χ^2) would indicate poor overall model fit. However, the chi-square test tends to be heavily influenced by sample size, with samples greater than 200 often yielding significant results regardless of model performance (Bentler & Bonett, 1980; Byrne, 2016; Jöreskog, 1969; Schumacker & Lomax,

2004). To address this limitation, practical fit indices have been introduced, divided into absolute and comparative fit indices. While absolute fit is based on test statistic T or residuals (Yuan, 2005), comparative fit indices evaluate whether the hypothesized model performs significantly better than a baseline model (see West et al., 2023 for calculation descriptions). The Comparative Fit Index (CFI; Bentler, 1990) and Tucker-Lewis Index (TLI; (Tucker & Lewis, 1973) test goodness-of-fit (i.e., the closer the values are to 1, the better) between different models. A cutoff value of .90 for TLI and CFI was initially proposed by Bentler and Bonnett (1980). Later on, Hu and Bentler (1999) adjusted this to .95 for good fit. However, the cutoffs proposed by Hu and Bentler (1999) face several limitations and should be taken as rough guidelines, not absolute benchmarks (Fan & Sivo, 2007; Kline, 2016; Marsh et al., 2004; West et al., 2023). Thus, we used a value of .90 as a good fit and .95 as an excellent fit. In addition, Root Mean Square Error of Approximation (RMSEA; Steiger, 1990, 2016; Steiger & Lind, 1980) and Standardized Root Mean Square Residual (SRMR; Bentler, 1995) are absolute fit indices, measuring badness-of-fit (i.e., the lower the values, the better the fit). Criteria of .06 for RMSEA and .08 for SRMR were applied for model evaluations (Hu & Bentler, 1999). Using the above criteria, the correlated three-factor, unidimensional, and uncorrelated two-factor models were poor fits for the data. The correlated two-factor, second-order, and bifactor models demonstrated good to excellent fit.

Table 7*CFA Model Fit Indices, Perceived Human Understanding of Grace from Others ($n_2 = 203$)*

	Correlated Three- Factor	Correlated Two-Factor	Uncorrelated Two-Factor	Uni- dimensional	Second- Order	Bifactor
χ^2 (df)	177.32 (62)	112.91 (64)	219.10 (65)	117.23 (65)	111.15 (63)	77.73 (52)
CFI	.89	.95	.85	.89	.95	.98
TLI	.86	.94	.82	.87	.94	.96
RMSEA	.10	.06	.11	.09	.06	.05
90% CI	[.08, .11]	[.05, .08]	[.10, .12]	[.08, .11]	[.05, .08]	[.04, .08]
SRMR	.08	.06	.30	.08	.06	.03
AIC	7094.33	7004.72	7144.30	7091.04	7006.72	6996.59
BIC	7190.42	7094.17	7230.45	7177.19	7099.49	7168.88

Model Selection. Model selection identifies the best-fitting model for Perceived HUG from Others on the sample data ($n_2 = 203$). Although χ^2 , CFI, TLI, RMSEA, and SRMR are important statistics to evaluate whether a model is good, they are not designed to compare which model is better (Preacher & Yaremych, 2023; West et al., 2023). Thus, the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) values were examined to compare fit across the different models (Preacher & Yaremych, 2023; West et al., 2023). In general, lower AIC and BIC values were indicators of better fit. In case there were incongruences between AIC and BIC values, the BIC, which adjusted for model complexities, was well-suited to compare between less (i.e., unidimensional, correlated-factor) and more complex (i.e., second-order, bifactor) models. However, there have been concerns about the BIC being biased in favor of second-order models over bifactor models under certain conditions (Mansolf & Reise, 2017; Murray & Johnson, 2013; Raykov et al., 2024). As there has yet to be a definitive solution in the

literature, the AIC, which avoided the downsides of BIC, was prioritized as a comparison statistic across these two complex models (Raykov et al., 2024). Finally, when the AIC and BIC differences - calculated by subtracting one model's AIC or BIC from another's - across models were not statistically significant, generalizability to other population samples was considered more important than goodness-of-fit tests (Myung, 2000; Pitt et al., 2002; Pitt & Myung, 2002; Preacher et al., 2007; Preacher & Yaremych, 2023). According to Raftery (1995), a difference of 0-2 constituted weak evidence, 2-6 positive, 6-10 strong, and higher than 10 very strong evidence in favor of the model with a smaller BIC. Thus, according to BIC values, both the correlated two-factor and second-order models had significantly smaller BIC than the bifactor model, suggesting a better fit (Raftery, 1995; see Table 7). Even though the correlated two-factor had lower AIC and BIC than the second-order model, the difference was not significant (Haughton et al., 1997; Murray & Johnson, 2013; Raftery, 1995). Since higher-order models tend to have higher applicability and align more with theoretical arguments for multidimensional constructs (Koufteros et al., 2009), the second-order model was selected as the representative model for Perceived HUG from Others.

Internal Reliability. Cronbach's alpha (i.e., alpha or α) is the most commonly reported value to determine reliability for structural equation modeling studies (Cho, 2016). However, Cronbach's alpha faces limitations in CFA and SEM due to its assumption of equal factor loadings across indicators and is often misused (see Cheung et al., 2024; Cortina, 1993; Dunn et al., 2014; Flora, 2020). Thus, McDonald's omega, a type of construct reliability that did not have a similar assumption (Fornell & Larcker, 1981; Jöreskog, 1969; McDonald, 2013), was also considered in this research. Both Cronbach's alpha (α) and McDonald's omega (ω) values above .70 were considered acceptable and .80 good for scale reliability (Carmines & Zeller, 1979; Hair

et al., 2009; Lance et al., 2006; Nunnally, 1978). Perceived HUG from Others total ($\alpha = .92$, $\omega = .94$), Presence of Grace ($\alpha = .92$, $\omega = .95$), and Absence of Grace subscales ($\alpha = .84$, $\omega = .89$) all had good to excellent reliability above .80 (Carmines & Zeller, 1979; Hair et al., 2009; Lance et al., 2006; Nunnally, 1978). Additionally, omega_{hierarchical} (ω_h) was calculated as a reliability measure tailored to second-order models (Cheung et al., 2024; Kelley & Pornprasertmanit, 2016; Zinbarg et al., 2005). The ω_h of .93 suggested that the Perceived HUG from Others higher-order factor had good construct reliability (Reise et al., 2013; Table 8).

Table 8

CFA Second-Order Model Item Loadings and Reliability, Perceived HUG from Others

Factors & Items	Factor Loadings	AVE	Construct Reliability	Cronbach's Alpha
Presence of Grace		.63	.95	.92
Q67. This person tries to create a safe space for me to express my political opinions without judgment from them.	.83			
Q52. This person tends to ask thoughtful questions to better understand my perspectives, even if we disagree.	.81			
Q56. This person often patiently listens to me when I take the time to explain my perspective.	.81			
Q60. This person often allows me to explain my perspective, even when I've misspoken or misunderstood an issue.	.79			
Q63. This person often encourages me to reflect on my views without pressuring me to agree with theirs.	.79			

Q64. This person often focuses on learning new perspectives rather than trying to “win” the conversation.	.77			
Q55. This person often tries to respond with empathy, especially if I am frustrated or emotional during a political discussion.	.76			
Absence of Grace		.48	.89	.84
Q61. This person often becomes defensive or hostile when I present political opinions that challenge their beliefs (R).	.81			
Q54. This person often cuts me off if I say something they disagree with politically (R).	.75			
Q66. This person would never admit that they were wrong in political conversations (R).	.71			
Q59. This person tends to reference my past political mistakes or misstatements to discredit me in a conversation (R).	.66			
Q58. This person tends to look down on me if I say something politically incorrect (R).	.57			
Q62. This person tends to shame and ridicule me if I change my political opinions (R).	.56			
Perceived HUG from Others Second-Order Factor		.87/.49	.93	.92
Factor 1: Presence of Grace	1.10			
Factor 2: Absence of Grace	0.73			

Note: For the second-order factor, .87 is the AVE value with first-order factors, and .49 is with the individual items.

Model-based Internal Consistency. To further determine the quality of the second-order model, five criteria outlined by Credé and Harms (2015) were implemented. The first criterion was that the model should be able to reproduce the covariances among first-order variables of the Presence and Absence of Grace. χ^2 for the model was significant at $p < .001$ as a result of the large sample size. Second, the model must reproduce variable covariations as accurately as less parsimonious models (i.e., models using more parameters such as bifactor, correlated factor) and better than more parsimonious ones (i.e., models using fewer parameters such as unidimensional, uncorrelated factor; Credé & Harms, 2015). Table 9 presents the model comparison statistics between Perceived HUG from Others second-order and other alternative models using the Satorra-Bentler (2001) formula. The χ^2 difference test showed that the second-order model exhibited significantly better fit than more parsimonious models, satisfying part of the second criterion. There was no significant difference between the second-order and correlated-factor models. However, the bifactor model exhibited statistically lower χ^2 and better CFI than the second-order model. As the χ^2 difference test and CFI tend to be biased towards bifactor models (Murray & Johnson, 2013), the BIC difference suggested that the second criterion was met.

Table 9*Model Comparison Statistics for the Second-Order Model and the Four Alternative Models*

Perceived HUG from Others	χ^2	<i>df</i>	<i>p</i>	$\Delta\chi^2$	Δdf	<i>p</i>
Second-order model	149.62	63	<.001	-	-	-
More parsimonious models						
Unidimensional model	237.94	65	<.001	71.75	2	<.001
Uncorrelated two-factor model	291.20	65	<.001	178.63	2	<.001
Less parsimonious models						
Correlated two-factor model	149.62	64	<.001	0	1	not sig.
Bifactor model	91.49	52	.001	27.09	11	.004

Note: lavaan::lavTestLRT used standard χ^2 statistics, not the robust χ^2 that was reported for each model in the previous model.

The remaining three criteria involved examining statistics specific to the relationship among the factors within the second-order model. The third criterion was that the model should be “characterized by a higher-order factor that reproduced the covariation among first-order factors” (Credé & Harms, 2015; p. 855). The high target coefficient of 1.02 (i.e., TC; Marsh, 1987; Marsh & Hocevar, 1985) and the relative normed-fit index of 0.99 (i.e., RNFI; Mulaik et al., 1989) indicated that almost all of the covariation among lower-order factors was explained by the second-order factor. RMSEA-P was .06, meeting the maximum threshold of .08 (Williams & O’Boyle, 2011). Fourth, the model should explain sufficient variation in the first-order factors. The first-order factors loaded onto the second-order Perceived HUG from Others at 1.10 and 0.73, meeting the threshold of .70 (Johnson et al., 2011, 2012). In addition, the AVE for the second-order factor achieved an excellent value of .87 (Fornell & Larcker, 1981). Finally, the second-order factor accounted for 49.4% of the variance in manifest variables (i.e., individual scale items), surpassing the 22% value found in prior literature (Credé & Harms, 2015; Hoffman

et al., 2010). Taken altogether, the results supported that the two dimensions of Presence and Absence of Grace reflected two aspects of a general Perceived Grace from Others construct.

Convergent Validity

Convergent validity sought to test whether the Perceived HUG from Others was congruent with related measures in the literature. Specifically, bivariate correlation was conducted between Perceived HUG from Others and GRACE's Grace-Giving subscale (Beckenbach et al., 2010; Cook, 2013). According to Cohen (1992, 2013), correlations between .10 - .30 are small, .30 - .50 medium, and above .50 are large effects. Perceived HUG from Others was strongly correlated with GRACE's Grace-Giving, $r = .63, p < .001$. Thus, bivariate correlation results indicated that convergent validity was achieved (Carlson & Herdman, 2012).

Discriminant Validity

Discriminant validity is established if Perceived HUG from Others does not correlate highly and is therefore distinct from theoretically different constructs. Correlations were examined between Perceived HUG from Others, Social Desirability Bias, Extraversion, and Neuroticism. Even though these constructs might have a significant relationship, they should not be so highly correlated as to measure Perceived Grace from Others. Support for discriminant validity was found: Perceived HUG from Others was not significantly correlated with Extraversion, $r = .11$, and had small correlations with Social Desirability, $r = .27, p < .01$, and Neuroticism, $r = .14, p < .05$. However, since Extraversion and Neuroticism had low reliability, these results should be interpreted with caution.

Predictive Validity

A measure is considered to have good predictive validity when it is linked to outcomes measured at a later point in time (Grimm & Widama, 2023). The predictive validity of the Perceived HUG from Others scale would be supported if it was found to predict Willingness to Communicate about Politics with another person in one's social circle (WTCAP; Kleinman & Kleinman, 2015). A series of stepwise regressions was conducted to determine predictive validity. In Step 1, only control variables that significantly correlated with WTCAP (i.e., Political Interest, Internal Political Efficacy, and Education) were regressed on WTCAP in the base model (i.e., Model 1; $N = 180$). In Step 2, Perceived HUG from Others was added as the fourth predictor to the base model to form the second model (i.e., Model 2). This process tested whether Perceived HUG from Others still significantly predicted WTCAP when controlling for empirically related factors.

The R^2 changes (ΔR^2) = .06, $F(1, 175) = 7.43$, $p = .01$, between Models 1 and 2 was significant. Specifically, when controlling for participants' political interest, efficacy, and level of education, Perceived HUG from Others still significantly predicted higher WTCAP, $b = .30$, $R^2 = .23$, $F(4, 175) = 7.39$, $p < .001$ in Model 2.

Incremental Validity

To demonstrate incremental validity, the Perceived HUG from Others scale should explain additional variance in WTCAP beyond a related scale, in this case, another grace from others' scales. If the Perceived HUG from Others scale does not explain variance in outcomes beyond existing measures, the usefulness of the measure would be limited. The three control variables (i.e., Political Interest, Internal Political Efficacy, and Education) and GRACE's Grace-Giving subscale was first added as predictors for the regression Model 3 on WTCAP. In the

second step, Perceived HUG from Others was added to Model 3 to form Model 4. A significant ΔR^2 difference between the models would confirm incremental validity. The change in R^2 from Model 3 to Model 4 was significant, $\Delta R^2 = .04$, $F(1, 174) = 4.43$, $p = .04$. Thus, the 13-item Perceived HUG from Others demonstrated good incremental validity over GRACE's Grace-Giving and relevant control variables on willingness to communicate politics with another person.

Results: Human Understanding of Grace to Self

Preliminary Analysis

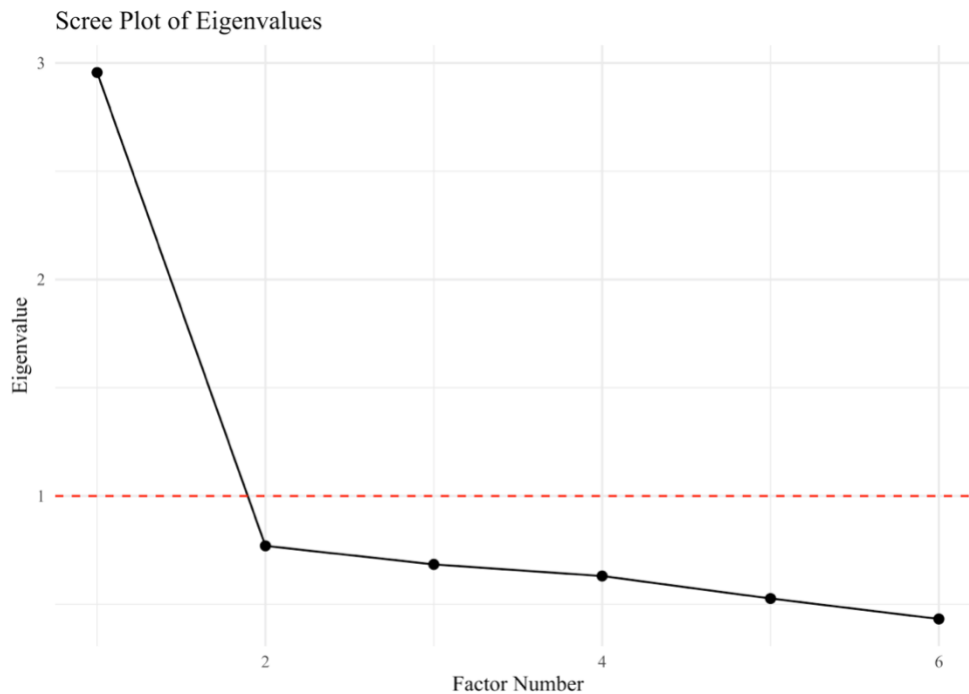
Preliminary analyses were conducted on the 12 proposed HUG to Self items. Three items, "I accept that I don't always have all the answers in political discussions" (kurtosis = 5.49), "I believe I can learn and grow from political conversations, even when they are difficult" (kurtosis = 2.52), and "I remind myself that it's okay to walk away from a heated conversation and revisit the discussion later" (kurtosis = 2.63), that fell outside of the kurtosis range were removed from subsequent analyses (George & Mallery, 2024). The inter-item correlations ranged from -.08 to .49, indicating no item pairs correlated at .80 to raise concerns of multicollinearity that they were repetitive (Beavers et al., 2013; DeVellis & Thorpe, 2021). Three more items were dropped due to low item-total correlations: "It is hard to forgive myself when I say something politically inappropriate in a conversation" (reverse-coded, $r_{drop} = .09$), "I recognize that external circumstances, such as stress or fatigue, can cause me to communicate poorly in political conversations" ($r_{drop} = .38$), and "I remain open to the idea that my political beliefs may change over time" ($r_{drop} = .26$).

Construct Validity: Exploratory Factor Analysis (EFA)

An EFA on the remaining six HUG to Self items was conducted using the same Time 1's subsample that was used for the Perceived HUG from Others scale ($n_i = 198$). Assumptions check on n_i indicated that the sample was suitable for factor analysis for HUG to Self: KMO = .84 and significant Bartlett's test of sphericity, $\chi^2(15) = 289.31, p < .001$. Eigenvalues, the scree plot (Figure 8), and parallel analysis all suggested a one-factor solution for HUG to Self rather than the two factors that were originally proposed .

Figure 8

Study 2 EFA Scree Plot, Human Understanding of Grace to Self



Note: The dotted red line marks eigenvalues of 1, with the number of factors on the x-axis.

The one-factor solution explained 39.4% of the variance, below the recommended level of .50 (Hair, 2011; Shrestha, 2021). All item loadings exceeded .40 onto the one factor, meeting the item retention rule (see Table 10 for item loadings and their respective proposed dimension).

Table 10*Study 2 EFA Loadings, Human Understanding of Grace to Self*

HUG to Self Items	Factor Loadings	Proposed Dimension
Q17. I try to understand why I might have reacted emotionally or defensively during a political conversation.	.71	Self-Growth & Change
Q15. When I reflect on a political conversation, I focus on what I can learn rather than dwelling on what I should have done.	.71	Self-Growth & Change
Q13. I allow myself the time and space to reconsider my views after engaging in a political discussion.	.61	Self-Growth & Change
Q9. When I say something inappropriate in a political conversation, I remind myself it is part of being human.	.61	Self-Forgiveness & Acceptance
Q18. I often reflect on how my personal experiences shape my political views.	.60	Self-Growth & Change
Q11. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect.	.52	Self-Forgiveness & Acceptance
Eigenvalue	2.96	
Variance Explained (%)	39.4	
Cronbach's Alpha	.79	
McDonald's Omega	.87	

McDonald's omega was also examined to address some of the shortcomings of Cronbach's alpha (see Cheung et al., 2024). The one-factor HUG to Self had good internal reliability with Cronbach's alpha at .79 and McDonald's omega at .87 (suggested $\geq .70$; Hair et al., 2009). The top three highest loading items belonged to the Allowing for Self-Growth and

Change dimension. Upon inspecting the results from Time 1's EFA, we decided that the 6-item HUG to Self scale had little face validity and explained too low a variance to adequately measure the grace to self construct. Thus, no further validation analysis was conducted in this study.

Scale Revisions

Six HUG to Self items that failed the normality and item-total correlations check were replaced by eight new items, such as "I remain patient with myself even when I struggle to discuss my political viewpoints" and "I recognize that navigating tough political discussions takes practice, and I give myself credit for trying." The revised 14-item HUG to Self scale was subsequently included in the Time 1.5 survey for test-retest reliability and fully tested in Study 3 (see Appendix I2 for all items).

Results: Human Understanding of Grace to Others

Preliminary Analysis

The mean, SD, variance, and normality for all 17 HUG to Others items were examined. Two items, "I understand that everyone has different viewpoints and I try to approach political discussions with that in mind" (kurtosis = 2.78), and "I try to remain respectful even when there are political disagreements with my friends" (kurtosis = 3.26), had kurtosis outside of the -2 and +2 range and were removed for violating normal univariate distribution (George & Mallery, 2024). The inter-item correlations ranged from .10 to .58. No items were removed to control for multicollinearity of correlating .80 or higher (Beavers et al., 2013; DeVellis & Thorpe, 2021). Finally, to account for items that were not statistically relevant, two items with item-total correlations (correlations between the item and the remaining 16 items) lower than .40 were removed (DeVellis & Thorpe, 2011; Ladhari, 2010; Loiacono et al., 2002; Wolfenbarger & Gilly, 2003): "If my friend calls me stupid or uses offensive names during a political conversation, I

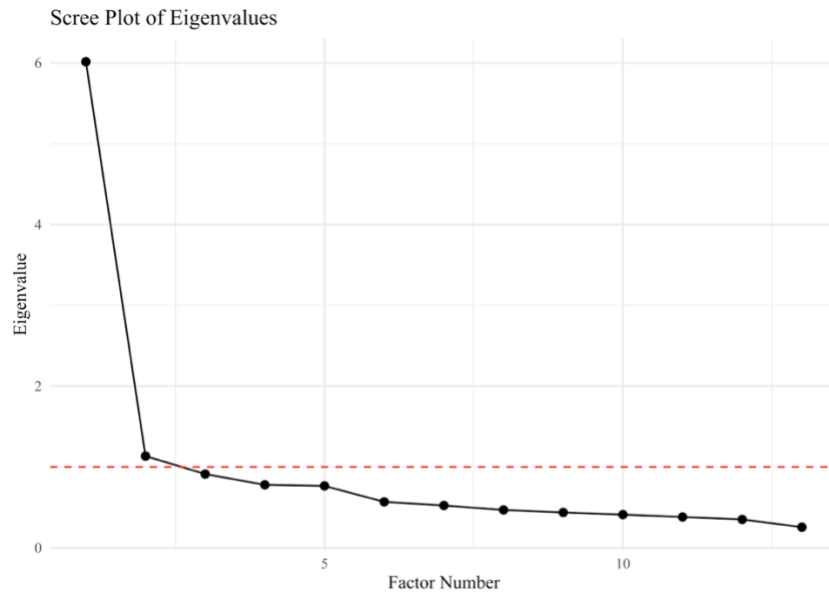
will verbally attack them back” (reverse-coded, $r_{drop} = .28$), and “My friends who made political mistakes or misstatements in the past have lost all of their credibility and respect from me” (reverse-coded, $r_{drop} = .37$).

Construct Validity: Exploratory Factor Analysis (EFA)

The same Time 1’s subsamples used to conduct the EFA ($n_1 = 198$) and the CFA ($n_2 = 203$) for the other HUG scales were used here. After removing 4 items based on the preliminary analyses, an EFA using principal axis factoring extraction with oblique rotation was conducted on the 13 HUG to Others items. EFA’s KMO was .92, and the Bartlett’s test of sphericity was significant, $\chi^2(78) = 1098.26, p < .001$, indicating that the sample data was suitable for EFA ($n_1 = 198$; Kaiser, 1976). Contrary to the three theoretical factors proposed for HUG to Others, eigenvalues, the scree plot (Figure 9), and parallel analysis all suggested a two-factor solution.

Figure 9

Study 2 EFA Scree Plot, Human Understanding of Grace to Others



Note: The dotted red line illustrates eigenvalues of 1, with the number of factors on the x-axis.

One item, “I tend to dismiss my friends whenever they express moral, social, or political views I fundamentally disagree with,” loaded less than .40 onto their main factor. Another two, “I am willing to discuss politics with my friends and family, even when they’ve offended me in past political discussions” and “I try to create a safe space for people around me to express their thoughts without fear of judgment from me,” had cross-loadings smaller than .20. All three were dropped from the scale. The remaining 10 items satisfied the .40-.30-.20 item retention rule (Howard, 2016; refer to Table 11 for final factor loadings). Both factors, Perspective-Taking & Mutual Growth and Forgiveness & Acceptance, had good reliability with alphas of .88 and .77, and omegas of .91 and .77. The two-factor solution explained 48% of the variance, lower than the recommended level (Hair, 2011; Shrestha, 2021). Similar to HUG to Self, we decided to stop further validation analyses and revise HUG to Others items to try increasing the scale’s cumulative variance.

Table 11

Study 2 EFA Loadings, Human Understanding of Grace to Others

HUG to Others Items	Factor Loadings		Proposed Dimension
	1	2	
<i>Perspective-Taking & Mutual Growth</i>			
Q33. I seek to understand why certain political issues matter deeply to people around me, even if they don’t resonate with me in the same way.	.87		Empathy & Perspective Taking
Q34. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others’ opinions.	.84		Empathy & Perspective Taking

Q46. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements.	.66	Growth & Change
Q45. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other.	.61	Growth & Change
Q42. I believe the political opinions of people around me can change and evolve.	.60	Growth & Change
Q36. I try to be patient with others in political discussions, even when they make mistakes or misunderstand key points.	.50	Forgiveness & Acceptance
Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine.	.48	Growth & Change

Forgiveness & Acceptance

Q31. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it.	.93	Forgiveness & Acceptance
Q32. I believe that people around me have good intentions, even if I find their political opinions difficult to accept.	.65	Forgiveness & Acceptance
Q39. I am willing to forgive people in my life for expressing a political view that I find offensive or uninformed.	.65	Forgiveness & Acceptance

Eigenvalue	3.59	2.60
Variance Explained (%)	28	20
Cronbach's Alpha	.88	.77
McDonald's Omega	.91	.77

Scale Revisions

Similar to HUG to Self, seven HUG to Others items included in the Time 1 were replaced by eight new items, such as “In political discussions, I often focus on learning new perspectives rather than trying to ‘win’ the conversation” and “I believe most people around me are doing the best they can, even when they express political views I find troubling” (see Appendix I3 for all items). The revised 19 HUG to Others items were pilot tested in Time 1.5 for test-retest reliability and went through the full empirical validation process in Study 3.

Brief Discussion

Study 2 was the first attempt to empirically validate the three Human Understanding of Grace (HUG) scales in the context of everyday political talk with one’s social circles. Out of the three, Perceived HUG from Others measure demonstrated good content, construct, and criterion-related validity and provided preliminary evidence that perceptions of grace offered increased willingness to engage in everyday political talk with friends and families. By asking individuals to focus on grace given by a specific conversation partner, this measure captured the interpersonal, dyadic nature of many dialogues in conflict and emphasized the importance of perceptions of receiving grace from others.

Although the initial exploratory factor analysis results for the HUG to Self and to Others scales did not have clear item loadings and were not aligned with the theoretical propositions, Study 2’s findings contributed to the revision of these two scales to inform the next iteration of scale validation.

3.3 Study 3: Second Scale Validation

Study 3 replicated the design and methodology of Study 2 to empirically validate the revised HUG to Self and to Others scales, adhering to the same considerations from DeVellis and Thorpe’s model (2021) starting on page 47. To reduce redundancy, identical methodologies and considerations to Study 2 are either omitted or briefly referenced.

Overview

Study 3 collected data from a completely new sample in two distinct time points: Time 1 and Time 2. In Time 1, participants completed the revised HUG to Self and to Others scales from Study 2’s results for factor analyses along with measures for convergent and discriminant validity. As the Perceived HUG from Others’ scale was already validated in Study 2, it was not included in this current iteration. The Time 2 survey included political talk outcome measures to assess predictive and incremental validity (see Figure 10).

Figure 10

Study 3 Measures and Analyses, N = 402

Time 1, N = 402	Time 2, N = 180
Measures	Measures
HUG to Self (14 items)	Willingness to Self-Censor
HUG to Others (19 items)	Frequency of Everyday Political Talk
PEGS’ Grace to Self	Level of Disagreement in Political
PEGS’s Unconditional Grace to Others	Discussion
Extraversion	Political Interests
Neuroticism	Internal Political Efficacy
Social Desirability Bias	Openness
Attention Check	Attention Check
Demographics	Demographics

Purpose/Analysis	Purpose/Analysis
Construct Validity (Exploratory and Confirmatory Factor Analyses)	Predictive Validity (Regressions)
Convergent Validity (Correlations)	Incremental Validity (Regressions)
Discriminant Validity (Correlations)	

Samples

Similar to Study 2, all participants were recruited via Prolific. The inclusion criteria required participants to be at least 18 years old, reside in the U.S. at the time of the survey, and be American citizens to ensure voting eligibility. Individuals who had taken part in previous studies were intentionally excluded.

Time 1. A total of 433 respondents started the Time 1 survey. However, 7 did not finish the survey, 23 failed the attention check, and 1 person completed the survey faster than 210 seconds. The final sample size for Time 1 was $N = 402$ participants. For gender, 48.0% identified as women, 49.5% as men, and 1.8% as non-binary or third gender. Many participants identified as White/ Caucasian (36.2%), followed by Black/ African-American at 24.0%, Mixed/ Multiracial at 15.1%, 14.7% identified as East Asian/ South Asian/ Southeast Asian, 10.0% as non-White Hispanic/ Latino, and 1.0% as other racial groups. For political affiliation, 37.6% were Democrats, 27.2% were Independents, and 33.7% were Republicans. More than half of the respondents identified with various branches of Christianity (60.9%), 28.2% were not religious, and 10.9% from other religions (e.g., Buddhists, Muslims, Hindus). Finally, for education, 27.2% held a high school or Associate’s degree, 40.1% had a Bachelor’s, and 31.7% had a graduate degree (e.g., Master’s, J.D., Ph.D.).

Time 2. A week later, 186 participants from Study 3’s Time 1 were randomly sampled for Time 2 (see Figure 3 for a Venn diagram of the samples). After removing 2 incomplete data and 4 attention check failures, 180 responses were used for the final analyses ($N = 180$). Among the 180 participants (see Table 12 for all demographics), 47.2% identified as women, 50.6% as men, and 1.7% as non-binary or third gender. The largest racial category was White/ Caucasian (38.3%), followed by Black/ African-American and East Asian/ South Asian/ Southeast Asian, each at 17.8%, and 13.9% identified as Mixed/ Multiracial. For political affiliation, 33.9% were Democrats, 30.6% were Independents, and 35.0% were Republicans. More than half of the respondents identified with various branches of Christianity (60.0%), 30.0% were not religious, and 10.0% from other religions. Lastly, for the highest level of education achieved, 32.8% held a high school or Associate’s degree, 36.1% had a Bachelor’s, and 30.6% had a graduate degree.

Table 12

Study 3’s Demographics across Times

Category	Time 1 ($N = 402$)	Time 2 ($N = 180$)
<i>Race</i>	%	%
Black/ African-American	24.0	17.8
East Asian/ South Asian/ Southeast Asian	14.7	17.8
Hispanic/ Latino	10.0	10.6
Mixed/ Multi-Racial	15.1	13.9
White/ Caucasian	36.2	38.3
Other (i.e., MENA, Indigenous People)	1.0	1.1
<i>Gender</i>		
Female/ Woman	48.0	47.2

Male/ Man	49.5	50.6
Non-Binary/ Third Gender	1.8	1.7
<hr/> <i>U.S. Political Affiliation</i> <hr/>		
Democrat	37.6	33.9
Independent	27.2	30.6
Republican	33.7	35.0
<hr/> <i>Age</i> <hr/>		
18-29	24.3	20.0
30-39	37.6	36.1
40-49	17.3	18.9
50-59	12.9	17.8
60 years old and above	7.9	7.2
<hr/> <i>Religious Affiliation</i> <hr/>		
Christian	60.9	60.0
Non-Religious	28.2	30.0
Other Religion (i.e., Buddhist, Muslim, Hindu)	10.9	10.0
<hr/> <i>Education</i> <hr/>		
Less than a High School Degree	0.0	0.0
High School/ Associate's Degree	27.2	32.8
Bachelor's	40.1	36.1
Graduate Degree	31.7	30.6

Procedures

Similar procedures to Study 2 was applied for Study 3. While the Time 1 included measures to assess the measures' dimensionality, convergent, and divergent validity, Time 2 included control variables and political talk related outcome measures to assess the measures' predictive and incremental validity. For both times, participants were informed that the study sought to explore beliefs and behaviors in political discussions. In addition, both surveys opened with "In this study, we define politics as matters concerning national government, local/ state concerns, foreign happenings, economics, and broad cultural and social issues" (adapted from Wyatt et al., 2000).

Time 1. Participants were asked to rate the extent to which they agreed with a series of statements about themselves. The scales were presented in the following arbitrary order: HUG to Self, Perceptions & Experiences of Grace Scale (PEGS)'s Grace to Self, Extraversion, Neuroticism, Social Desirability Bias, the first attention check, HUG to Others, PEGS' Grace to Others, and the second attention check. Items within each measure were presented in randomized order. The survey then ended with demographic questions, and upon completion, participants were compensated \$2.75 for their time (median completion time was 16 minutes).

Time 2. Finally, Time 2 was conducted a week after Time 1 to establish predictive validity. Participants rated the scales measuring control and outcome variables in the following order: Political Interests, Internal Political Efficacy, Openness, the first attention check, Willingness to Self-Censor, Frequency of Everyday Political Talk, Level of Disagreement in political discussion, and a second attention check. The second and final section was the demographic questions. The survey was estimated to take participants around 10 minutes, who were then directed to receive their payment of \$2.00 for finishing the survey.

Measures

All the measures included in this study can be referred in more details in Appendices G and I.

Human Understanding of Grace (HUG) in Political Talk. The revised 14-items HUG to Self and 19-item HUG to Others from Time 1.5 in Study 2 were fully tested in this study. Participants were asked to indicate the extent to which they agreed with the statements for these two measures on 5-point Likert scales, where 1 = Strongly Disagree, 5 = Strongly Agree.

Measures were included to assess the convergent, discriminant, predictive, and incremental validity of the two HUG scales (see Appendix G for all items). All convergent, discriminant measures, and control variables were rated on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree.

Convergent and Incremental Measures (Time 1)

Perceptions and Experiences of Grace Scale (PEGS). Two subscales, Grace to Self (5 items; $\alpha = .90$) and Unconditional Grace to Others (4 items; $\alpha = .80$), from the PEGS were included to test for convergent and incremental validity for HUG to Self and to Others (Rush, 2022; Rush et al., 2023).

Discriminant Measures (Time 1)

Big Five Inventory (BFI). Extraversion (2 items; $\alpha = .46$) and Neuroticism (2 items; $\alpha = .69$) subscales from the Big Five Inventory (BFI; John et al., 1991; Rammstedt & John, 2020) were measured in the Time 1 survey.

Social Desirability Bias. All 10 items from the short-form version of the Marlowe-Crowne Social Desirability Scale ($\alpha = .77$; Strahan & Gerbasi, 1972) were included as a discriminant measure.

Control Variables (Time 2)

All control variables were rated on a 5-point Likert scale, from 1 = Strongly Disagree to 5 = Strongly Agree.

Openness. Two items representing Openness to Experience from the BFI ($\alpha = .48$; Rammstedt & John, 2007) were included as control variable.

Political Interest. A two-item measure of political interests, “I am interested in politics” and “I often keep up with political news and information,” was adapted for this study (see Study 2 for more context; $\alpha = .80$).

Internal Political Efficacy. Responses to two items, “I feel that I have a pretty good understanding of the important political issues facing our country” and “I think I am more informed about politics and government than most Americans,” were averaged to measure internal political efficacy ($\alpha = .60$; adapted American National Election Studies, 2025; Park, 2019).

Predictive Measures (Time 2)

Frequency of Everyday Political Talk. To measure how frequent participants discussed politics with others within their social circles, respondents were asked “How often do you talk about politics (both in-person and texting) over the past six months with 1. Romantic partner, 2. Family members; 3. Friends; 4. Neighbors; 5. Coworkers,” with responses ranging from 1 = Never, 2 = Once a month or less, 3 = Once a week, 4 = A few times a week, and 5. Daily or more than daily ($\alpha = .77$).

Level of Disagreement in Political Talk. As a general measure of the level of disagreement in political conversations with their social circles, participants were asked how often they disagreed with 1. Romantic partner, 2. Family members, 3. Friends, 4. Neighbors, and

5. Coworkers when they talked about politics on a 5-point scale ($\alpha = .81$; 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always; adapted from Wojcieszak, 2010).

Willingness to Self-Censor (WTSC). Utilizing the WTSC scale ($\alpha = .85$; Chan, 2018; Hayes et al., 2005), participants were asked to rate on a 5-point scale (1 = Strongly Disagree, 5 = Strong Agree) on eight questions indicating their willingness to self-censor and refrain from sharing their opinions when political disagreements arise. Responses were made on a 5-point scale (1 = Strongly Disagree, 5 = Strong Agree).

Other Measures

Attention Checks. The same two attention checks from Study 2 were included in both surveys.

Demographics. Participants were asked to provide their demographic information, including race/ ethnicity, gender, age, religion, political affiliation, and highest education level achieved (see Appendix H for demographic questionnaires).

Analysis

The HUG scales were validated using an analytic approach similar to the one used in Study 2. The first step examined the mean, standard deviation (SD), variance, normality, inter-item, and item-total correlations of all items from each HUG scale for preliminary analysis. To establish construct validity, EFA and CFA were conducted, randomly splitting the dataset into two equal subsets for EFA and CFA.

For EFA, principal axis factoring with oblique rotation (i.e., Promax; Hendrickson & White, 1964) allowed for factors to be correlated (Finch, 2020). For item retention, the .40-.30-.20 rule was applied, keeping only items with loadings $>.40$ in their main factor, alternative

factor loadings $<.30$, and the loading differences between the main and alternative factors were $>.20$ (Howard, 2016).

A series of competing CFA models was conducted to identify the best-suited for each HUG scale. They were the correlated-factor, uncorrelated-factor, unidimensional, second-order, and bifactor models. A series of fit indices were examined to assess and compare the fit of the CFA models (West et al., 2012, 2023).

Correlations were used to examine convergent and discriminant validity. Predictive validity was investigated using both simple linear and stepwise regressions to account for control variables. Finally, stepwise regressions were also employed to examine incremental validity.

The following sections of this chapter displays the results of the second empirical validation of for HUG to Self and to Others scales. Although all two measures were assessed simultaneously using the same analytical methods, for ease of interpretation, rather than by validation steps, the results for HUG to Self will be discussed first, followed by HUG to Others.

Results: Human Understanding of Grace to Self

Preliminary Analysis

The mean, SD, variance, and normality for all 14 items from HUG to Self were examined. The items' kurtosis ranged from $-.39$ to 1.27 , passing the normality check (George & Mallery, 2024). The inter-item correlations ranged from $-.01$ to $.55$. No item was removed to control for multicollinearity (Beavers et al., 2013; DeVellis & Thorpe, 2021). Lastly, two items had item-total correlations lower than $.40$ and were removed from analyses (DeVellis & Thorpe, 2021; Ladhari, 2010; Loiacono et al., 2002; Wolfenbarger & Gilly, 2003): "I am open to changing my beliefs when presented with new information during political discussions" ($r_{drop} =$

.34) and “I often reflect on how my personal experiences shape my political views” ($r_{drop} = .38$). The remaining twelve items moved onto exploratory factor analysis.

Time 1’s data ($N = 402$) were randomly split into two subsets for construct validity analyses ($n_1 = 201$ for EFA and $n_2 = 201$ for CFA). *Tableone*’s chi-square statistics for categorical variables (Yoshida et al., 2022) indicated no significant difference across the two subsets across racial groups, gender, age, education, and religious affiliation.

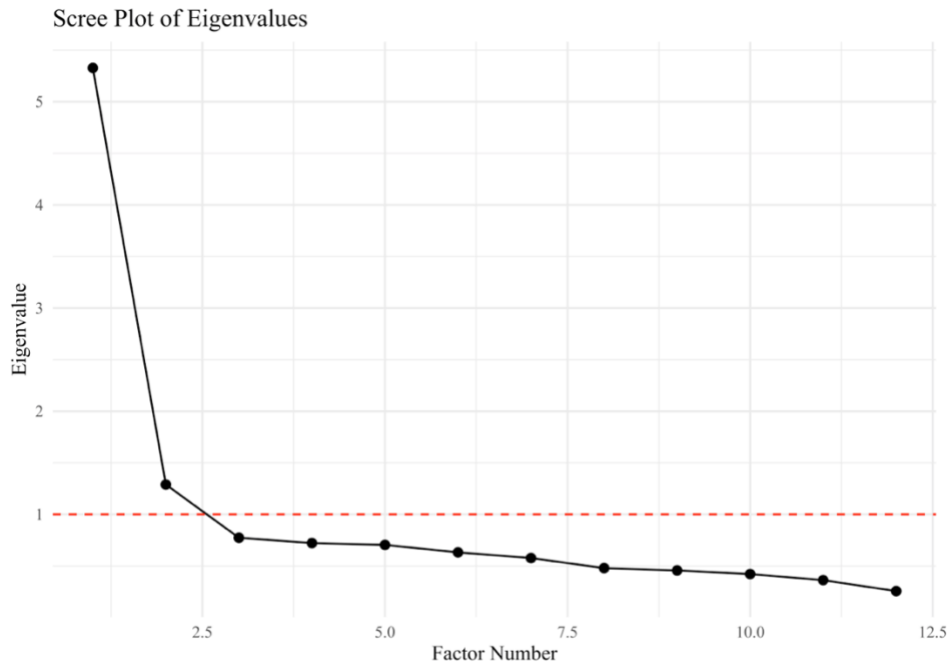
Construct Validity: Exploratory Factor Analysis (EFA)

Time 1’s $n_1 = 201$ was suitable for factor analysis on the 12 HUG to Self items: EFA with principal axis factoring and oblique rotation passed the assumptions check, with KMO = .89 and significant Bartlett’s test of sphericity, $\chi^2(66) = 932.28, p < .001$.

Eigenvalues, the scree plot (Figure 11), and parallel analysis were evaluated to determine the number of factors. All three methods suggested a two-factor solution, aligning with the theoretical proposition for HUG to Self.

Figure 11

Study 3 EFA Scree Plot, Human Understanding of Grace to Self



Note: The dotted red line illustrates eigenvalues of 1, with the number of factors on the x-axis.

Four items had high loadings on alternative factors ($>.30$) and low cross-loadings ($<.20$; see Appendix I2 for loadings with all 14 proposed items). Consequently, “Q5. I remain patient with myself even when I struggle to discuss my political viewpoints,” “Q6. I recognize that navigating tough political discussions takes practice, and I give myself credit for trying,” “Q10. When I communicate poorly during a political discussion, I try to cut myself some slack and learn from it,” and “Q15. When I reflect on a political conversation, I focus on what I can learn rather than dwelling on what I should have done” were excluded from further analysis. A correlated two-factor solution EFA was conducted again on the remaining eight items. All of the eight items passed the .40-.30-.20 rule. The two-factor solution accounted for 47% of the variance (see Table 5 for item loadings and initially proposed dimension). Although the variance

was still lower than the 50% threshold, we decided that the 47% was close enough to the cut-off criteria for the current research agenda.

Table 13

Study 3 EFA Loadings, Human Understanding of Grace to Others

HUG to Self Items	Factor Loadings		Proposed Dimension
	1	2	
<i>Self-Forgiveness & Self-Acceptance (5 items)</i>			
Q12. I try to be kind toward myself when I don't handle a political disagreement as well as I would have liked.	.79		F&A
Q8. Even if I lose my cool in a political conversation, I usually avoid beating myself up afterward.	.76		F&A
Q7. When I struggle to stay calm in a political discussion, I remind myself that it's okay to be imperfect.	.64		F&A
Q11. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect.	.56		F&A
Q9. When I say something inappropriate in a political conversation, I remind myself it is part of being human.	.43		F&A
<i>Allowing for Self-Growth & Change (3 items)</i>			
Q17. I try to understand why I might have reacted emotionally or defensively during a political conversation.		.81	G&C
Q13. I allow myself the time and space to reconsider my views after engaging in a political discussion.		.73	G&C
Q16. I see political discussions as my chance to learn new perspectives and ideas.		.52	G&C
Eigenvalue	3.47	1.28	
Variance Explained (%)	26.7	19.8	

Proportion Explained (%)	58	42
Cronbach's Alpha	.79	.71
McDonald's Omega	.84	.72

Note: F&A = Self-Forgiveness & Self-Acceptance; G&C = Allowing for Self-Growth & Change

All items aligned with their theoretically proposed factors. The first theoretical dimension was Self-Forgiveness & Self-Acceptance. The resulting five items from the EFA loaded onto Factor 1 as predicted, capturing the ability to be gentle on oneself for imperfections and mistakes. This factor accounted for 26.7% of the variance. Similarly, the second theoretical dimension for HUG to Self, Allowing for Self-Growth & Change, consisted of three items that were supposed to load together. Factor 2 described the openness to learn from one's political conversations and encounters, accounting for 19.8% of the variance. The two factors correlated highly enough with each other ($r = .57$) to indicating that they were tapping into a similar construct, but not so highly that they were considered redundant (cautious of correlations $> .80$; Rönkkö & Cho, 2022).

Construct Validity: Confirmatory Factor Analysis (CFA)

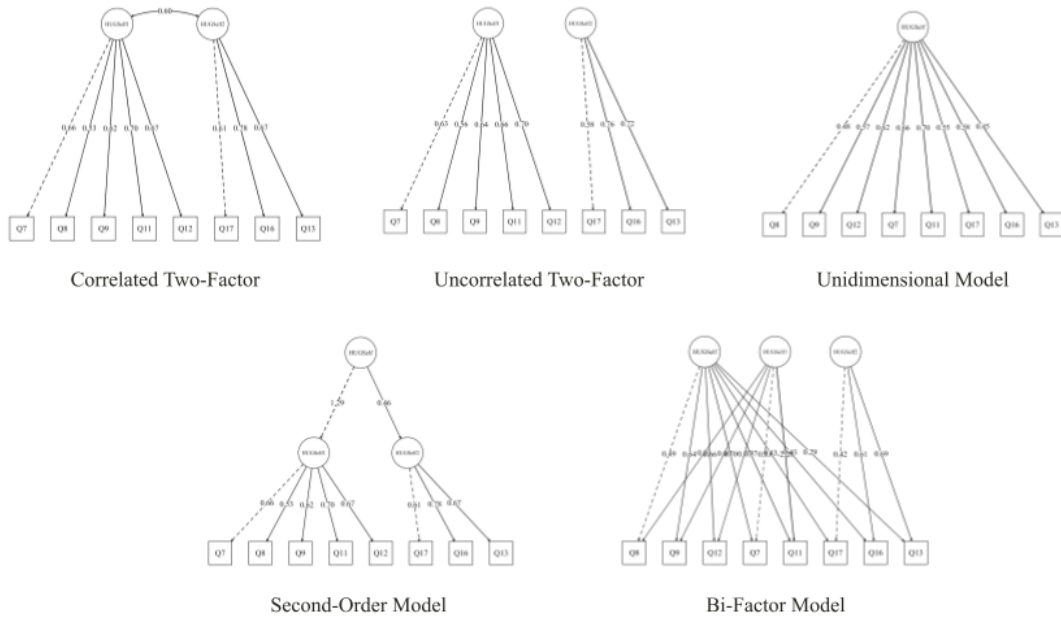
CFA Overview and Assumptions Check. CFA was conducted using the randomly selected second subsample from Time 1 ($n_2 = 201$) to test the factor structure from EFA results. The data was found to be adequate for the HUG to Self items with KMO = .82 and a significant Barlett's test, $\chi^2(28) = 430.38, p < .001$. However, the data did not pass the normality test on both Mardia's multivariate and Anderson-Darling's univariate tests at $p < .001$. Considering non-normal data can lead to erroneous inference for the maximum likelihood method in confirmatory factor analysis (Yuan, 2005), the Robust Maximum Likelihood (MLR) was utilized. The MLR,

compared to regular maximum likelihood, was found to outperform other methods for a sample size of 200 on non-normal data (Li, 2016).

CFA Models. Five competing CFA models were conducted on HUG to Self (see Figure 12 for a visualization of all models; $n_2 = 201$; Credé & Harms, 2015). The first model was derived from the EFA results above, which aligned with theoretical assumptions that HUG to Self consisted of two correlated factors, Self-Forgiveness & Self-Acceptance and Allowing for Self-Growth & Change. The second model, the uncorrelated two-factor model, assumed that there was no significant relationship between the dimensions. The unidimensional model assumed that all eight HUG to Self items all loaded onto a single underlying factor. The second-order model proposed that the eight items first loaded onto two first-order factors, which then loaded onto another higher-order construct explaining the correlations among the first-order factors. Finally, the bifactor model allowed eight items to load simultaneously on a general factor of grace to self and their specific group factors. The general factor represented the shared variance across all items, while the group factors captured additional variance not explained by the general factor.

Figure 12

All CFA Models, Human Understanding of Grace to Self



Model Fit Evaluation. Adhering to cutoffs of .90 for CFI and TLI, .06 for RMSEA, and .08 for SRMR (Hu & Bentler, 1996; Marsh et al., 2004), the unidimensional model was the only one with a poor fit on the data, while the remaining three had excellent fit (see Table 14). Notably, despite the large sample size, the bifactor model marginally passed the χ^2 test, with $\chi^2(12) = 11.33, p = .501$.

Table 14*CFA Model Fit Indices, Human Understanding of Grace to Self (n₂ = 201)*

	Correlated Two-Factor	Uncorrelated Two-Factor	Uni- dimensional	Second- Order	Bifactor
χ^2 (df)	30.54 (19)	60.77 (20)	71.98 (20)	28.93 (18)	11.33 (12)
CFI	.96	.86	.82	.96	.99
TLI	.94	.80	.74	.94	.98
RMSEA	.06	.10	.11	.06	.00
90% CI	[.02, .09]	[.08, .13]	[.09, .14]	[.02, .09]	[.00, .06]
SRMR	.06	.18	.09	.06	.04
AIC	4150.51	4192.52	4203.32	4152.51	4139.97
BIC	4206.67	4245.34	4256.17	4211.97	4219.25

Model Selection. Model selection identifies the best-fitting model for HUG to Self on the sample data ($n_2 = 201$). As discussed in Study 2, AIC and BIC values were prioritized over other statistics in comparing across the three models with good fit, with lower values being better (Preacher & Yaremych, 2023; West et al., 2023). In this case, because the unidimensional and uncorrelated models had a poor fit, comparisons were made across the remaining three models. According to Raftery (Raftery, 1995), a difference from subtracting one model's BIC from the other of 0-2 constituted weak evidence, 2-6 positive, 6-10 strong, and higher than 10 very strong evidence in favor of the model with a smaller BIC. Thus, according to BIC values, the HUG to Self correlated two-factor showed positive and strong evidence of being a better fit than second-order and bifactor models.

Internal Reliability. The full scale, factor 1 (Self-Forgiveness & Self-Acceptance), and factor 2 (Allowing for Self-Growth and Change) showed good internal reliability with alphas of

.80, .77, and .72, and omegas of .86, .81, and .73, respectively (see Table 15). Alpha results did not improve significantly by dropping items from the full scale or the factors; hence, all eight items were retained.

Table 15

CFA Correlated Two-Factor Model Item Loadings and Reliability, HUG to Self

Factors & Items	Factor Loadings	AVE	Construct Reliability	Cronbach's Alpha
<i>Self-Forgiveness & Self-Acceptance</i>				
Q11. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect.	.70			
Q12. I try to be kind toward myself when I don't handle a political disagreement as well as I would have liked.	.67			
Q7. When I struggle to stay calm in a political discussion, I remind myself that it's okay to be imperfect.	.66			
Q9. When I say something inappropriate in a political conversation, I remind myself it is part of being human.	.62			
Q8. Even if I lose my cool in a political conversation, I usually avoid beating myself up afterward.	.53			
<i>Allowing for Self-Growth & Change</i>				
Q16. I see political discussions as my chance to learn new perspectives and ideas.	.78	.48	.73	.72

Q13. I allow myself the time and space to reconsider my views after engaging in a political discussion.	.67
Q17. I try to understand why I might have reacted emotionally or defensively during a political conversation.	.61

Model-based Consistency. Cheung and colleagues argued that reporting only model fit indices was insufficient to determine the quality of measurement scales (Cheung et al., 2024). The correlated two-factor model had good internal consistency based on commonly used criteria (Cheung et al., 2024). All standardized factor loadings were statistically significant at $p < .001$ and greater than .50 (Anderson & Gerbing, 1988; Dunn et al., 2014; Hair et al., 2009). The next test was the average variance explained (AVE) values, which ignored sampling errors and should be used in conjunction with other tests (Fornell & Larcker, 1981; Shiu et al., 2011). Even though the common threshold for AVE was .50, a .40 cutoff was acceptable as the HUG to Self had good composite reliability as shown above (Fornell & Larcker, 1981; Lam, 2012). The model was found to have acceptable internal consistency with AVE values of .40, .40, and .48 for HUG to Self overall, Self-Forgiveness & Self-Acceptance, and Allowing for Self-Growth & Change. Finally, the correlations between the two factors were .60, indicating that they were measuring similar constructs.

Convergent Validity

To assess convergent validity the HUG to Self scale the PEGS’ Grace to Self subscale, testing a similar construct was measured and the correlation between the two measures was calculated. According to Cohen (1992, 2013), HUG to Self showed a strong correlation with PEGS Grace to Self at $r = .69, p < .001$, providing evidence of convergent validity (Carlson & Herdman, 2012).

Discriminant Validity

Discriminant validity tested whether HUG to Self was not similar as other theoretically distinct constructs (i.e., Social Desirability Bias, Extraversion, and Neuroticism). Even though these constructs might have a significant relationship, they should not be so highly correlated as to measure grace to self (Campbell, 1960; McDonald, 1985; Nunnally & Bernstein, 1994). HUG to Self had low correlations with Extraversion at $r = .28, p < .01$, and moderately correlated with Social Desirability, $r = .32, p < .01$, and Neuroticism, $r = .43, p < .001$, suggesting evidence of discriminant validity. However, because of low internal reliability for Extraversion ($\alpha = .46$), we should be cautious in interpreting these results.

Predictive Validity

A measure is considered to have good predictive validity when it is linked to certain outcomes measured at a later point in time (Grimm & Widaman, 2023). In this case, this research agenda asked whether HUG to Self determined people's Willingness to Self-Censor, Frequency of Everyday Political Talk, and the Level of Disagreement when they discussed politics within their social circles. A series of stepwise regressions was conducted to determine predictive validity. All models passed assumption tests. In Step 1, control variables significantly correlated with each dependent variable (DV) were added as predictors using responses from $N = 180$ participants who took both surveys as base models. In Step 2, HUG to Self was added to those models. This process tested whether HUG to Self still significantly predicted the outcome variables when controlling for other factors (i.e., Social Desirability Bias, Political Interest, Internal Political Efficacy, Openness, and Education).

First, Social Desirability Bias, Political Efficacy, and Political Interest were regressed on Willingness to Self-Censor (Step 1, Model 1), $R^2 = .17, F(3, 176) = 6.88, p < .001$. HUG to Self

was then added to the model (Step 2, Model 2), $b = -0.27$, $R^2 = .22$, $F(4, 175) = 7.32$, $p < .001$. The R^2 change was significant between Models 1 and 2, $F(1, 176) = 7.33$, $p = .01$, suggesting that higher HUG to Self significantly predicted lower Willingness to Self-Censor when accounting for Political Efficacy and Openness.

For the next DV, Political Interest, Political Efficacy, and Education were added as predictors of Frequency of Everyday Political Talk (Step 1, Model 3), $R^2 = .21$, $F(3, 176) = 15.38$, $p < .001$. HUG to Self was then added as a fourth predictor (Step 2, Model 4), $b = 2.11$, $R^2 = .30$, $F(4, 175) = 18.86$, $p < .001$. The R^2 change was significant between Models 3 and 4, $F(1, 176) = 23.41$, $p < .001$. When controlling for participants' Political Interest, Efficacy, and their Level of Education, HUG to Self still significantly predicted the Frequency of Everyday Political Talk.

Finally, for Level of Disagreement, people with higher grace to self were more likely to have discriminant opinions and viewpoints in their conversations. Significant R^2 change from Step 1 to Step 2 of the regression models, $\Delta R^2 = .14$, $F(1, 175) = 20.68$, $p < .001$, supported that higher HUG to Self significantly predicted higher levels of disagreement when accounting for Social Desirability Bias, Political Interest, Efficacy, and Levels of Education, $b = 0.49$, $R^2 = .34$, $F(5, 174) = 10.15$, $p < .001$. These results supported predictive validity for the HUG to Self scale on the Willingness to Self-Censor, Frequency, and Level of Disagreement in Everyday Political Talk.

Incremental Validity

For HUG to Self to have incremental validity, it should explain additional variance in outcome variables beyond existing self-grace scales. The PEGS' Grace to Self subscale (Rush, 2022; Rush et al., 2023) and previous control variables included in predictive validity were used

as base predictors for the regression models on each of the three DVs. In the second step, HUG to Self was added to the models. Then, the base models with just PEGS' Grace to Self were compared against the models with both PEGS' Grace to Self and HUG to Self. Significant R^2 change (ΔR^2) differences between the models would confirm incremental validity for the HUG to Self scale. There were significant changes for Frequency of Everyday Political Talk, $\Delta R^2 = .07$, $F(1, 175) = 9.31$, $p = .003$, and Level of Disagreement, $\Delta R^2 = .07$, $F(1, 175) = 10.21$, $p = .002$. However, there was only marginal change for Willingness to Self-Censor, $\Delta R^2 = .03$, $F(1, 175) = 3.10$, $p = .08$. Thus, the eight-item HUG to Self measure showed good incremental validity over existing control variables and PEGS's Grace to Self on Frequency of Every Political Talk and Level of Disagreement.

Test-Retest Reliability

Because we could not determine the final structure of HUG to Self until Study 3, test-retest reliability was conducted using the shared HUG to Self items between Times 1 and 1.5 from Study 2 ($N = 200$). Although the Time 1 survey did not include the revised items to test reliability for the full measures, stability across items could be predictive of the scale's reliability over time (Ashford et al., 2013; Jones & Goldberg, 1967; Polit, 2014). The 4 HUG to Self items from the final scale, "Q9. When I say something inappropriate in a political conversation, I remind myself it is part of being human," "Q11. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect," "Q13. I allow myself the time and space to reconsider my views after engaging in a political discussion," and "Q17. I try to understand why I might have reacted emotionally or defensively during a political conversation," were measured in both Times 1 and 1.5. The correlation between the mean of the 4 items across both times was $r = .67$, $p < .001$. As the cut-off for good trait test-retest reliability

was .70 (de Vet et al., 2011), preliminary evidence did not support HUG to Self being a trait-based measure.⁶

Results: Human Understanding of Grace to Others

The 19-item HUG to Others scale were empirically validated through the same process as HUG to Self, as depicted above.

Preliminary Analysis

One item, “Q38. I try to give people room to explain their perspectives, even if their political views upset me” (kurtosis = 2.37), failed the normality check. The inter-item correlations did not show concerns for multicollinearity ($<.80$), ranging from .30 to .60. Additionally, all items had item-total correlations greater than .40. After removing Q38 from normality violation, exploratory factor analysis was conducted on the remaining 18 items.

Construct Validity: Exploratory Factor Analysis (EFA)

The same Time 1 subsamples used to assess the validity of the HUG to Self scale were used to assess the HUG to Others’ scale ($n_1 = 201$ for EFA and $n_2 = 201$ for CFA). Assumptions check on n_1 for EFA indicated that the sample was suitable for factor analysis: KMO = .93 and Bartlett’s test of sphericity, $\chi^2(153) = 1635.36, p < .001$.

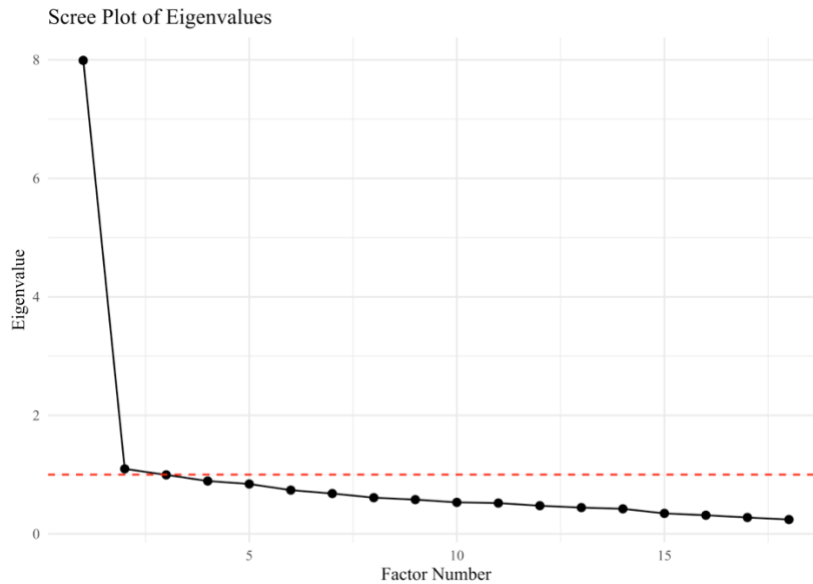
Eigenvalues, the scree plot (Figure 13), and parallel analysis from principal axis factoring and oblique rotation suggested different numbers of factors. Parallel analysis suggested one factor, the scree plot two, and eigenvalues allowed for up to three factors. After consideration of our theoretical propositions for three dimensions, the analysis moved forward with the three-factor solution to retain all conceptually meaningful dimensions (Fabrigar et al., 1999). However,

⁶ Due to the changes in the instrument across the studies, the HUG to Self scale and its individual factors could not be fully explored.

an EFA with a correlated two-factor solution was still conducted in parallel to compare models in CFA (see Appendix I3 for the two-factor EFA result).

Figure 13

Study 3 EFA Scree Plot, Human Understanding of Grace to Others



Four items had high cross-loadings (>.20; see Appendix I3 for all item loadings) and were removed: “Q30. I remind myself that people I discuss politics with are more than just their views,” “Q36. I try to be patient with others in political discussions, even when they make mistakes or misunderstand key points,” “Q37. When someone says something politically inappropriate or ignorant, I remind myself that people grow at different rates,” and “Q39. I am willing to forgive people in my life for expressing a political view that I find offensive or uninformed.” A correlated three-factor solution EFA was repeated on the remaining 14 items.

One item, “Q33. I seek to understand why certain political issues matter deeply to people around me, even if they don’t resonate with me in the same way,” had low main loadings <.40. Two items, “Q47. I try to create a safe space for people around me to express their thoughts without fear of judgment from me” and “Q48. When others act poorly in political conversations,

I reassure them that everybody makes mistakes,” had high cross loadings (>.20). Another round of EFA was conducted again on the remaining 11 items, with all items passing the .40-.30-.20 rule. Even though the third factor’s eigenvalue for this final round was lower than the recommended level at 0.93, the factor was retained to preserve one additional theoretically meaningful dimension. The three-factor solution accounted for 51% of the variance (see Table 16 for factor loadings), reaching an acceptable threshold (Hair, 2011; Shrestha, 2021).

Table 16

Study 3 EFA Loadings, Human Understanding of Grace to Others

HUG to Others Items	Factor Loadings			Proposed Dimension
	1	2	3	
<i>Allowing for Growth & Change (4 items)</i>				
Q45. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other.	.76			G&C
Q44. I am open to talking about politics with friends and family, even after disagreements, so we can learn from each other.	.64			G&C
Q42. I believe the political opinions of people around me can change and evolve.	.55			G&C
Q46. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements.	.46			G&C
<i>Forgiveness & Acceptance (3 items)</i>				
Q40. I believe most people around me are doing the best they can, even when they express political views I find troubling.		.85		F&A

Q32. I believe that people around me have good intentions, even if I find their political opinions difficult to accept.	.67	F&A
Q31. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it.	.61	F&A

Empathy & Perspective-Taking (3 items)

Q35. In political discussions, I often focus on learning new perspectives rather than trying to “win” the conversation.	.77	E&P
Q34. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others’ opinions.	.69	E&P
Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine.	.47	G&C

Eigenvalue	5.07	1.01	0.93
Variance Explained (%)	20	16	15
Proportion Explained (%)	40	32	29
Cronbach’s Alpha	.72	.79	.75
McDonald’s Omega	.74	.80	.76

Note: G&C = Allowing for Growth & Change, F&A = Forgiveness & Acceptance, E&P = Empathy & Perspective-Taking

The first factor from EFA results aligned with the Allowing for Growth & Change dimension proposed from theory, which posited that giving grace to others would entail creating opportunities for people to learn from their experiences. Four out of five items loaded onto this dimension as intended. One item, “Q41. I try to listen patiently to others during political conversations, even when I strongly disagree with them,” originally proposed as part of Empathy & Perspective-Taking, was removed through qualitative evaluation as it did not align with others

(Samuels, 2017). The four-item Allowing for Growth & Change showed good reliability, Cronbach's $\alpha = .72$ and McDonald's $\omega = .74$, and accounted for 20% of the variance.

Three items, proposed as part of the Forgiveness & Acceptance dimension, loaded onto the second factor from the EFA result. Forgiveness & Acceptance in the context of grace referred to the ability to embrace mistakes and differences as part of the human experience. This factor accounted for 16% of the variance and had good internal reliability, $\alpha = .79$ and $\omega = .80$.

The final dimension, Empathy & Perspective-Taking ($\alpha = .75$ and $\omega = .76$), consisted of three items and accounted for 15% of the variance. The top two highest loading items aligned with theoretical propositions. The last item, "Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine," was initially proposed to be part of Allowing for Growth & Change. However, upon qualitative inspection, this item was retained as it also tapped into aspects of Empathy & Perspective-Taking by trying to understand where others were coming from in political conversations.

The correlations between the three factors were lower than .80, mitigating concerns of overlap and redundancy (Rönkkö & Cho, 2022). Allowing for Growth & Change correlated at $r = .69$ with Forgiveness & Acceptance and $r = .72$ with Empathy & Perspective-Taking. Similarly, Forgiveness & Acceptance and Empathy & Perspective-Taking were considered to be tapping into a similar construct with their high correlations of $r = .64$.

Construct Validity: Confirmatory Factor Analysis (CFA)

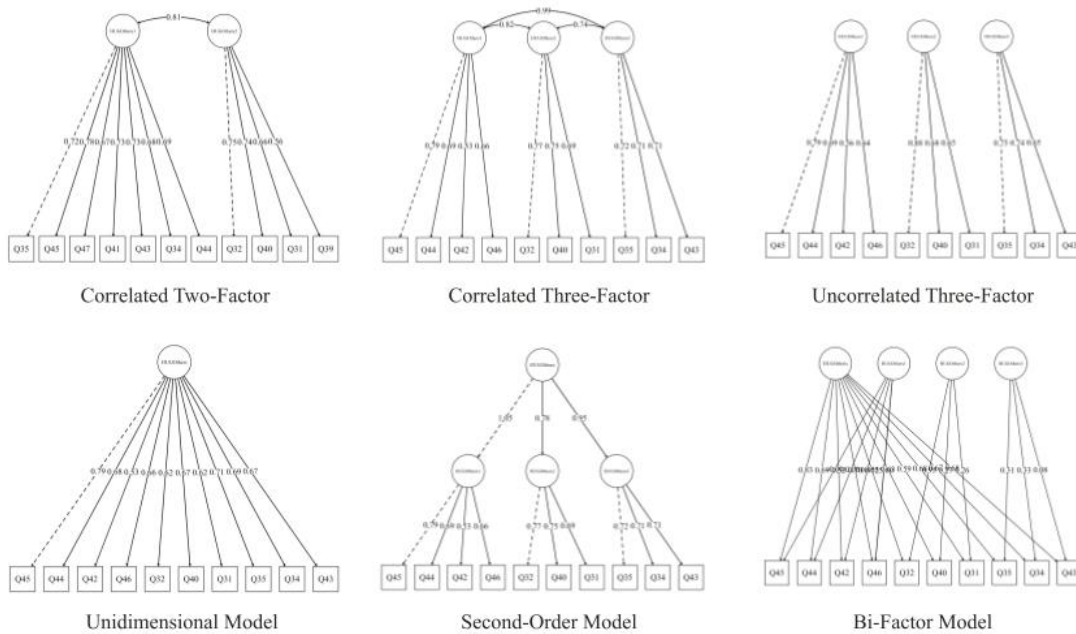
CFA Overview and Assumptions Check. CFA was conducted using Time 1's second subsample ($n_2 = 201$) to confirm the factor structure from EFA results. The data was found to be adequate for the HUG to Others items with KMO = .93 and a significant Barlett's test, $\chi^2(171) =$

1900.89, $p < .001$. Similar to HUG to Self, the Robust Maximum Likelihood estimator was utilized to control for non-normal data (Li, 2016).

CFA Models. Six competing CFA models were conducted for HUG to Others (Credé & Harms, 2015; see Figure 14 for a visualization of all models; $n_2 = 201$). The first model was derived from the EFA results above, which aligned with theoretical assumptions that HUG to Others was made up of three correlated factors (i.e., Allowing for Growth & Change, Forgiveness & Acceptance, and Empathy & Perspective-Taking). The second model tested was the correlated two-factor model solution also suggested by EFA. This model was included to test whether two or three dimensions might be a better fit for the HUG to Others scale. The third model, the uncorrelated three-factor model, assumed that there was no significant relationship between the dimensions. The fourth model was the unidimensional model that included all ten HUG to Others items on a single grace to others factor. The second-order model, similar to a full mediation, proposed that the ten items first loaded onto three first-order factors, which then loaded onto another single second-order factor that explained the correlations among the three first-order factors. Finally, the bifactor model allowed ten items to load simultaneously on a general factor (i.e., grace to others) and their specific group factors. The general factor represented the shared variance across all items, while the group factors captured additional variance not explained by the general factor.

Figure 14

All CFA Models, Human Understanding of Grace to Others



Model Fit Evaluation. Adhering to cutoffs of .90 for CFI and TLI, .06 for RMSEA, and .08 for SRMR as rough references (Brown, 2015; Hu & Bentler, 1999; Marsh et al., 2004), the unidimensional and uncorrelated three-factor models were poor fits for the data (see Table 17 for all model fits). The correlated three-factor, two-factor, second-order, and bifactor models demonstrated good to excellent fit.

Table 17*CFA Model Fit Indices, Human Understanding of Grace to Others (n₂ = 201)*

	Correlated 3-Factor	Correlated 2-Factor	Uncorrelated 3-Factor	Uni- dimensional	Second- Order	Bifactor
χ^2 (df)	51.88 (32)	77.82 (43)	253.20 (35)	79.09 (35)	51.88 (32)	35.11 (25)
CFI	.96	.95	.59	.92	.96	.98
TLI	.95	.93	.48	.90	.95	.97
RMSEA	.06	.06	.18	.08	.06	.05
90% CI	[.03, .08]	[.04, .08]	[.16, .19]	[.06, .10]	[.03, .08]	[.00, .07]
SRMR	.04	.05	.34	.06	.04	.04
AIC	4977.03	5349.63	5235.48	4991.04	4957.03	4949.13
BIC	5086.04	5425.61	5301.55	5057.11	5033.01	5048.23

Model Selection. Model selection identifies the best-fitting model for HUG to Others on the sample data ($n_2 = 201$). AIC and BIC values were examined to compare fit across the three models with good fit, with lower values being better (Preacher & Yaremych, 2023; West et al., 2012). According to Raftery (1995), a difference of 0-2 constituted weak evidence, 2-6 positive, 6-10 strong, and higher than 10 very strong evidence in favor of the model with a smaller BIC. The correlated three-factor model had lower AIC and BIC than the two-factor model, supporting a three-dimensional structure for HUG to Others. Moreover, the correlated three-factor model had higher AIC and BIC than both second-order and bifactor models, suggesting a poorer fit. As BIC scores tend to be biased in favor of second-order models (Haughton et al., 1997; Murray & Johnson, 2013; Raftery, 1995), more statistical analyses were conducted to identify the best fit. Table 19 presents model comparison statistics between HUG to Others second-order and alternative models using Satorra-Bentler (2001) formula. The χ^2 difference test showed that the

second-order model exhibited significantly better fit than both more parsimonious alternative models, satisfying part of the second criterion (see Table 18 for model comparison statistics). However, the bifactor model exhibited statistically lower χ^2 and better CFI than the second-order model, thus, it was selected as the best fitting.

Table 18

Model Comparison Statistics for HUG to Others' Models

HUG to Others' Models	χ^2	<i>df</i>	<i>p</i>	$\Delta\chi^2$	Δdf	<i>p</i>
Second-order model	74.41	32	<.001	-	-	-
More parsimonious models						
Unidimensional model	114.41	35	<.001	25.35	3	<.001
Uncorrelated three-factor model	358.85	35	<.001	230.12	3	<.001
Less parsimonious models						
Correlated three-factor model	74.41	32	<.001	0	0	not sig.
Bifactor model	52.50	25	.001	18.02	7	.01

Note: lavaan::lavTestLRT used standard χ^2 statistics, not the robust χ^2 that was reported for each model in the previous model.

Internal Reliability. HUG to Others total ($\alpha = .89$, $\omega = .91$), Allowing for Growth & Change ($\alpha = .76$, $\omega = .80$), Forgiveness & Acceptance ($\alpha = .77$, $\omega = .80$), and Empathy & Perspective-Taking ($\alpha = .75$, $\omega = .75$) subscales all had good internal reliability above .70 (Carmines & Zeller, 1979; Hair et al., 2009; Lance et al., 2006; Nunnally, 1978; Table 19). Finally, for the bifactor model, omega_{hierarchical} (ω_h) values provided a more accurate representation of its internal reliability (Cheung et al., 2024; Kelley & Pornprasertmanit, 2016; Zinbarg et al., 2005). The ω_h for the HUG to Others general factor was .95, exceeding the recommended level (Reise et al., 2013).

Table 19*CFA Second-Order Model Item Loadings and Reliability, HUG to Others*

Factors & Items	Factor Loadings	AVE	Construct Reliability	Cronbach's Alpha
Allowing for Growth & Change		.46	.77	.76
Q45. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other.	.79			
Q44. I am open to talking about politics with friends and family, even after disagreements, so we can learn from each other.	.69			
Q46. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements.	.66			
Q42. I believe the political opinions of people around me can change and evolve.	.53			
Forgiveness & Acceptance		.54	.78	.77
Q32. I believe that people around me have good intentions, even if I find their political opinions difficult to accept.	.77			
Q40. I believe most people around me are doing the best they can, even when they express political views I find troubling.	.75			
Q31. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it.	.69			
Empathy & Perspective-Taking		.51	.75	.75
Q35. In political discussions, I often focus on learning new perspectives	.72			

rather than trying to “win” the conversation.				
Q34. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others’ opinions.	.71			
Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine.	.71			
HUG to Others General Factor		.87/.45	.95	.89
Factor 1: Allowing for Growth & Change	1.05			
Factor 2: Forgiveness & Acceptance	.78			
Factor 3: Empathy & Perspective-Taking	.95			

Note: For the general factor, .87 is the AVE value with subfactors, and .45 is with individual items.

Convergent Validity

Convergent validity sought to test whether the HUG to Others scale measured similar constructs to the existing PEGS’ Unconditional Grace to Others subscale. Correlations above .50 were considered large (Cohen, 1992, 2013). HUG to Others was strongly correlated with PEGS’ Unconditional Grace to Others at $r = .58, p < .001$, supporting convergent validity (Carlson & Herdman, 2010).

Discriminant Validity

Discriminant validity tested whether HUG to Others was distinct from unrelated constructs. First, correlations were examined between HUG to Others, Social Desirability Bias, Extraversion, and Neuroticism. Even though these constructs might have a significant relationship, they should not be so highly correlated as to measure grace to others. HUG to Others had low with Extraversion at $r = .21, p < .01$, and moderate correlations with Social Desirability, $r = .43, p < .001$, and Neuroticism, $r = .42, p < .001$. However, because of low internal reliability for Extraversion, these results should be interpreted with caution.

Predictive Validity

A measure's ability to predict certain outcomes administered at a later date is referred to as predictive validity (Lin & Yao, 2024). To establish this type of validity for HUG to Others, a series of stepwise regressions was conducted on two dependent variables (DV): the Frequency of Everyday Political Talk and the Level of Disagreement when one discussed politics within their social circles. Similar to HUG to Self, in Step 1, control variables significantly correlated with each DV was regressed on DVs collected in Time 2 using responses from 180 participants who took both surveys ($N = 180$) as base models. Preliminary analyses found no significant correlations for Generalized Trust and Gender; thus, these two variables were not included in regression models. In Step 2, HUG to Others collected in Time 1 were added to those models. This process tested whether HUG to Others still significantly predicted certain outcomes when controlling for other related factors (i.e., Social Desirability Bias, Political Interest, Internal Political Efficacy, Openness, and Education).

First, Political Interest, Political Efficacy, and Education were added as predictors of Frequency of Everyday Political Talk (Step 1, Model 1), $R^2 = .21, F(3, 176) = 15.38, p < .001$. As

the next step, Model 2 added HUG to Others as a fourth predictor to the first model, $b = 1.91$, $R^2 = .28$, $F(4, 175) = 17.37$, $p < .001$. The R^2 changes between Models 1 and 2, $F(1, 176) = 18.68$, $p < .001$, was significant. This finding indicated that people who gave others more grace discussed politics with people in their social circles (e.g., family members, friends, coworkers) more frequently, even when controlling for Political Interest, Efficacy, and Level of Education.

Furthermore, for Level of Disagreement, Social Desirability Bias, Political Interest, Efficacy, and Level of Education was added in the first step in the base model (Model 3), $R^2 = .20$, $F(4, 175) = 6.29$, $p < .001$. The regression Model 4 added HUG to Others as the fifth predictor in the next step, illustrating that higher HUG to Others significantly predicted a higher Level of Disagreement when accounting for Social Desirability Bias, Political Interest, Efficacy, and Level of Education, $b = 0.44$, $R^2 = .30$, $F(5, 174) = 8.71$, $p < .001$. There was a significant change in R^2 between Models 3 and 4, $F(1, 175) = 14.89$, $p < .001$. These results supported predictive validity for HUG to Others on the Frequency and Level of Disagreement in Everyday Political Talk.

Incremental Validity

For HUG to Others to have incremental validity, it should explain additional variance in outcome variables beyond existing grace to others scales and thus, adding to the current understanding in the literature. The PEGS' Unconditional Grace to Others subscale (Rush, 2022; Rush et al., 2023) and control variables included in predictive validity models were first added as predictors for the regression models on the DVs. In the second step, HUG to Others was added to the models. Then, the base models were compared against the second models with added HUG to Others. Significant R^2 change (ΔR^2) differences between the models would confirm incremental validity. There were significant changes for the Frequency of Everyday Political

Talk, $\Delta R^2 = .04$, $F(1, 175) = 5.99$, $p = .02$, and level of disagreement, $\Delta R^2 = .06$, $F(1, 174) = 8.64$, $p = .004$. Thus, the 10-item HUG to Others measure showed good incremental validity over PEGS's Unconditional Grace to Others on political talk outcomes.

Test-Retest Reliability

Seven out of ten items from Study 3's HUG to Others scale were evaluated using Times 1 and 1.5 data from Study 2 ($N = 200$). Preliminary test-retest reliability was conducted with these shared items to assess the scale's stability (Ashford et al., 2013; Jones & Goldberg, 1967; Polit, 2014). The 7 items were: "Q31. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it," "Q32. I believe that people around me have good intentions, even if I find their political opinions difficult to accept," "Q34. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others' opinions," "Q42. I believe the political opinions of people around me can change and evolve," "Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine," "Q45. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other," and "Q46. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements." The correlation between the average of the items across both times met an acceptable level for good test-retest reliability (de Vet et al., 2011), $r = .75$, $p < .001$, suggesting that HUG to Others could be a trait-based measure.

Brief Discussion

Study 3 provided empirical evidence supporting the reliability and validity of the two Human Understanding of Grace (HUG) to Self and to Others. Initial theoretical dimensions were supported: The HUG to Self scale exhibited a two-factor structure, with its eight items loading onto Self-Forgiveness & Self-Acceptance and Allowing for Self-Growth & Change dimensions. Similarly, the HUG to Others scale consisted of ten items distributed across three factors - Allowing for Growth & Change, Forgiveness & Acceptance, and Empathy & Perspective-Taking. More importantly, these two HUG scales demonstrated predictive properties for the frequency and level of disagreements in everyday political talk with others within one's social circles. The findings compared to previous literature will be discussed in Chapter 4.

3.4 Study 4

Although Studies 2 and 3's longitudinal designs allowed us to establish predictive validity, causal inferences could not be made. Thus, Study 4 utilized an experimental design to address this limitation in previous studies. Additionally, while Studies 2 and 3 saw the effects of human grace in everyday political talk *within one's social circles*, Study 4 aimed to expand on whether grace had an impact on willingness to discuss politics with *strangers*, both within and outside of an individual's political groups. As discussing politics within one's social network is crucial and often the focus of most studies, little is known about political discussions with strangers (Schmitt-Beck & Schnaudt, 2023). Study 4 sought to understand whether human grace meaningfully impacted openness to engage with strangers who were less likely to share similar views compared to friends and families.

Manipulating both the stranger's level of grace (high vs. low grace) and political group match (same vs. opposing political party), Study 4 employed a 2x2 between-participant

experimental design to establish causal relationship between perceived human grace and openness to discuss politics. Additionally, analyses were conducted to investigate whether there were interaction effects between human grace and political group match on the willingness to engage and social distancing preferences.

Even though one might assume that there is a greater gap in political views with people outside compared to inside their social network, recent research suggests that political conversations with strangers take place even less frequently and consist of more similar, homogenous opinions than discussions with people they know (Schmitt-Beck & Schnaudt, 2023). This finding implies that everyday political talk still has the most benefits when conducted with people within one's social circles. Therefore, while engaging in conversations can be a single instance where both parties remain somewhat as strangers, this study moved a step further by asking: do levels of perceived grace impact willingness to connect socially, turning strangers into friends? To answer this question, social distancing (i.e., whether to have others as friends, neighbors, coworkers) was added as an important outcome in addition to willingness to engage in political conversations.

Social trust - the outlook that people tend to act in goodwill (Nannestad, 2008) - was an important mechanism in motivating individuals to approach strangers for political discussions (Schmitt-Beck & Schaudt, 2023). Study 4 posited that perceptions of grace from others could serve a similar role as that of social trust. When individuals perceive their conversation partner to be more gracious by acting with empathy, forgiveness, and growth, they may be more open to engaging in conversations and less likely to socially distance despite a lack of relationship history.

Hypothesis 1a (*Main Effect for Perceived Grace from Others*): Individuals will be more willing to engage in political discussions with strangers who are expected to offer more grace.

Hypothesis 1b (*Main Effect*): Individuals will be less likely to socially distance from strangers who are expected to offer more grace.

Another factor that can invoke people's perceived level of disagreement in political discussions is their political identification, specifically, whether their political group match (i.e., identifying with the same political party) or mismatch (i.e., identifying with different ones). Discovering that a stranger identifies with an opposing political party from one's own can elicit feelings of avoidance, hostility, and intolerance (Brandt et al., 2014; Iyengar & Krupenkin, 2018). In fact, negative attitudes towards opposing political parties have escalated such that partisan-based discrimination exceeded that based on religion and ethnicity (Westwood et al., 2018). Furthermore, political group (mis)match was found to be a strong predictor of social distancing preferences beyond the history of the parties' relationship. A study with 302 participants found that people expressed a higher desire to establish friendships with a politically matched stranger than maintaining a relationship with a mismatched close friend (Buliga & MacInnis, 2020).

Hypothesis 2a (*Main Effect*): Individuals will be more willing to engage with strangers that match their political affiliation.

Hypothesis 2b (*Main Effect*): Individuals will be less likely to socially distance from strangers that match their political affiliation.

Finally, we proposed that perceptions of grace offered could help individuals change their perceptions of others, including those who were politically mismatched, and impact their willingness to engage and social distancing preferences. Previous findings in romantic

relationships provided initial support for this proposition: perceived grace from partners was negatively correlated with hostile and aggressive thoughts (Cook, 2013; McCarthy, 2012), feelings often associated with people in opposing political party. People were also found to be more motivated to approach others exhibiting high grace behaviors (i.e., open to learning and growing from difficult conversations), even when they disagreed politically (Knöchelmann & Cohrs, 2024).

Hypothesis 3 (*Interaction Effect*): There will be an interaction effect between political match (i.e., same or opposing political party) and the stranger's perceived level of grace on individuals' willingness to engage, such that...

... **a.** when the stranger is perceived to offer less grace, individuals will be more willing to engage with the politically matched stranger than the mismatched one.

... **b.** when the stranger is perceived to offer more grace, there will be no significant differences in individuals' willingness to engage with the politically matched versus the mismatched stranger.

Hypothesis 4 (*Interaction Effect*): There will be an interaction effect between political match (i.e., same or opposing political party) and the stranger's perceived level of grace on social distancing preferences, such that...

... **a.** when the stranger is perceived to offer less grace, individuals will be less likely to socially distant from the politically matched stranger than the mismatched one.

... **b.** when the stranger is perceived to offer more grace, there will be no significant differences in individuals' willingness socially distant from the politically matched versus the mismatched stranger.

Sample

Study 4 intentionally excluded respondents who had participated in any of the previous studies. Calculations using G*Power estimated a minimum of 128 participants for a medium effect size (Faul et al., 2009). After removing 19 responses that failed attention checks, the final sample size consisted of $N = 239$ participants. Demographically, the respondents were equally distributed across political identification (49.4% Democrats, 50.6% Republicans). Other recorded statistics included gender (53.1% male, 45.2% female, 1.3% non-binary, 1 missing data point), racial groups (33.9% White, 26.8% Black, 18.4% Asian, 9.6% Hispanic/ Latino, 10.5% Mixed, 2 missing), age (36.8% 18-29 years old, 28.5% between 20-39, 19.2% 40-49, 15.5% 50 and above), and education (19.2% High School/ Associate's, 45.2% Bachelor's, 35.6% Graduate Degree).

Procedures

Adapting Knöchelmann and Cohrs' (2024) methods, Study 4 employed a 2x2 between-subject experiment design. Different participants were randomly assigned to one of the four experimental conditions (political match/ mismatch x high grace/ low grace from others). First, even though the recruitment platform Prolific had political party data of their sample, participants were asked to report their political affiliation in the survey. Having participants answered this again achieved three goals: 1. Ensured we had the most current data,⁷ 2. Primed participants on their political identification, and 3. Correctly assigned participants to their intended experimental condition. In each of the conditions, to create mundane realism, participants were asked to write three to four sentences on their thoughts about discussing politics with the opposing political party and whether they permitted researchers to share their

⁷ Although Prolific had their internal demographic information, it was unclear when was the last time the information was updated for each participant.

statement with others. These prompts were intended to manipulate participants to believe that the statement they were about to read was a response from another person that they might be matched with, just like the one they generated themselves. The following section instructed participants to carefully read a profile from another “participant,” Alex, who was either in the same political party (e.g., Republican participants will see Alex as a Republican) or in an opposing political party (e.g., Republican participants will see Alex as a Democrat). No demographic information except for political affiliation was provided for “Alex,” which was selected as a gender- and race-neutral name, an approach adopted by previous studies (e.g. Glikson et al., 2018; Knöchelmann & Cohrs, 2024; Lai & Babcock, 2013).⁸ The profiles had been edited to have a similar count of around 50 words (Figure 15). In the high grace condition, Alex’s introduction said, “As a Democrat/ Republican, I don’t fully agree with how Republicans/ Democrats make decisions, but I understand where they’re coming from and why they support certain policies. We’ll all say the wrong things sometimes when discussing politics, but I hope we can be patient with each other and learn new perspectives.” In the low grace condition, Alex wrote, “As a Republican/ Democrat, I don’t understand why Democrats/ Republicans would continue supporting their party. It’s frustrating because I honestly think it comes from ignorance. I’m not afraid to call people out when they’re plainly wrong. If someone can’t defend their views with facts, they deserve to be called out so their lies don’t spread.”

⁸ Despite “Alex” not always being a completely neutral name (Lai & Babcock, 2013), we decided to use the name instead of a pseudonym to further humanize the target.

Figure 15

Alex's Introduction for Republican x High Grace (left) and Democrat x Low Grace (right)

Name: Alex

Political Affiliation: Republican

Self-Introduction: As a Republican, I don't fully agree with how Democrats make decisions but I understand where they're coming from and why they support certain policies. We'll all say the wrong things sometimes when discussing politics, but I hope we can be patient with each other and learn new perspectives.

Name: Alex

Political Affiliation: Democrat

Self-Introduction: As a Democrat, I don't understand why Republicans continue to support their party. It's frustrating because I honestly think it comes from ignorance. I'm not afraid to call people out when they're plainly wrong. If someone can't defend their views with facts, they deserve to be called out so their lies don't spread.

Next, participants were asked about Alex's political identification as an attention check and to rate "Alex" using the Perceived HUG from Others as a manipulation check. The survey then asked whether they would be willing to engage with Alex for a future political conversation, and the degree to which they wanted to be socially close to Alex. Finally, for exploratory purposes, group malleability belief and willingness to engage in a future conversation with Democrats and Republicans were measured.

Measures

Attention Check. After reading Alex's statement, participants were asked to identify Alex's political identification (i.e., Democrat, Independent, or Republican). Any participant who failed to select the right political identification for their experimental condition was removed from further analyses.

Manipulation Check. To ensure that the manipulation was successful, participants were asked about Alex's political identification and to rate "Alex" using the 13-item Perceived HUG from Others scale ($\alpha = .97$), rating how true each statement might be for the target (1 = Strongly Disagree; 5 = Strongly Agree).

Willingness to Engage in Future Discussions. One item created for the study, “Would you be willing to be matched with Alex for a political discussion in the future?”, was used to measure willingness to engage with Alex in a future political discussion. The four choices were: 1 = Definitely not, 2 = Probably not, 3 = Probably yes, and 4 = Definitely yes (see Appendix J for all measures in Study 4).

Adapted Bogardus Social Distance Scale. Participants answered a series of questions on how much they would like to be socially distanced from Alex using an adapted Bogardus Social Distance Scale ($\alpha = .94$; Agrest et al., 2022; Bogardus, 1925). The shortened scale consisted of five questions (e.g., “Would you be friends with Alex?”, “Would you rent a room to Alex?”) on a Likert scale from 1 = Definitely not to 4 = Definitely yes. To be consistent with the name of the scale, all items were reverse coded in data analysis so that higher scores would indicate a higher preference to be socially distant from the target.

Demographics. Participants were invited to provide their demographic information, including race and ethnicity, gender, age, political affiliation, and education (see Appendix H for demographic questionnaire).

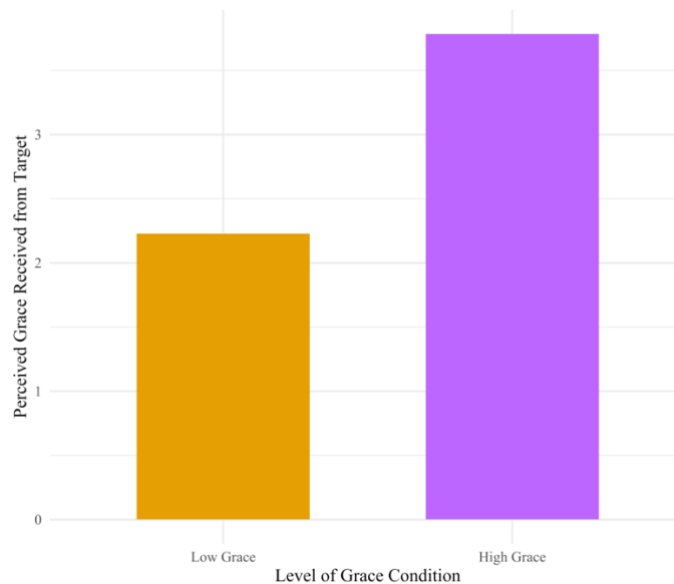
Results

Preliminary Analysis

T-test result confirmed that the grace manipulation was successful (see Figure 16), with participants in the low grace condition ($M = 2.23$) rated Perceived HUG from Others significantly lower than the high grace condition ($M = 3.78$), $t(235.91) = -13.48$, $p < .001$. Perceived HUG from Others scores did not differ significantly across participants’ and targets’ political affiliation, suggesting that the manipulation was not confounded by political match-mismatch bias. Correlations across factors can be reviewed in Appendix K.

Figure 16

Manipulation Check



Hypotheses Testing

Two-way ANOVAs were the recommended method to test the interaction hypotheses (Tabachnick & Fidell, 2013). Starting with assumption checks, all ANOVA models satisfied Levene’s test for homogeneity of variance. The qqPlot and Shapiro-Wilk outputs revealed that only one model did not pass the normality of residuals. However, given the robustness of ANOVA against normality violations (Blanca et al., 2017; Knief & Forstmeier, 2021), this deviation was not a cause for concern.

Willingness to Engage. Two-way ANOVA was conducted to examine the effects of Target’s Level of Grace (low vs. high) and Political Match (same vs. opposing party) on willingness to engage with the target “Alex” for a political conversation in the future (Table 20). Partial eta squared (η^2_p) was utilized to determine effect size, with values above .01 considered small, .06 medium, and .14 large (Cohen, 2013b). Results found both main effects for target’s

grace level, $F(1, 235) = 57.10, p < .001$, and political match, $F(1, 235) = 22.51, p < .001$, supporting H1a and H2a. On average, people were more willing to communicate politics in the future with the target perceived to offer more grace ($M = 3.29$) than less grace ($M = 2.49$) with a large effect size, $\eta_p^2 = .20$. In addition, people were more willing to communicate with the stranger from a matching political party ($M = 3.14$) compared to the mismatched target ($M = 2.66$). The effect was found to be moderate, $\eta_p^2 = .08$.

Table 20

Two-Way ANOVA, Willingness to be Matched with Target for Political Conversation

	df	Mean Sq.	F statistics	Sig.	Partial eta ²
Target's Level of Grace	1	38.47	59.73	<.001	.20
Political Match	1	12.80	19.87	<.001	.08
Political Match x Target's Level of Grace	1	2.54	3.94	.048	.02
Residuals	235	0.64			

Additionally, the interaction between level of grace and political match was also significant on willingness to engage, $F(1, 235) = 3.94, p = .048, \eta_p^2 = .02$ (see Figure 17 for visualization). Consistent with H3a, Tukey's HSD post hoc revealed that when the target was perceived to offer less grace, people were significantly more willing to engage with a politically matched ($M = 2.85$) than a mismatched stranger ($M = 2.18$), $t(235) = 4.56, p < .001$. Supporting H3b, in the high grace condition, there were no significant differences in willingness to engage

with the matched ($M = 3.42$) versus the mismatched target ($M = 3.17$), $t(235) = 1.75, p = .30$ (see Table 21 for group mean and Appendix L1 for pairwise comparison results).

Figure 17

Two-Way ANOVA, Target's Level of Grace x Political Match on Willingness to Engage

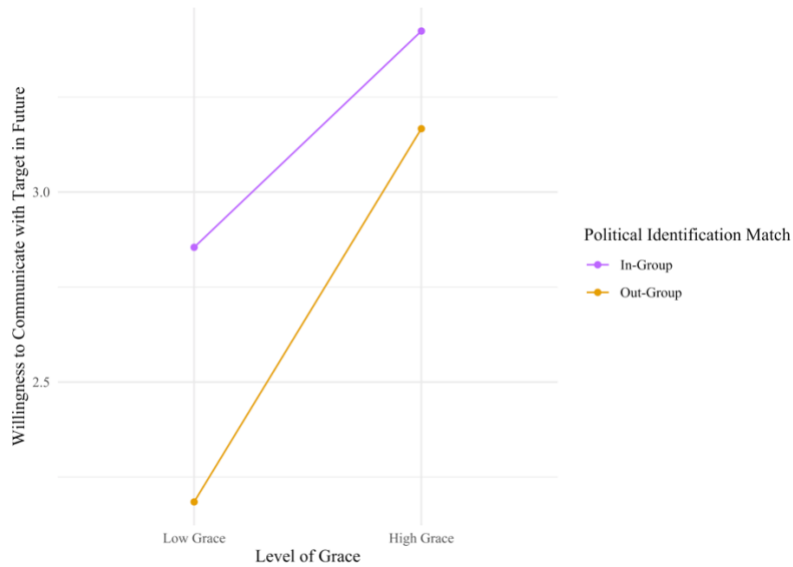


Table 21

Means by Group, Willingness to Match with Target for a Political Conversation

Target's Grace Level	Political Match	<i>n</i>	<i>Mean</i>	<i>SE</i>	<i>df</i>	95% C.I.	
						Lower	Upper
Low Grace	Mismatch	65	2.18	0.10	235	1.99	2.38
Low Grace	Match	55	2.85	0.11	235	2.64	3.07
High Grace	Mismatch	60	3.17	0.10	235	2.96	3.37
High Grace	Match	59	3.42	0.10	235	3.22	3.63

Social Distancing. Similarly, Table 22 presents the results for the two-way ANOVA on the effects of Target’s Level of Grace (low vs. high) and Political Match (same vs. opposing) on Social Distancing (i.e., openness to be friends, neighbors, or coworkers with Alex). Significant main effects were observed for both target’s grace level, $F(1, 235) = 65.44, p < .001$, and political match, $F(1, 235) = 26.11, p < .001$. There was a large effect, $\eta_p^2 = .22$, suggesting that individuals would be more likely to socially distance themselves from the low-grace target ($M = 3.57$) than the high-grace one ($M = 2.85$). In addition, people were more willing to socially distance themselves from the politically mismatched stranger ($M = 3.42$) than the matched one ($M = 3.00$) with a medium effect size, $\eta_p^2 = .09$. Taken altogether, the two-way ANOVA results supported both H1b and H2b.

Table 22

Two-Way ANOVA, Social Distancing from Target

	df	Mean Sq.	F statistics	Sig.	Partial eta²
Target’s Level of Grace	1	30.80	68.48	<.001	.22
Political Match	1	10.37	23.07	<.001	.10
Political Match x Target’s Level of Grace	1	2.14	4.75	.03	.02
Residuals	235	0.45			

In line with initial predictions, the interaction effect between level of grace and political match was also significant on social distancing preferences, $F(1, 235) = 4.75, p = .030, \eta_p^2 = .02$ (see Figure 18 for visualization). Tukey’s HSD post hoc analyses revealed that the interaction

effect supported both H3a and b (refer to Appendix L2 for pairwise comparisons). Specifically, in the low grace condition, participants reported significantly greater social distancing preference from a politically mismatched ($M = 3.84$) than a matched stranger ($M = 3.24$), $t(235) = 4.94$, $p < .001$, supporting H4a. H4b was also supported, such that when the conversation partner was perceived to offer more grace, there was no significant difference in their social distancing preference between the mismatched ($M = 2.96$) and matched target ($M = 2.73$), $t(235) = 1.85$, $p = .25$. Means, standard errors, and confidence intervals for each group are provided in Table 23.

Figure 18

Two-Way ANOVA, Target's Level of Grace x Political Match on Social Distance

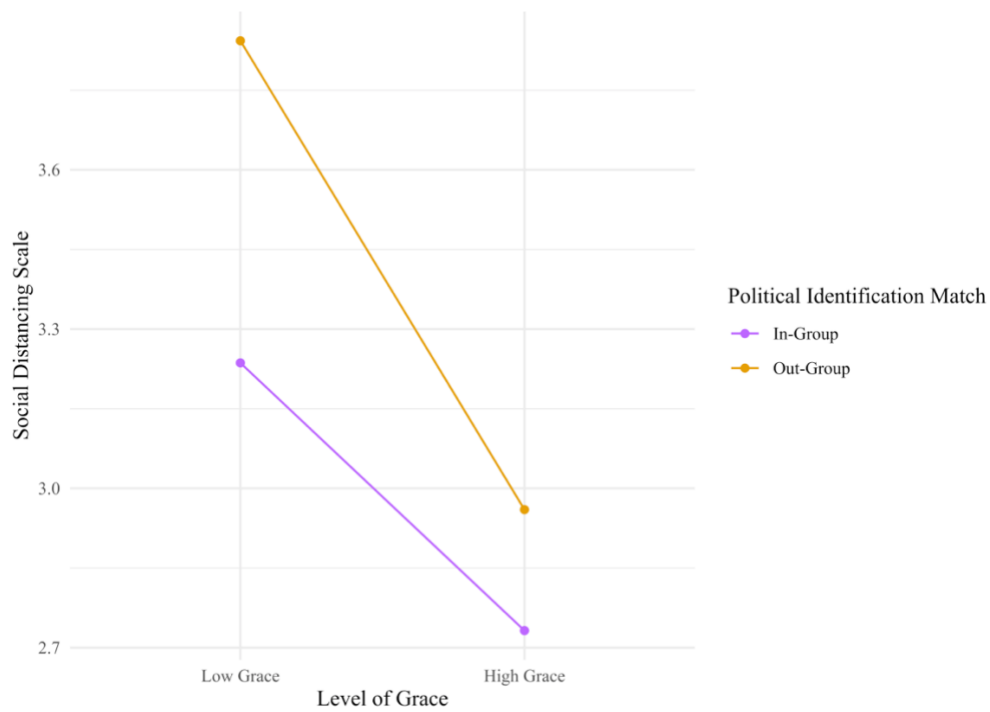


Table 23*Means by Group, Social Distancing from Target*

Target's Grace Level	Political Match	<i>n</i>	<i>Mean</i>	<i>SE</i>	<i>df</i>	95% C.I.	
						Lower	Upper
Low Grace	Mismatch	65	3.84	0.08	235	3.68	4.01
Low Grace	Match	55	3.24	0.09	235	3.06	3.41
High Grace	Mismatch	60	2.96	0.09	235	2.79	3.13
High Grace	Match	59	2.73	0.09	235	2.56	2.90

Discussion

Study 4 expanded beyond political talk within one's social circles in Studies 2 and 3 to establish how grace shaped engagement with strangers. Utilizing an experimental design, Study 4 provided greater support for the causal relationship between perceptions of human grace and openness to political discussions. All main and interaction effect hypotheses were supported for both the level of perceived grace and political group match and the interaction between the two.

As proposed, participants were more willing to engage in a future conversation with a stranger when they were perceived to offer more grace, and when they shared the same political affiliation. However, interaction results revealed that grace moderated the effects of political group match on outcomes. When the conversation partner was perceived to be low in grace, participants expectedly preferred to engage with the matched than the mismatched stranger. Yet, when the target was perceived to offer more grace, the political group match had no significant effect on individuals' willingness to engage with the person. Grace, then, can act as a potential

buffer against political cross-partisan bias, especially when two people identify as members of opposing political parties. One explanation for this lack of preference is that partners with high grace are expected to exhibit constructive and civil behaviors in conversations, reducing concerns and anxiety about escalating conflict even if disagreements arise. This parallels findings from intellectual humility research that perceived higher intellectual humility from the target led to positive expectations of debate, subsequently increasing openness to approach (Knöchelmann & Cohrs, 2024).

Similarly, the level of perceived grace and political group match both independently predicted social distancing preference from another person. Individuals were significantly less likely to socially distance from the conversation partner that was perceived to offer more grace and shared their political affiliation. Significant interaction results revealed that the level of grace moderated political group match. While individuals were significantly more likely to socially distance from the politically mismatched than the matched stranger in the low grace condition, political group membership did not predict social distancing preference in the high grace condition. This aligns with findings on both grace in romantic relationships and other related constructs, where perceptions of desirable virtues from others promoted positive social interactions (e.g., Brock et al., 1998; Cook, 2013; Khalaf-Moughabghab, 2019), sometimes even overriding political, moral, and social stance in approaching and establishing relationships with others (e.g., Itzhakov et al., 2024; Itzhakov & Reis, 2021; Knöchelmann & Cohrs, 2024). Thus, perceptions of grace can encourage people to invite strangers to their social circles, even when they identify with an opposing political group.

Overall, these findings highlight the potential of grace-giving behaviors in promoting sustained, long-term political dialogues. By showing empathy, acceptance, understanding, and

openness to change, individuals can foster a productive, inviting discursive space for all. By practicing grace, people can divert from the divisive us-versus-them pattern and focus on building connections for mutual growth.

Chapter 4: General Discussion

Despite frequent references to grace as an antidote to the growing political polarization and entrenched conflicts (e.g., Helgeson, 2014; Holland & Silvers, 2019; Kimmins, 2025; Putnam & Campbell, 2012), its capacity to foster casual, unstructured political dialogue has never been empirically tested. This research agenda addressed that gap by achieving multiple purposes. First, it introduced a grounded, secular definition of human grace. Second, three theoretical dimensions were identified, which contributed to psychometric conceptualizations of this broad construct. Third, addressing the lack of rigorous human grace measures in the literature (Hodge et al., 2022), Studies 1, 2, and 3 empirically developed and fully validated three multidimensional measures of grace to self, to others, and perceived from others within one's social circles. Utilizing an experimental design, Study 4 explored the impact of a strangers' perceived grace to them and whether their political affiliation was the same or different from the respondent's. This study demonstrated the potential of human grace in mitigating the divide across opposing political affiliations. Finally, our findings across five studies provided the first evidence that human grace predicts more frequent and diverse opinions in everyday political talk with others who have similar and different political affiliations.

4.1 Overview of Findings

Human Grace as a Multi-Dimensional Construct

The first key finding of this work lies in the exclusion of “undeserving” recipients from the psychometric definition of human grace. While religious definitions of grace often emphasize the notion of merit, such framing can be strongly contested in interpersonal and political contexts, where judgments about worthiness are inherently subjective (O Tuama, 2022; Scarre,

2011). Preserving its relational aspects, our new definition reframes grace as a *voluntary gift of understanding and acceptance to self, others, and from others*.

Three theoretical dimensions of human grace in having difficult conversations were introduced. The first dimension, Empathy & Perspective-Taking, involves the ability to see things from others' viewpoints, put oneself in others' shoes, and recognize that external factors can influence one's actions at any given moment. Although this dimension has been presented among the characteristics of grace (Scarre, 2011), it has not been explicitly operationalized in previous grace measures. Ultimately, this dimension is grounded in the assumption that people generally have good intentions, even if their actions might not always align with others' best interests.

Forgiveness & Acceptance is the capacity to move past mistakes - both from oneself and others - and the acceptance that imperfections are part of the human condition. This dimension is reflected in most psychometric measures of grace in the literature (e.g., Bufford et al., 2015; Payton et al., 2000; Rush et al., 2023; Schellekens et al., 2024). In political talk, this dimension manifests as letting go of resentment, harsh judgments, or the desire to be "right." However, forgiveness and acceptance do not equate to suppressing or ignoring negative emotions but rather acknowledging, embracing, and processing them in constructive ways.

Last but not least, Allowing for Growth & Change ensures accountability remains central to grace giving and receiving. This dimension traces back to the belief that people can learn from their experiences and evolve into better versions of themselves. Offering grace, in this sense, can reflect the act of creating a safe environment for people to express themselves without fear of judgment, engage in reflections, and encourage positive changes in oneself and others. Although none of the previous existing grace scales include factors reflecting this dimension, prior

research has alluded to grace being a catalyst for growth (e.g., Emmons et al., 2017; Graves, 2017; Meissner, 1966). For example, Schellekens and colleagues (2024) found that “receiving grace [leading] to new chances” emerged as one of the central themes.

Validation of Human Understanding of Grace Measures

The above findings informed the development of three separate measures of Human Understanding of Grace (HUG) to Self, Others, and Perceived from Others in political discussions. The reliable and valid scales provided measurable tools for future work in examining the impact of human grace in different contexts. The similarities and differences compared to prior literature are discussed, along with the findings of each HUG scale.

Grace to Self

A two-dimensional HUG to Self measure was proposed. Aligning with the theoretical proposition, exploratory factor analysis (EFA) on separate subsets supported a two-factor solution for HUG to Self: Self-Forgiveness & Self-Acceptance and Allowing for Self-Growth & Change. All items proposed to belong in each dimension loaded as expected. Model comparisons for confirmatory factor analysis (CFA) suggested the correlated two-factor model was marginally the best fit for the data. Even though the second-order and bifactor models were not selected, they both showed excellent fit, indicating that the relationship among the two factors could potentially be explained by a general Grace to Self factor. When using the scale, future researchers can interpret both an overall mean score of the 8-item HUG to Self and use its subscales to investigate the theoretical dimensions separately.

The first dimension, Self-Forgiveness & Self-Acceptance, overlapped with aspects of previous grace-to-self measures (e.g., Bufford et al., 2017; Rush et al., 2023). The five items belonging to this dimension reflected being kind and gentle with oneself, even when one did not

behave in desirable ways in political conversations. The second dimension, Allowing for Self-Growth & Change, demonstrated the tendency to approach one's own actions and thoughts with curiosity. Individuals with higher scores in this dimension would be more likely to view difficult conversations as an opportunity for learning. Although PEGS' Grace to Self has one item illustrating Allowing for Self-Growth & Change (i.e., "I try to do my best, and when I fall short, I give myself another chance"; Rush et al., 2023), HUG to Self is the first to introduce it as an independent theoretical factor.

HUG to Self demonstrated good convergent validity with PEGS' Grace to Self and discriminant validity with Neuroticism, Extraversion, and Social Desirability Bias. It also showed predictive validity for willingness to self-censor, frequency, and level of disagreement in everyday political talk. Specifically, people who extend more grace to themselves in political contexts were less likely to censor themselves when facing opposing opinions. Furthermore, people with higher grace to self were more likely to engage in informal, unstructured political discussions with people in their social circles, and these conversations tended to involve a wider and more diverse perspectives. Notably, these effects were still significant even when controlling for social desirability bias, political efficacy, political interests, openness, and level of education. Finally, HUG to Self accounted for unique variance in predicting frequency and disagreement level beyond that explained by the existing PEGS' Grace to Self subscale.

Finally, contrary to prior research that showed grace to self as a relatively stable trait across time (Rush, 2022; Rush et al., 2023), preliminary test-retest results with shared HUG to Self items did not support it as a fixed trait. HUG to Self could be seen as an orientation that was more prone to change depending on the context. With grace to self's link to lower willingness to self-censor, higher frequency and more diverse opinions within everyday political talk with

people within one's social circles, it is instrumental to explore strategies to cultivate higher sense of grace to self.

Grace to Others

The theoretically proposed three-factor HUG to Others scale was also rigorously validated. EFA supported the three factors for grace to others, namely Allowing for Growth & Change, Forgiveness & Acceptance, and Empathy & Perspective-Taking. Two items loaded onto different factors than initially proposed, with one removed from Allowing for Growth & Change and the other retained in Empathy & Perspective-Taking based on qualitative evaluations. CFA indicated that the bifactor model was the best fit for the data, suggesting that these three dimensions could be treated as components of a broader, higher grace to others construct. Thus, researchers using HUG to Others in the future are advised to use the full 10-item HUG to Others scale instead of its subscales to avoid misrepresenting the construct. Conceptually, this implies that giving grace to others encompasses related constructs such as forgiveness, acceptance, and empathy. As higher-order constructs tend to be better predictors of broad outcomes than their sub-facets (e.g., Jenkins & Griffith, 2004; Ones & Viswesvaran, 1996; Van Iddekinge et al., 2005), HUG to Others can serve as an important conceptual framework to add to our understanding of the current literature on political engagement.

The dimensions for HUG to Others both resembled and differed from previous literature. The Forgiveness & Acceptance dimension reflected elements from the DGS and PEGS' unconditional grace to others. This dimension captured embracing a holistic view of others beyond their temporal actions or opinions. Diverging from previous grace to others scales (e.g., Bufford et al., 2017; Rush et al., 2023), three items from this dimension explicitly highlighted the underlying assumption that others had good intentions (e.g., "I believe most people around me

are doing the best they can, even when they express political views I find troubling”). The remaining two dimensions introduced new aspects of grace to others. While Allowing for Growth & Change reflected the belief and effort to learn from others in political conversations, the three-item Empathy & Perspective-Taking subscale showed a willingness to self-reflect and see from others’ points of view. While these aspects have been proposed theoretically (Scarre, 2011), they have not been operationalized in psychometric measurements of grace until now.

HUG to Others evidenced convergent validity with PEGS’ Unconditional Grace to Others and discriminant validity with Neuroticism and Extraversion, with some indication of divergence from Social Desirability Bias. More importantly, HUG to Others showed strong predictive validity for political talk outcomes: individuals higher in grace to others reported more frequent and higher presence of diverse opinions in everyday political talk. These effects remained significant even when controlling for social desirability bias, political efficacy, political interests, openness, and level of education. HUG to Others accounted for additional variance in frequency and level of disagreement beyond PEGS’ Unconditional Grace to Others, showing its potential as a predictor of political engagement.

Lastly, concurring with Rush and colleagues’ findings (2023), HUG to Others exhibited relative stability over time. Preliminary test-retest across two weeks with shared HUG to Others items produced strong correlations. Although long-term evaluations with the full scale are needed, this can serve as initial evidence that the level of grace given to people within one’s social circle might be a fairly consistent orientation.

Perceived Grace from Others

The 13-item Perceived HUG from Others was revealed to consist of two factors, Presence and Absence of Grace, diverging from theoretical propositions of three dimensions of Empathy

& Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change. The empirically derived factors were formed by seven positive-wording items loaded onto one and six negatively worded items clustered onto the other, a common occurrence in other psychological measures (e.g., Neff, 2003). The emergence of the presence and absence of grace dimensions might hint that individuals were less likely to perceive grace from others conceptually (e.g., empathy, acceptance) due to lack of insights into others' minds than a straightforward distinction of whether grace was offered or not. CFA model comparisons suggested that the second-order model was the best fit, indicating that the correlations between the two factors could be explained by an underlying perceived grace from others construct. An overall mean score of all 13 items should be used as a composite measure for Perceived HUG from Others.

The Perceived HUG from Others scale deviated heavily from previous measures of grace from others in a few ways. While most of the grace from others measures targeted general experiences, often involving questions about grace received from parents or from coworkers (Rush et al., 2023; Bufford et al., 2017; O'Connell, 2024), Perceived HUG from Others is context- and person-specific. By asking individuals to focus on grace given by a specific conversation partner, this measure can capture the interpersonal, dyadic nature of many dialogues in conflict. It also emphasizes the importance of grace from both sides.

Although test-retest reliability was not assessed, Perceived HUG from Others demonstrated predictive validity for higher willingness to communicate about politics with others beyond known factors associated with political talk (i.e., political efficacy, political interest, level of education). It also accounted for significantly more variance beyond GRACE's Grace-Receiving subscale in openness to engage politically.

Human Grace in Everyday Political Talk

Across all three HUG measures, human grace consistently predicted both the frequency of everyday political talk and the level of disagreement in those conversations. This pattern held in both longitudinal and experimental designs, highlighting the robust relationship. Furthermore, grace not only facilitated dialogue within existing networks (Studies 2 and 3) but also encouraged engagement with those outside one's immediate circle regardless of whether they matched politically (Study 4). These findings expanded both the literature on grace and political talk by highlighting grace as a measurable construct that predicted positive outcomes in deliberate democracies.

4.2 Theoretical Implications

This research agenda contributed to the current understanding of human grace and everyday political talk in several ways. First, it advanced the psychometric conceptualization of human grace by identifying three theoretical dimensions: Forgiveness & Acceptance, Empathy & Perspective-Taking, and Allowing for Growth & Change. Although past research has offered thematic aspects of grace, most psychometric measurements have operationalized human grace by relational categories: grace to self, to others, and from others. The current research agenda extended these existing frameworks by offering crucial factors of each relational grace aspect and capturing a more nuanced comprehension of grace.

Second, this series of studies developed three Human Understanding of Grace (HUG) scales as the first fully validated interpersonal grace psychometric measurements. As divine and human grace are conceptually distinct, existing measures of grace that included both types of grace risked misrepresenting the unique effects of human grace (Hodge et al., 2022). Furthermore, all existing measures of grace in psychology and theology operated on the notion

that recipients of grace must be “undeserving.” This assumption has been contested (Jones, 2020; Ó Tuama, 2022; Schellekens et al., 2021), especially within interpersonal conflicts where no one can remain completely faultless to hold the moral high ground (Scarre, 2011). Aligning with these contemporary perspectives, these three HUG scales are the only ones to date that explicitly exclude consideration of recipients’ merit from its definition and conceptualization, boosting its applicability in interpersonal contexts.

Another key contribution of this research is its empirical demonstration of how human grace promoted everyday political talk, adding to the body of research on the benefits of grace, such as better mental health and well-being (Bufford et al., 2015, 2017; Rush et al., 2023) and relationship satisfaction (Khalaf-Moughabghab, 2019). Despite sound theoretical arguments that human grace can be an important factor to moral, social, and political divides (e.g., Helgeson, 2014; Holland & Silvers, 2019; Kimmins, 2025; Putnam & Campbell, 2012), this series of five studies was the first to empirically show its potential in such contexts. This research agenda found that higher human grace to self, to others, and perceived from others predicted higher frequency and diversity of opinions in everyday political talk within people’s social circles, and increased openness to engage with strangers regardless of whether they had the same or opposing political affiliations.

Finally, the findings of Study 4 suggested that perceptions of grace offered could encourage people to be willing to not only engage in political discussions but also form social connections with strangers who might disagree politically. Although American adults tend to decide their neighbors, friends, and romantic partners based on their political beliefs (Pew Research Center, 2014), perceptions of grace could have a moderating effect where people may be open to invite people of opposing party into their social circles in the presence of perceived

grace. Similar findings have emerged from studies of both grace in romantic relationships and other related constructs, where perceptions of desirable virtues from others promoted positive social interactions (e.g., Brock et al., 1998; Cook, 2013; Khalaf-Moughabghab, 2019), sometimes a stronger predictor of willingness to approach and establish relationships with others than moral and political beliefs (e.g., Itzchakov et al., 2024; Itzchakov & Reis, 2021; Knöchelmann & Cohrs, 2024). Particularly relevant to our current political climate of polarization, characterized by unprecedented hostility towards the other party (Dimock & Wike, 2020), our findings suggested the potential of human grace in promoting understanding and fostering cross-partisan connections, even within deeply divided societies (Scarre, 2011).

4.3 Practical Implications

Political polarization is at an all-time high, with people feeling tired, angry, and frustrated with one another about politics. Could human grace, then, be a way to reconnect, strengthen our communities, and move forward together? The findings from our five studies carry a few practical implications across three different contexts: political bridge-building, personal relationships, and professional settings.

First, considering that there are over 7000 political bridge-building organizations in the U.S. alone (Bridging Divides Initiative, 2023), the three Human Understanding of Grace scales can assist these practitioners and organizations in mitigating polarization by providing a framework for communicating with external stakeholders. Specifically, elements of grace can be incorporated into messaging and communications to invite participation in bipartisan initiatives, countering extreme, polarizing rhetoric plaguing the current political landscape. Moreover, by administering the three HUG scales altogether, training and educational curriculum can offer a holistic assessment for their participants, addressing the potential discrepancies between self- and

other-perception (Kenny & West, 2010). By having both HUG to Others and Perceived HUG from Others results, individuals can receive multi-rater feedback, assessing whether their own self-rating of grace to others aligned with their perceived grace-giving behaviors. By evaluating whether there is a gap in one's perceptions of their behaviors compared to how they appear to others, individuals can work with organizations, educators, and facilitators to subjectively identify areas for growth.

Second, cultivating grace can be crucial to preserving personal relationships while still being able to have difficult conversations with one another. Although political disagreements can be extreme and divisive, sincerely listening to opposing views can promote more constructive outcomes (De Wied et al., 2007; Porter & Schumann, 2018). As such, the items from the HUG measures can serve as references for how to engage with others in more civil, productive ways. By measuring themselves on these scales, individuals can assess their and their conversation partners' readiness for constructive dialogue. The results can inform people on their own orientations, potential blind spots, and conversational strategies applicable for daily use.

Finally, no longer confined to specific contexts, political, moral, and social issues have spilled over to aspects of professional and personal lives, where conflict over these topics can strain relationships and jeopardize careers (Budd et al., 2018; Cheng & Horowitz, 2025; Coleman, 2024; Moorhouse, 2025; Smith, 2020). Despite the potential risks, political discussions in the workplace were found to increase knowledge and political tolerance (Mutz & Mondak, 2006). To reap the benefits in productive ways, offering conflict-based workplace training grounded in interpersonal grace can provide managers and employees a helpful framework to engage in difficult conversations without escalating tensions. The benefits of grace are not only confined to intra- and interpersonal but also can lead to important organizational level outcomes

in professional settings. Past research has found that employees who received more grace from their managers at work rated their job satisfaction and thriving at work higher (O’Connell & Adams, 2024). These employees with high grace managers were also more likely to exhibit grace-giving behaviors to their coworkers, reinforcing a positive work climate. Leaders, human resource professionals, and employees hoping to transform the culture of their organizations can use human grace dimensions to inform their organizational practices and management approaches (as also proposed by Fehr & Gelfand, 2012; O’Connell & Adams, 2024a). Human grace, in this way, serves as a practical toolkit and an attainable skillset for all seeking to preserve personal and professional relationships, bridge the political divide, and contribute to a deliberate democracy.

4.4 Limitations & Future Research

This series of studies is not without limitations. For Studies 1, 2, and 3, some of the measures could be improved. First, the HUG to Self and HUG to Others scales accounted for lower variance than recommended at 47% and 51%, respectively. Although the scales showed promising results, adding items that capture underrepresented aspects could strengthen these measures. Second, HUG to Others showed a notable correlation with social desirability bias. We suggest adding reverse-worded items to mitigate this. Although the set of original items contained a few negatively worded statements, they were subsequently dropped through factor analysis. Furthermore, due to a methodological oversight of not randomizing the order in which the scales were presented, the HUG scale items were shown to participants with their respective convergent and discriminant measures, potentially conflating their relationships. Fourth, excluded due to survey length, future work should also examine relationships between the HUG scales and related constructs such as self-compassion, empathy, and growth mindset to identify

overlaps and distinctions among them. Lastly, although a longitudinal design was utilized, the political outcome measures were conducted only a few weeks after measuring grace. Future research, especially those applying human grace as an intervention, should test whether this supporting evidence persists over time.

For Study 4 although the manipulation check was successful, adjustments to soften the tone for the low-grace statement might avoid introducing confounding effects (i.e., negativity effect). Moreover, no realism check was conducted to verify that participants believed “Alex” was a real discussion partner. Moving beyond initial perceptions of grace offered, future research should conduct conversations in real time and study how dynamic changes with low and high grace behaviors from conversation partners.

The current studies focused solely on U.S. participants and in everyday political talk, therefore limiting the generalizability of the findings across contexts. The concept of grace has been intricately integrated in numerous aspects of American life, but it might not be the case for other cultures, affecting how people engage with the construct. Testing the relationship between human grace and everyday political conversations in other countries can help us better understand how generalizable the current research is across different countries and cultures. Furthermore, future research can benefit from exploring the antecedents, boundary conditions for the impact of human grace in political discussions, and the potential consequences of offering grace to self and to others over time. By addressing these limitations, future research can further refine human grace measurements and test their practical utility in fostering dialogue across differences.

Conclusion

This series of studies provides the first rigorous empirical examination of grace in the context of everyday political talk. By conceptualizing human grace as Empathy & Perspective-Taking, Forgiveness & Acceptance, and Allowing for Growth & Change, and by validating three measures, we hope to offer tools that inform future research examining the potential of interpersonal grace across contexts. Our findings demonstrate, for the first time, that human grace predicts more frequent, deliberate, and higher openness to engage in everyday political talk both within and beyond one's social circles and partisan divides. Thus, these results suggest that grace, a widely used everyday concept, can serve as an effective solution to seemingly unbridgeable political ruptures. As democracies face entrenched polarization in their political landscape and plummeting satisfaction from citizens (Dimock & Wike, 2020; Shearer, 2025; Wike et al., 2025), fostering grace may offer a promising and powerful intervention that might restore and sustain healthy, deliberate democracies around the world.

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Appendix A

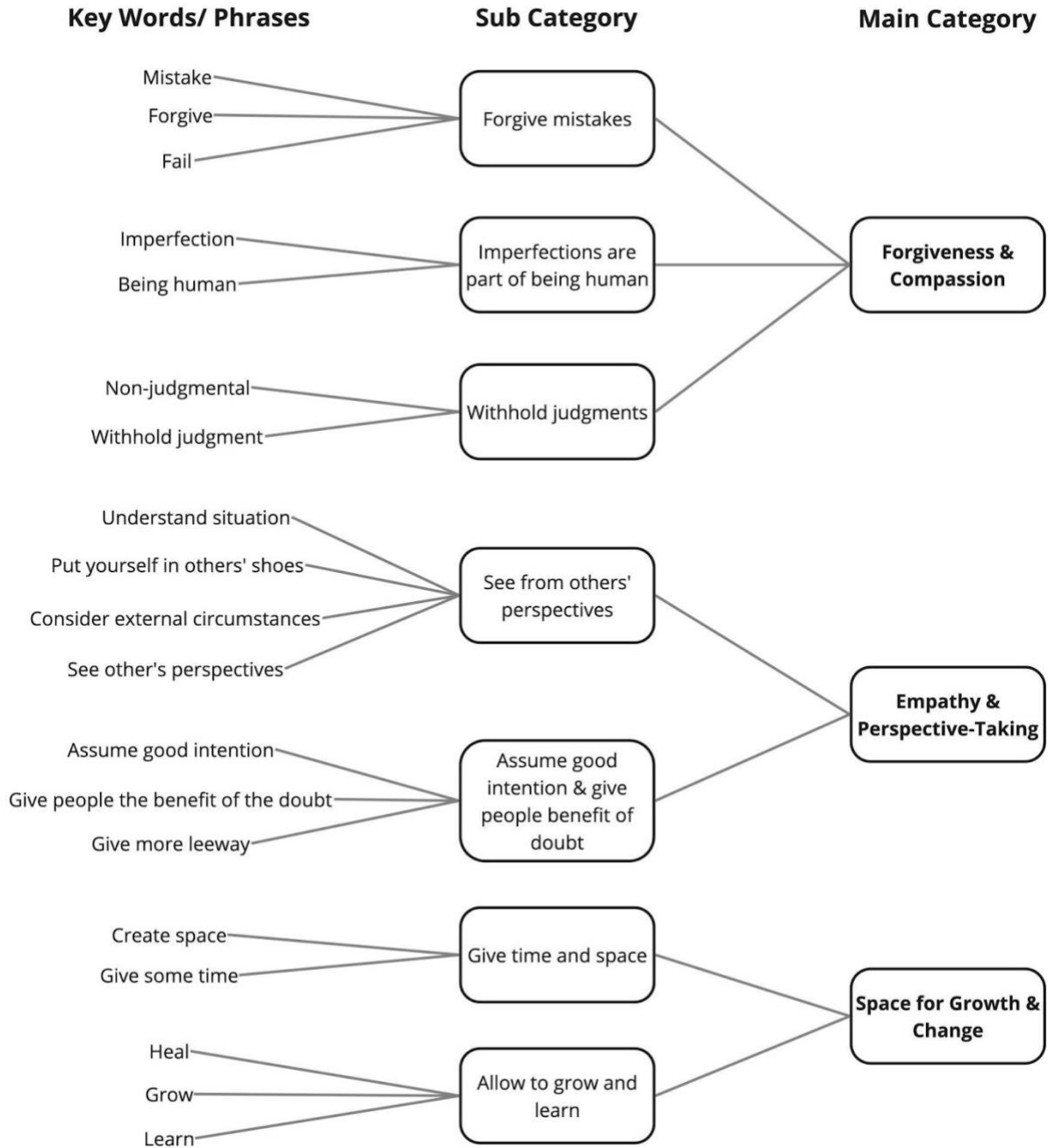
Literature Search Matrix

Search Query	Catalog/ Databases	Result
("conflict resolution" OR "intergroup contact" OR conversation OR dialogue OR communication) AND grace [title]	Educat+	410
Title: grace AND (politic OR conflict)	CLIO	435
("relational conflict" OR "conflict resolution" OR "intergroup contact" OR conversation OR dialogue OR communication) AND grace [title]	Web of Science	508
("relational conflict" OR "conflict resolution" OR politic OR conversation OR dialogue OR communication OR talk) AND grace [title]	APA Psyc Net	259
ALL ("relational conflict" OR "conflict resolution" OR politic OR conversation OR dialogue OR communication) AND TITLE ("grace")	SCOPUS	265
grace politic	Elsevier	21
grace AND politic	EBSCOHost	130
title(grace) AND summary("relational conflict" OR "conflict resolution" OR politic OR conversation OR dialogue OR communication OR talk)	ProQuest	154
("relational conflict" OR "conflict resolution" OR politic OR conversation OR dialogue OR communication OR talk) AND grace	Sage Journals	21
allintitle: conflict OR politic OR conversation OR dialogue OR communication OR talk "grace"	Google Scholar	1

Note: All searches included a filter for only peer-reviewed articles.

Appendix B

Abstraction Process Visualization



Appendix C

Defining Grace: Human versus AI

Author's initial working definition: Human grace encompasses the ability to view situations from others' perspectives, withhold judgments, assume others have good intentions, and accept that mistakes and imperfections are inherent to being human. It often involves providing compassion, forgiveness, kindness, patience, and understanding of external circumstances that can shape behaviors in the moment. Ultimately, secular grace is the belief in human's capacity to learn from and grow beyond their mistakes.

Grace definition from MAXQDA AI: Giving or being given grace involves extending understanding, compassion, and forgiveness, even when mistakes or imperfections are present. It means offering patience, kindness, and the benefit of the doubt, recognizing our shared humanity, and allowing room for growth. Grace fosters empathy, connection, and a sense of peace, rather than harsh judgment. It is about showing leniency, providing second chances, and responding with empathy instead of criticism. Grace represents the profound human capacity to love and support one another beyond immediate circumstances.

Appendix D

Subject Matter Expert Survey (adapted Nguyen, 2020; Li, 2021)

Survey Introduction

Thank you for agreeing to review my measure of human grace in political talk for expert content validation!

The current study seeks to develop and validate a measure of human grace in political talk. The instrument is designed to measure human beliefs, feelings, and actions that align with the grace constructs. Based on prior literature (i.e., Emmons et al., 2017; Schllekens et al., 2021; O’Connell, 2022) and data from the pilot study, this research defines human grace as a voluntary gift of understanding and acceptance to self, others, and from others.

Task Description

In the following sections, you will be asked to:

- Rate the relevance of each item against the provided definition of human grace on a 4-point scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant)
- Provide any feedback you have in the text boxes on each page (e.g., suggesting rephrasing an item and/ or inclusion of new items)

Provided Definition of Human Grace

This research defines human grace as a voluntary gift of understanding and acceptance to self, others, and from others. There are three underlying themes of human grace in political talk:

1. The ability to see from others' perspectives, put oneself in other's shoes, and understand where they are coming from;
2. The acknowledgment that making mistakes and having shortcomings are part of being human, especially in political conversations;
3. The willingness to provide oneself and others with opportunities to change and learn from their political encounters and conversations.

Prompt for Open-Ended Feedback

1. Are there any general subdimensions for grace to self/ grace to others/ perceived grace from others that should be assessed but are not listed in the current survey?
2. Is there any additional feedback you would like to share with the researcher regarding the assessment?

Appendix E

Subject Matter Expert Recruitment Email (adapted from Nguyen, 2020; Li, 2021)

Dear Dr. [],

My name is Lan and I am a current doctoral candidate at Teachers College, Columbia University. I am working with Dr. Peter T. Coleman to develop a measure of human grace in political discussions.

I am writing to seek your input on my proposed measure as a subject matter expert. You were chosen because of [insert individualized reasoning]. As the expert, you are asked to assess the relevancy and provide general feedback on the items for the human grace scale in political discussion. The survey should take you 10-15 minutes to complete. Your responses are confidential and will be utilized to retain, modify, or remove items.

To participate by the deadline of **Tuesday, April 15th, at 5 p.m. EDT**, please click the following [link].

Thank you for your time and participation, and please do not hesitate to contact me at lh2122@tc.columbia.edu if you have any further questions. Your participation is extremely valuable in advancing our understanding and application of human grace in political discussions.

Sincerely,

Lan Phan

Appendix F

Quantitative Subject Matter Expert Ratings on Initial HUG Scales Items and S-CVIs

Item No	SME 1	SME 2	SME 3	SME 4	Agree Count
<i>HUG Scale to Self</i>					
1	1	1	1	1	4
2	1	0	0	0	1
3	0	0	1	0	1
4	0	0	1	1	2
5	1	1	1	1	4
6	0	1	1	1	3
7	0	1	1	1	3
8	0	1	1	1	3
9	0	1	1	1	3
10	0	1	1	1	3
11	0	1	1	1	3
12	0	1	1	1	3
13	0	1	1	1	3
14	0	1	1	1	3
<i>S-CVI</i>	0.21	0.79	0.93	0.86	0.70

HUG Scale to Others

1	0	1	1	1	3
2	0	1	1	1	3
3	0	0	1	0	1
4	0	1	1	1	3

5	0	1	1	1	3
6	0	0	1	0	1
7	0	1	1	1	3
8	0	1	1	1	3
9	1	0	1	0	2
10	0	0	0	0	0
11	0	0	1	0	1
12	0	1	1	1	3
13	0	0	1	0	1
14	0	1	1	1	3
15	0	1	1	1	3
16	0	1	1	1	3
17	1	1	1	1	4
18	0	1	1	1	3
19	1	1	1	1	4
20	1	1	1	1	4
<i>S-CVI</i>	0.20	0.70	0.95	0.70	0.64

Perceived HUG from Others

1	1	1	1	1	4
2	1	1	1	1	4
3	1	0	1	0	2
4	1	1	1	1	4
5	1	1	1	1	4
6	1	0	1	0	2
7	1	1	1	0	3

8	1	1	1	1	1	4
9	1	0	1	1	1	3
10	1	0	1	1	1	3
11	1	0	1	1	1	3
12	1	1	1	1	1	4
13	1	1	1	1	1	4
14	1	1	1	1	1	4
15	1	0	1	1	1	3
16	1	1	1	1	1	4
S-CVI	1.00	0.63	1.00	0.81		0.86

Note: Values of 0 indicated that the SMEs rated the item as not at all or somewhat relevant, and values of 1 indicated that the SMEs rated the item as quite or highly relevant.

Appendix G

Studies 2 and 3's Measures

Unless specified, all scales were rated on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree.

Convergent and Incremental Measures

Perceptions and Experiences of Grace Scale (PEGS; Rush et al., 2023), Grace to Self

1. I accept myself even though I am not perfect.
2. I give myself unconditional love.
3. I am kind to myself just because.
4. I unconditionally accept myself no matter what.
5. I accept my shortcomings.
6. I try to do my best, and when I fall short, I give myself another chance.

PEGS (Rush et al., 2023), Unconditional Grace to Others

1. I strive to serve others with no strings attached.
2. I am generous to others, even when I know they cannot repay me.
3. I try to accept others no matter what they do.
4. I try to give to others without restraints.

Global Relations Attitude Conflict Exam, Grace-Receiving Subscale (Cook, 2013)

1. This person is good to me, without my asking.
2. This person will do kind things for me without me asking.
3. This person often extends themselves for me.
4. It is common for this person to do good things for me that I don't deserve.

Divergent Measures

Marlowe-Crowne Social Desirability Scale Short-Form (Strahan & Gerbasi, 1972; alpha = .70)

1. I am always willing to admit it when I make a mistake.
2. I always try to practice what I preach.
3. I never resent being asked to return a favor.
4. I have never been irked when people expressed ideas very different from my own.
5. I have never deliberately said something that hurt someone's feelings.
6. I like to gossip at times.
7. There have been occasions when I took advantage of someone.
8. I sometimes try to get even rather than forgive and forget.
9. At times I have really insisted on having things my way.
10. There have been occasions when I felt like smashing things.

Big Five Inventory Short-Form (BFI; Rammstedt & John, 2007), Extraversion

I see myself as someone who...

1. ...is reserved (R)
2. ...is outgoing, sociable

BFI (Rammstedt & John, 2007), Neuroticism

I see myself as someone who...

1. ...is relaxed, handles stress well (R)
2. ...gets nervous easily

Control Variables

BFI (Rammstedt & John, 2007), Openness

I see myself as someone who...

1. ...has few artistic interests (R)
2. ...has an active imagination

Political Interest

1. I am interested in politics.
2. I often keep up with political news and information.

Internal Political Efficacy (adapted ANES, 2025; Park, 2019)

1. I feel that I have a pretty good understanding of the important political issues facing our country.
2. I think I am more informed about politics and government than most people.

Predictive Measures

Frequency of Everyday Political Talk (Gerber et al., 2012; Eveland & Thompson, 2006)

The scale was rated from 1 = Never, 2 = Once a month or less, 3 = Once a week, 4 = A few times a week, 5 = Daily or more than daily, to 6 = Not Applicable.

How often do you talk about politics (both in-person and texting) over the past six months with:

1. Romantic partner; 2. Family members; 3. Friends; 4. Neighbors; 5. Coworkers

Level of Disagreement in Political Talk (adapted from Wojcieszak, 2010)

The scale was rated from 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always, to 6 = Not Applicable.

Over the last six months, how often do you disagree when you talk about politics with 1.

- Romantic partner; 2. Family members; 3. Friends; 4. Neighbors; 5. Coworkers

Willingness to Self-Censor (WTSC; Chan, 2018; Hayes et al., 2005)

1. It is difficult for me to express my political opinion if I think others won't agree with what I say.
2. There have been many times when I have thought others were wrong politically but I didn't let them know.
3. When I disagree with others on politics, I'd rather go along with them than argue about it.
4. It is easy for me to express my political opinion around others who I think will disagree with me (reverse-coded).
5. I'd feel uncomfortable if someone asked my political opinion and I knew he or she wouldn't agree with me.
6. I tend to speak my political opinion only around friends or other people I trust.
7. It is safer to keep quiet than publicly speak a political opinion that you know most others don't share.
8. If I disagree with others on politics, I have no problem letting them know it (reverse-coded).

Willingness to Communicate About Politics (WTCAP; Kleinman & Kleinman, 2015)

1. Suppose you ran into (this person) at a party. How likely would you be to engage in a conversation with this person about the topic of politics broadly speaking?
2. Suppose you ran into (this person) at a party. How likely would you be to initiate a conversation about politics broadly speaking?
3. Suppose you ran into (this person) at a party. Assume that in the natural flow of conversation, a political topic generally speaking arose. How likely would you be to continue discussing the topic?
4. Suppose were eating a meal with (this person). How likely would you be to engage in a conversation with this person about the topic of politics broadly speaking?
5. Suppose were eating a meal with (this person). How likely would you be to initiate a conversation about politics broadly speaking?
6. Suppose were eating a meal with (this person). Assume that in the natural flow of conversation, a political topic generally speaking arose. How likely would you be to continue discussing the topic?

Appendix H

Demographic Questionnaire

Race/ Ethnicity

Please select your race/ ethnicity (can select more than one)

- White/ Caucasian
- Black/ African/ Caribbean
- Hispanic/ Latino
- Asian/ East Asian/ South Asian/ Southeast Asian
- Native Hawaiian/ Pacific Islander
- Middle Eastern/ North African
- Native/ Indigenous People
- Other (please elaborate)
- Prefer not to answer

Gender

Please select your gender

- Male
- Female
- Non-binary
- Other (please elaborate)
- Prefer not to answer

Age

Which category below includes your age?

- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older
- Prefer not to answer

Political Affiliation

Please select your main political affiliation

- Democrat
- Independent
- Republican
- Other (please elaborate)
- Prefer not to answer

Religion

What is your religion?

- Buddhist
- Christian
- Hindu
- Jewish
- Muslim
- Sikh
- I don't identify with any specific religion
- Other (please specify)
- Prefer not to answer

Education

What is the highest level of school you have completed or the degree you have received?

- Less than a high school degree
- High school degree or equivalent (e.g., GED)
- Associate Degree
- Bachelor's Degree
- Graduate Degree
- Prefer not to say

Appendix I

EFA Final Item Decisions

Table I1

Perceived Human Understanding of Grace from Others, Study 2 EFA with All Items

Proposed Dimension	Perceived HUG from Others (16 Items)	Factor Loadings		Decision
		1	2	
E&P	Q52. This person tends to ask thoughtful questions to better understand my perspectives, even if we disagree.	.84	-.02	Retain
E&P	Q53. This person extends patience and understanding toward me if I struggle to articulate my views.	.70	.24	Drop, shorten scale
E&P	Q54. This person often cuts me off if I say something they disagree with politically (R).	.20	.60	Retain
E&P	Q55. This person often tries to respond with empathy, especially if I am frustrated or emotional during a political discussion.	.81	.02	Retain
E&P	Q56. This person often patiently listens to me when I take the time to explain my perspective.	.78	.09	Retain
F&A	Q57. This person will stop talking to me if I say something they find politically inappropriate or offensive (R).	-.06	.70	Drop, shorten scale
F&A	Q58. This person tends to look down on me if I say something politically incorrect (R).	-.09	.85	Retain
F&A	Q59. This person tends to reference my past political mistakes or misstatements to discredit me in a conversation (R).	-.17	.80	Retain

F&A	Q60. This person often allows me to explain my perspective, even when I've misspoken or misunderstood an issue.	.61	.22	Retain
F&A	Q61. This person often becomes defensive or hostile when I present political opinions that challenge their beliefs (R).	.21	.68	Retain
G&C	Q62. This person tends to shame and ridicule me if I change my political opinions (R).	-.07	.78	Retain
G&C	Q63. This person often encourages me to reflect on my views without pressuring me to agree with theirs.	.80	-.04	Retain
G&C	Q64. This person often focuses on learning new perspectives rather than trying to "win" the conversation.	.78	.03	Retain
G&C	Q65. This person often uses mistakes made in political discussions as opportunities for dialogue and learning instead of criticism.	.54	-.23	Drop, item-total correlation <.40
G&C	Q66. This person would never admit that they were wrong in political conversations (R).	.17	.69	Retain
G&C	Q67. This person tries to create a safe space for me to express my political opinions without judgment from them.	.80	.04	Retain

Table I2*Human Understanding of Grace to Self, Study 3 EFA with All Items*

Proposed Dimension	HUG to Self (14 Items)	Factor Loadings		Decision
		1	2	
F&A	Q5. I remain patient with myself even when I struggle to discuss my political viewpoints.	.48	.23	Retain
F&A	Q6. I recognize that navigating tough political discussions takes practice, and I give myself credit for trying.	.40	.40	Drop, high cross-loading >.30
F&A	Q7. When I struggle to stay calm in a political discussion, I remind myself that it's okay to be imperfect.	.64	.12	Retain
F&A	Q8. Even if I lose my cool in a political conversation, I usually avoid beating myself up afterward.	.83	-.35	Retain
F&A	Q9. When I say something inappropriate in a political conversation, I remind myself it is part of being human.	.39	.18	Drop, low main loading <.40
F&A	Q10. When I communicate poorly during a political discussion, I try to cut myself some slack and learn from it.	.51	.23	Retain
F&A	Q11. I allow myself to feel proud of the effort I put into navigating challenging discussions, even if the outcome wasn't perfect.	.73	-.10	Retain
F&A	Q12. I try to be kind toward myself when I don't handle a political disagreement as well as I would have liked.	.73	.00	Retain
G&C	Q13. I allow myself the time and space to reconsider my views after engaging in a political discussion.	.15	.60	Retain

G&C	Q14. I am open to changing my beliefs when presented with new information during political discussions.	-.10	.58	Drop, item-total correlation <.40
G&C	Q15. When I reflect on a political conversation, I focus on what I can learn rather than dwelling on what I should have done.	.39	.36	Drop, main loading <.40
G&C	Q16. I see political discussions as my chance to learn new perspectives and ideas.	.02	.70	Retain
G&C	Q17. I try to understand why I might have reacted emotionally or defensively during a political conversation.	-.06	.70	Retain
G&C	Q18. I often reflect on how my personal experiences shape my political views.	-.15	.73	Retain

Table I3*Human Understanding of Grace to Others, Study 3 EFA with All Items*

Dimension	HUG to Others (19 Items)	2-Factor		3-Factor			Decision
		1	2	1	2	3	
F&A	Q30. I remind myself that people I discuss politics with are more than just their views.	.29	.40	.32	.32	.07	Drop, high cross-loading
F&A	Q31. I assume that people I have political discussions with want the best for society, even if we disagree on how to achieve it.	.05	.64	.05	.57	.09	Retain
F&A	Q32. I believe that people around me have good intentions, even if I find their political opinions difficult to accept.	-.05	.82	.11	.71	-.03	Retain
E&P	Q33. I seek to understand why certain political issues matter deeply to people around me, even if they don't resonate with me in the same way.	.48	.10	.49	.03	.09	Retain
E&P	Q34. In political discussions, I make an effort to consider the personal experiences or circumstances that may shape others' opinions.	.59	.06	.19	.05	.46	Retain
E&P	Q35. In political discussions, I often focus on learning new perspectives rather than trying to "win" the conversation.	.76	-.07	-.09	-.08	.92	Retain
F&A	Q36. I try to be patient with others in political discussions, even when they make mistakes or misunderstand key points.	.54	.22	.21	.19	.40	Retain

F&A	Q37. When someone says something politically inappropriate or ignorant, I remind myself that people grow at different rates.	.28	.40	-.01	.38	.35	Drop, high cross-loading
E&P	Q38. I try to give people room to explain their perspectives, even if their political views upset me.	.72	.03	.48	-.03	.32	Drop, non-normal
F&A	Q39. I am willing to forgive people in my life for expressing a political view that I find offensive or uninformed.	.19	.53	.39	.44	-.08	Drop, high cross-loading
F&A	Q40. I believe most people around me are doing the best they can, even when they express political views I find troubling.	-.20	.92	-.09	.86	-.03	Retain
E&P	Q41. I try to listen patiently to others during political conversations, even when I strongly disagree with them.	.67	.08	.53	.02	.24	Retain
G&C	Q42. I believe the political opinions of people around me can change and evolve.	.34	.22	.61	.12	-.14	Retain
G&C	Q43. I encourage people around me to reflect on their political views without forcing them to agree with mine.	.59	.07	.20	.05	.44	Retain
G&C	Q44. I am open to talking about politics with friends and family, even after disagreements, so we can learn from each other.	.55	.20	.54	.11	.12	Retain
G&C	Q45. I believe that engaging in political dialogue is an opportunity for both parties to learn from each other.	.81	-.16	.70	-.24	.23	Retain
G&C	Q46. I strive to engage in political conversations in a way that preserves relationships, even amid strong disagreements.	.35	.20	.53	-.08	.12	Retain

G&C	Q47. I try to create a safe space for people around me to express their thoughts without fear of judgment from me.	.71	-.05	.22	-.05	.53	Retain
F&A	Q48. When others act poorly in political conversations, I reassure them that everybody makes mistakes.	.37	.29	-.16	.32	.55	Retain

Appendix J

Study 4's Measures

Willingness to Engage in Future Political Discussions

Participants rated on a 4-point Likert scale from 1 = Definitely not, 2 = Probably not, 3 = Probably yes, to 4 = Definitely yes.

Would you be willing to be matched with Alex for a political discussion in the future?

Adapted Bogardus Social Distance Scale (Agrest et al., 2022)

5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree

1. Would you be friends with Alex?
2. Would you move by and have Alex as a neighbor?
3. Would you work with Alex?
4. Would you recommend Alex for a job?
5. Would you rent a room to Alex?

Appendix K

Study 4 Correlations ($N = 239$)

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. HUG From Others	3.00	1.18			
2. Group Malleability Beliefs	3.15	0.88	-.03		
3. Social Distancing	3.21	0.79	-.68***	.00	
4. Willingness to Match with Target	2.89	0.93	.62***	.05	-.64***

Note. *M* and *SD* are used to represent mean and standard deviation, respectively.

* indicates $p < .05$, ** $p < .01$, *** $p < .001$

Appendix L

Two-Way ANOVA Post-Hoc Comparisons

Table L1

Two-Way ANOVA Post-Hoc Comparisons, Willingness to Engage Politically with Target

Target's Grace Level	Political Match		Mean Diff. (I-J)	t	Sig.	95% C.I.	
	I	J				Lower	Upper
Low Grace	Mismatch	Match	-0.67	-4.56	<.001	-1.05	-0.29
	Match	Mismatch	0.67	4.56	<.001	0.29	1.05
High Grace	Mismatch	Match	-0.26	-1.75	0.30	-0.64	0.12
	Match	Mismatch	0.26	1.75	0.30	-0.12	0.64
Political Match	Target's Grace Level		Mean Diff. (I-J)	t	Sig.	95% C.I.	
	I	J				Lower	Upper
Mismatch	Low Grace	High Grace	-0.98	-6.84	<.001	-1.35	-0.61
	High Grace	Low Grace	0.98	6.84	<.001	0.61	1.35
Match	Low Grace	High Grace	-0.57	-3.78	<.001	-0.96	-0.18
	High Grace	Low Grace	0.57	3.78	<.001	0.18	0.96

Table L2*Two-Way ANOVA Post-Hoc Comparisons, Social Distancing from Target*

Target's Grace Level	Political Match		Mean Diff. (I-J)	<i>t</i>	Sig.	95% C.I.	
	I	J				Lower	Upper
Low Grace	Mismatch	Match	0.61	4.94	<.001	0.29	0.92
	Match	Mismatch	-0.61	-4.94	<.001	-0.92	-0.29
High Grace	Mismatch	Match	-0.28	-2.21	0.12	0.18	0.83
	Match	Mismatch	0.28	2.21	0.12	-0.83	-0.18
Political Match	Target's Grace Level		Mean Diff. (I-J)	<i>t</i>	Sig.	95% C.I.	
	I	J				Lower	Upper
Mismatch	Low Grace	High Grace	0.88	7.36	<.001	0.57	1.19
	High Grace	Low Grace	-0.88	-7.36	<.001	-1.19	-0.57
Match	Low Grace	High Grace	0.50	4.01	<.001	0.18	0.83
	High Grace	Low Grace	-0.50	-4.01	<.001	-0.83	-0.18