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Culture and Getting to Yes:
The Linguistic Signature of Creative Agreements in the U.S. and Egypt

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Abstract

We complement the dominant rational model of negotiation found in the West with a new honor model of negotiation found in many Arabic-speaking populations and illustrate the linguistic processes that facilitate creativity in negotiation agreements in the U.S. and Egypt. Community samples ($N=136$) were recruited in the U.S. and Egypt and negotiated an integrative bargaining task, Discount Marketplace. Analyses of categories of the Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2007) and our own newly developed honor dictionary illustrate that the same language that predicts integrative agreements in U.S., namely that which is rational and logical (Cognitive Mechanisms, LIWC), actually backfires and hinders agreements in Egypt. Creativity in Egypt, by contrast, reflects an honor model of negotiating with language that promotes honor gain (i.e., moral integrity) and honor protection (i.e., image and strength). Theoretical and practical implications are discussed.
Culture and Getting to Yes:

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“Separate the people from the problem” (Fisher & Ury, 1991)

"I would rather you respect me than feed me" (Arabic Proverb)

Negotiations, or situations in which individuals manage their interdependence (Walton & McKersie, 1965), are omnipresent in organizational life. Whether it is over salary, promotions, division of tasks, or relations with customers, suppliers, and other external stakeholders, negotiations take place across a broad array of actors on a regular basis. In all of these contexts, negotiations fundamentally require creativity, or the invention of new options that satisfy both parties’ intangible and tangible interests. Like other creative decision-making tasks that are the subject of this special issue, the best negotiated agreements are those that redefine the problem in novel ways (Lewicki, Saunders, & Barry, 2014) in order to create useful and sustainable solutions. Indeed, many have argued that creativity is a key ingredient in value creation in negotiations (e.g., Carnevale, 2006; Goldenberg, Nir, & Maoz, 2006; Kurtzberg, 1998; Miles & LaSalle, 2008; Schei, 2013; Wilson & Thompson, 2014). In The Art and Science of Negotiation, Raiffa (1982) prescribes that negotiators should engage in “creative side-by-side joint problem solving” (p. 315) and Carnevale (2006) explains that integrative agreements—which meet the needs of all parties—inherently involve creative thinking. Toward this end, decades of research on negotiation provide wisdom into the strategies and tactics that facilitate creative agreements (Fisher & Ury, 1991; see Goldman & Shapiro, 2012; Thompson, Wang, & Gunia, 2010, for recent reviews). Yet it is important to note that theory and research on creativity in negotiation...
has largely been a Western enterprise. Reviews illustrate that approximately 90% of the samples on which we base our advice on creating win-win agreements are from the U.S., Europe, and other English-speaking countries, with only 6% of samples from Asia, 2% from Israel, and an alarming 2% of the remaining samples from the Middle East, Latin America, and Africa (Gelfand, Severance, Fulmer, & Al Dabbagh, 2013). As a result, with some notable exceptions, we have very little insight into the cultural factors that affect creativity in negotiations.

In the spirit of this special issue, we move away from examining whether there are cultural differences in attaining creative agreements (e.g., main effect models of culture and negotiation; Gelfand et al., 2013) to assess the distinct linguistic pathways that enable negotiators to arrive at creative agreements in the U.S. and Arabic-speaking populations in the Middle East. Specifically, we use Pennebaker’s Linguistic Inquiry and Word Count Software (LIWC; Pennebaker, et al., 2007), coupled with our own newly created honor linguistic dictionary to examine how negotiators get to yes differently in the U.S. and Egypt. LIWC has been used to illustrate the linguistic features underlying numerous psychological processes, including leadership (Pennebaker & Lay, 2002; Pennebaker, Slatcher, & Chung, 2005; Slatcher, Chung, Pennebaker, & Stone, 2007), relationship quality (Cassidy, Sherman, & Jones, 2012; Ireland & Pennebaker, 2010), performance (Robinson, Navea, & Ickes, 2013), and health (Baddeley, Daniel, & Pennebaker, 2011; Fernandez, Cabana, Garcia-Caballero, Alves-Perez, Garcia-Garcia, & Mateos, 2013), and has been applied to study differences in gender, personality, and age (Hirsh & Peterson, 2009; Lee, Kim, Seo, & Chung, 2007; Newman, Groom, Handelman, & Pennebaker, 2008; Pennebaker & Stone, 2003). To date, linguistic dictionaries have rarely been applied to understand creativity in negotiation processes (see Brett, Olekalns, Friedman, Goates,
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As we will show, the same language that helps to facilitate creative agreements in the U.S.—namely that which is rational and logical and is consistent with rational models of negotiation—actually backfires and hinders agreements in Egypt. Creativity in Egypt, by contrast, reflects an honor model wherein parties who negotiate with language that promotes honor gain (i.e., moral integrity) and honor protection (i.e., prevention, public image, strength) reach the most creative agreements. More generally, we contribute to the growing momentum to understand relational models of negotiation as a complement to rational models in negotiation science (cf. Barley, 1991; Gelfand, et al., 2006; Gray, 1994; Kopelman, 2014; Ting-Toomey & Kurogi, 1998). In what follows, we first describe rational and honor models of negotiation and their implications for different routes to creativity in negotiation. We then present data from an experimental study among community samples in the U.S. and Egypt using the LIWC, along with our newly developed honor dictionary, to examine the linguistic processes that enable negotiators to Get to Yes. To our knowledge, this is of the first empirical research that addresses how individuals differentially create value in negotiations in the U.S. and Middle East. Implications for the science and practice of creativity in negotiation are discussed.

**Rational Models of Negotiation**

In the U.S., negotiation has long been conceptualized as a cognitive decision-making task wherein parties seek to gain economic capital through a process of logical exchange (Bazerman & Neale, 1992; Thompson, 1990). To effectively negotiate, parties are instructed to claim and create value to maximize both parties’ interests (Lax & Sebenius, 1992) and to negotiate rationally (Bazerman & Neale, 1992; Neale & Bazerman, 1991). Negotiating rationally has
several key elements. First, negotiators are urged to “separate the person from the task” and not allow relational concerns to impair their ability to focus on the instrumental task of maximizing economic value (Fisher & Ury, 1991). Second, negotiators are expected to follow a rational procedure wherein they appeal to facts and objective standards of fairness when evaluating options for mutual gain (Brett & Gelfand, 2006; Fisher & Ury, 1991). The rational negotiator is also to avoid cognitive biases that restrict the parties from finding Pareto efficient solutions, i.e., those that maximize value for both parties. Indeed, one of the hallmarks of negotiation theory and research has been to show precisely how negotiators systematically depart from rationality in order to debias negotiators (Neale & Bazerman, 1991). This perspective is institutionalized in the titles of classics in the field: Raiffa’s (1982) *The Art and Science of Negotiation*; Bazerman and Neale’s (1992) *Negotiating Rationally*; Zeckhauser, Keeney, and Sebenius’ (1996) *Wise choices: Decisions, Games, and Negotiations*, and Fisher and Ury’s (1991) pioneering book *Getting to Yes*. The common theme across all of these seminal works is that negotiators should be more rational, and the assumption is that rationality pays off. As Bazerman and Neale (1992) so aptly explain, “Negotiating rationally means making the best decisions to maximize your interests” (p. 1).

A focus on rationality in negotiation is deeply embedded in Western thought where the science of negotiation has bloomed. In the U.S., individuals are socialized to have an analytic system of thought (Nisbett, Peng, Choi, & Norenzayan, 2001) wherein objects are detached from their context and assigned to categories based on logical rules for the purpose of description, prediction, and explanation. Western societies, with their socio-cognitive foundations in Greek philosophy and adversarial debate, place a higher value on logic and rules as compared to non-Western cultures. Americans score higher on analytic thinking (Choi, Koo,
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& Choi, 2007), prefer formal, rule-based methods of cognitive reasoning (Norenzayan, Smith, Kim & Nisbett, 2002), are more persuaded by logical arguments and reject arguments that are illogical or subject to logical contradiction (Peng & Nisbett, 1999) as compared to non-Western samples. Individuals from non-Western cultures, by contrast, are more holistic, intuitive, and experience-based in their thought, and reject logical consistency in favor of a tolerance for contradiction (Nisbett et al., 2001; Norenzayan et al. 2002; Peng & Nisbett, 1999).

In the context of negotiation, research has indeed shown that Western negotiators engage in sequences of rational persuasion, which rely on facts, logic, and reasoning more frequently than negotiators from non-Western cultures (Adair & Brett, 2005; Glenn, Witmeyer, & Stevenson, 1977). A focus on rational argumentation is also consistent with the ethos of individualism that is found in many Western cultures. As Brett & Gelfand (2006) explain, “Rationality is all about what I should and should not do in planning and executing negotiation, e.g., identify my BATNA (best alternative to a negotiated agreement), set a walkaway, identify a target, etc. Negotiating rationally only seems to take into consideration the perspective of the other party when advising about avoiding the bias of failing to identify the differential priorities between negotiators’ preferences, and so leaving value on the table” (p. 177). Rational persuasion is also a mainstay of the low context communication (Hall, 1976) that is characteristic of Western negotiators. Low context communication is direct, linear, and factual, and enables negotiators to “cut to the chase” and “not beat around the bush” in order to reach agreements quickly and efficiently, which is particularly important in the West where “time is money” (Gelfand & McCusker, 2002).

In all, the importance of rationality in negotiations abounds in scientific theory and prescriptions and is consistent with the values and assumptions of American culture in which this
advice has been cultivated. Accordingly, we expected that in the U.S., negotiators’ use of rational language would be positively related to their ability to create win-win agreements (Hypothesis 1). We tested this hypothesis with Pennebaker’s LIWC category of Cognitive Mechanisms (which includes words relating to cognitive processes associated with Western rational argumentation and causal thinking) and examined its impact on negotiated agreements in the U.S.

**Relational Models of Negotiation**

Expanding upon the rational model of negotiation in U.S., we argue that negotiations in the Arab Middle East are organized by a relational logic wherein promoting honor gain and avoiding honor loss is critical for Getting to Yes. Indeed, as we suggest below, a focus on rationality, which is so useful in negotiations in the West, might actually backfire in Arabic-speaking Middle East cultures. A focus on Honor in negotiation is part of a growing momentum to complement rational approaches in negotiation with additional “relational logics”. Relational logics in negotiation have thus far focused on empathy and connection (Gelfand et al., 2006, Gray, 1994; Greenhalgh & Chapman, 1995; Kolb & Coolidge, 1991), mindfulness and emotions (Kopeman, 2014), and face maintenance (Oetzel & Ting-Toomey, 2003; Ting-Toomey & Kurogi, 1988), among others. The honor model, as discussed below, is related to other relational models but is unique in its focus on moral integrity and protection in negotiation.

**Honor Model of Negotiation**

The study of honor cuts across culture and history (Horowitz, 1983; Stewart, 1994), yet it has rarely been examined in the context of negotiation (see Alon & Brett, 2007; Aslani et al., 2013; Beersma, Harinck, & Gerts, 2003; Harinck, Shafa, Ellemers, & Beersma, 2013, for notable exceptions). Honor has been conceptualized as a key commodity that signifies a person’s self-
worth in society; it is “the value of a person in his own eyes, but also in the eyes of his society. It is his estimation of his own worth, his claim to pride, but it is also the acknowledgment of that claim” (Pitt-Rivers, 1965, p. 21). Fundamentally, honor is experienced as “a right to respect” or a sense of deservingness of others’ respect (Stewart, 1994). It is a core focal concern (Mesquita & Frijda, 1992) that pervades social interactions in many regions of the world, including the Middle East, Africa, and Latin America (Cross et al., 2014; Gelfand et al., 2012; Guerra, Giner-Sorolla, & Vasiljevic, 2013; Helkama, al., 2013; Lun et al., 2011; Uskul, Cross, Sunbay, Gercek-Swing, & Ataca, 2012). In these cultures, honor is to a person what air is to breathing. Without honor, a person cannot survive (Baroja, 1966; Hurst, 1990), and not surprisingly, people are often willing to fight and die rather than give up their honor (Atran & Axelrod, 2008).

The importance of honor is instantiated in many proverbs, including Dignity before bread, I’d rather you respect me than feed me, and What is my need for money as it is plenty! If I didn’t save my honor, whichever is plenty will not save it. The common theme that cuts across these adages is that maintaining honor is more important than any economic value in social interactions. And as a commodity, honor must be negotiated continuously—it needs to be gained, maintained, and prevented from being lost or stolen at all costs in any social interaction. Accordingly, we suggest that in negotiations in cultures where honor is a focal concern (Mesquita & Frijda, 1992), parties must successfully negotiate the honor of each party in order to provide the necessary context in which they can create high quality economic agreements.

Drawing on extant theory (Cross et al., 2014; Lun et al., 2011; Nisbett & Cohen, 1995; Pitt-Rivers, 1965; Stewart, 1994), we suggest that honor in negotiation is achieved through two
interrelated self-regulatory processes, including (a) *the promotion of honorable behavior* (e.g., projecting an image of a virtuous self by measuring up to well-defined social norms and obligations) as well as through (b) *the prevention of dishonorable behavior* (e.g., protecting one’s honor and projecting strength so as to not appear vulnerable; Lun et al., 2011). With respect to the former, we theorize that in order to gain the trust necessary to build high quality agreements, negotiators in the Middle East need to signal that they are *virtuous*—that is, they have high integrity and moral commitment and will abide by codes of loyalty, honesty, and trustworthiness. Virtuous behavior and adherence to moral values are key mechanisms for having *the right to respect* and gaining respect in the eyes of others (Cross et al., 2014; Lun et al., 2011; Stewart, 1994). In the Middle East, the importance of the virtuous self—who is generous, trustworthy, loyal, and adhering to moral values—dates back to Bedouin culture where such traits were critical for survival in the harsh and unpredictable context of the desert. Failure to behave in an honorable way would, as Abou-Zeid (1966) explains, “bring shame and disgrace on the whole lineage” (p. 255). Indeed, in their recent analyses, Cross et al. (2014) found that moral behavior was one of the most central elements of mental models of honor in Turkey. Similarly, in over 200 interviews conducted across the Middle East region, Lun et al. (2011) found that honor is gained through an active engagement of the virtuous self in everyday interactions. As discussed below, to complement Pennebaker’s LIWC, we developed a new honor dictionary and predicted that language of *moral integrity* would be predictive of high quality agreements in Egypt.

As honor is a commodity, in addition to promoting honor gain, we argue that negotiators need to have a key sensitivity to *protecting their honor* and the honor of others from being lost (Nisbett & Cohen, 1996). As much as honor can be earned through virtuous behavior, honor can
also be given up and stolen if person engages in or is accused of disreputable behavior. To protect one’s honor, it is critical to guard one’s public image and to signal that one is cautious and vigilant against anything that can tarnish one’s reputation. Protecting one’s honor is also achieved through projecting images of strength so as to avoid being perceived as vulnerable and to deter others’ honor attacks through insults, accusations, or aggression. That honor needs to be protected and carefully guarded from potential tarnish honor was one of the most frequent themes of Lun et al.’s (2011) interviews across the Middle East. And to gain the respect of others, it is important to signal that one is protective of one’s partner’s honor. Insulting others and communicating disrespect through demonstrations of arrogance that intimate that one is “better” than another would be seen as a severe affront and hinder negotiations in the Arab Middle East.

Based on the above discussion, we expected that language that signifies one is virtuous (i.e., that one has high moral integrity, is trustworthy, honest, and loyal) and language that indicates one is protective of one’s honor (prevention, public image, strength) would help people reach creative agreements in Egypt (Hypothesis 2). Through this language, individuals signal that they are abiding by honor codes to be virtuous and also to defend and protect their honor, thereby gaining the necessary trust and respect of others which is critical for the creation of value negotiation. This is particularly critical in Arabic-speaking countries where there high betrayal aversion, particularly in dealing with strangers (Bohnet, Herrmann, & Zeckhauser, 2006; Bohnet, Greig, Herrmann, & Zeckhauser, 2008). In such contexts, individuals who do not use honor talk signal they have no concern for abiding by honor codes, which would engender even lower trust and respect, and seriously inhibit the creation of value in negotiations. Our new honor dictionary,
discussed below, captured each of these categories and was examined for its predictive power for high quality negotiated agreements in Egypt.

We would note that these dimensions of *Honor Talk* were not expected to be as important for success in negotiations in the U.S., which has generally been referred to as a dignity culture (Leung & Cohen, 2011). Dignity cultures, which are individualistic, subscribe to the conviction that “each individual at birth possesses an intrinsic value at least theoretically equal to that of every other person” (Ayers, 1984, p. 19). In these cultures, there is a universal and unwavering acknowledgement of an individual’s right to self-worth and belief that dignity can never be lost (Kamir, 2002). In contrast to honor cultures, in dignity cultures, internal (i.e., self-generated) evaluations are of the utmost importance, whereas external (i.e., other-generated) evaluations are secondary. As such, in dignity cultures, one does not need to gain worth in the eyes of others and also cannot have one’s worth easily taken away. Ayers (1984) captured this notion well by explaining that “dignity might be likened to an internal skeleton, to a hard structure at the center of the self” (p. 20). Accordingly, the negotiation of honor is not necessary in Western contexts, where swift trust and a focus on the substantive issues and economic capital loom large. This is consistent with Atran & Axelrod’s (2008) speculation that while Western models of negotiation involve “rational actors” engaging in an exchange to maximize resource gain, Middle East negotiations involve “devoted actors” who are seeking to preserve their own honor first and foremost.¹

From this discussion, it should be clear that in contrast to the U.S., where negotiations are construed as rational exchanges wherein people should “separate the person from the task,” in Egypt and other honor cultures, the *person is the task*. In this respect, effectively negotiating honor gain and avoiding honor loss is a critical foundation for the task of negotiating the
economic exchange, particularly in contexts of low trust and high betrayal aversion. Indeed, we would expect that too much of a focus on the instrumental and rational aspects of negotiation (e.g., *Cognitive Mechanisms* in the LIWC) can be seen as “cold hearted” (March, 1990) and viewed with skepticism in the Middle East. As Anderson (1989-1990) noted, “An Arab would view Americans insistence on a unitary perspective based on “objective facts” as deliberately deceptive in neglecting the broader historical context behind the immediate issues” (p. 92). We therefore examined the possibility that language that focuses on cognitive mechanisms would impede the quality of negotiated agreements in Egypt (*Hypothesis 3*).

**Method**

**Participants**

Participants included community samples of individuals from the United States (*N*=76) and Egypt (*N*=60). The U.S. sample included 38 same-sex dyads (22 male and 16 female; *M*<sub>Age</sub>=33.60). U.S. participants were recruited via an advertisement on Craigslist and U.S. data collection was conducted at two large universities in the Mid-Atlantic. Three U.S. dyads were missing a large amount of negotiation dialogue due to a technical error, leaving a final sample size of *N*=35 US dyads for linguistic analyses. The Egyptian sample included 30 same-sex dyads (15 male and 15 female, *M*<sub>Age</sub>=36.73). Egyptian participants were recruited via posters and flyers at the American University of Cairo. One Egyptian dyad was excluded due to a large amount of missing data on both objective negotiation outcomes and negotiation dialogue, leaving a final sample size of *N*=29 Egyptian dyads.

**Procedure**

Upon arrival to the study, participants provided informed consent and were then provided with instructions regarding the negotiation task. Participants were then given 60 minutes to
negotiate. All negotiations were recorded using audio recording devices. After the negotiation, participants were asked to specify negotiation agreement in writing on an agreement form.

**Task**

Dyads participated in an adaptation of Bacow’s (1991) *Discount Marketplace* integrative negotiation task. The task is a two-party business negotiation between a real estate developer (Hawkins Development) who plans to open a mall, and a large retailer (Discount Marketplace) who is interested in opening an anchor store in the mall. The key negotiation issue pertained to how much flexibility Discount Marketing would have to sublet their space. Hawkins Development (referred to as Anis Corporation in Egypt) does not want to allow subletting because it would give Discount Marketplace complete freedom to use, assign, or sublet as it personally desires, which could deprive the mall of a true central store. It would also take away Hawkins' ability to maintain control over the future vendor mix and character of the mall, and potentially cause competition with other retailers in the mall. However, Discount Marketplace (referred to as Hybar Corporation in Egypt) wants to sublet in order to protect itself against unforeseeable future events and financial hardship. Discount Marketplace wants to have the freedom to adapt to different market situations so as to avoid the risk of being tied to a single use that does not fit the future market.

Although the parties have different positions, the task presented ample opportunity for creative, integrative solutions that could meet the interests of both parties. In this respect, the Discount Marketplace task is integrative (as opposed to distributive) in nature (Lax & Sebenius, 1986; Neale & Bazerman, 1991; Raiffa, 1982). In order to reach an integrative agreement,
negotiators need to look beyond the key position on which they disagree (i.e., subletting) and discover ways to meet each other’s underlying interests (i.e., flexibility to adapt to market situations for Discount Marketplace and having control over the character of the mall and maintaining an anchor store for Hawkins Development). This uncovering of and subsequent integration of these novel issues into proposed agreements is a highly creative process. The parties could negotiate many elements of the issue, including who Discount Marketplace could sublet to, how much space they could sublet, the kinds of uses that might be restricted, how much involvement the real estate developer and other stores would have in the decision, and at what point in the future and under what circumstances the store could sublet (see Barry & Friedman, 1998).

For example, many creative agreements reached allowed some degree of subletting, but focused on placed restrictions on the types of vendors to which Discount Marketplace could sublet, with Hawkins Development having approval over sublettees in order to capture their fundamental interests of preserving the quality of the mall. Other dyads agreed to only sublet to vendors whose values and character align with those of other vendors in the mall and who have a good reputation in the retail industry, or who only offer seasonal products so as to avoid competition with other retailers. Other agreements were contingent in nature such as specifying that if Discount Marketplace provides proof of financial hardship, they will have the option of subletting up to 30% of the space. Other creative agreements allowed subletting but involved both Discount Marketplace and Hawkins Development in the decision-making process. In some agreements, subletting was allowed provided that Discount Marketing assumed full responsibility for the sublettees and agreed to work directly with other retailers in the mall to effectively resolve any conflicts that arise with sublettees. What these agreements have in
common is that negotiators were able to look beyond the key impasse issue (i.e., subletting) to identify each parties’ key concerns and interests and then craft agreements that satisfied both parties. By contrast, agreements that were low on creativity were ones that failed to meet both parties’ interests, such as Hawkins Development flat out refusing to allow Discount Marketplace to sublet. While these types of agreements benefitted one party, they fail to discover any joint gains that might be reaped with a more creative agreement. The agreements in which one party dominates thus show little creative thinking on the part of the negotiators.

The task was translated into Arabic (and back translated into English to check for discrepancies) and was piloted in both the U.S and Egypt to endure it was motivating and realistic in both cultural contexts. All dyads reached agreement.

**Measures**

**Objective Outcome Coding.** If an agreement was reached, participants were asked to specify in writing the agreement they reached during the negotiation. In order to quantify these agreements, we developed a coding scheme (available from the second author) to assess the integrativeness and utility of agreements to both parties, modeled after Barry and Friedman (1998), whom we thank for their assistance. Integrative agreements were defined those that bridged the differences between the parties and creatively satisfied the interests of both parties. Specific issues included in the coding scheme were decision-making power, space restrictions, product restrictions, time delay, advertising, third party involvement, future reevaluation of terms, among others. When employing this coding scheme, coders were reminded to consider the overarching interests of each party in addition to the specific issues. Prior to coding agreements, two coders reviewed each transcript with the accompanying agreement form to ensure that all
agreement terms were captured. All information identifying the country of participants was removed from agreement forms prior to coding.

Subsequently, two coders performed three separate ratings for each dyad: one for integrativeness, one for utility to Hawkins, and one for utility to Discount Marketplace. Coders rated agreements on a 1-7 scale with 7 representing values high on a given dimension (i.e., integrativeness or utility) and 1 representing values low on a given dimension. Agreements that breached both parties’ interests—for Hawkins Development, maintaining a true central store and control over the character of the mall, avoiding competition with smaller retailers, and making a profit, and for Discount Marketplace, flexibility to adapt to the changing market and making a profit— in creative ways were rated highly on all three dimensions. Agreements that only met one party’s interests, but not the other’s were given a low score for integrativeness and a high utility score for the party whose interests were met, but a low utility score for the party whose interests were not met. For example, an agreement in which Hawkins Development prohibited Discount Marketplace from subletting at all would receive a 1 for integrativeness, a 7 for utility to Hawkins Development, and a 1 for utility to Discount Marketplace. Agreements that met the both parties’ interests to some degree, but not fully, were rated anywhere from 2-6 on all three dimensions, depending on the extent to which each party’s interests were met.

For each dimension, we assessed interrater agreement by examining inter-correlations between the values assigned by the coders, as per Barry and Friedman (1998). Levels of agreement on all three rounds were high: $r(64) = .90, p < .001$ for integrativeness, $r(64) = .87, p < .001$ for utility to Hawkins, and $r(64) = .89, p < .001$ for utility to Discount Marketplace. Values from the two coders were then averaged, and we then created variables representing the extent to which the agreements (a) were integrative and (b) one party dominated the negotiation
(calculated as the absolute value of the difference between Hawkin’s Development and Discount Marketplace’s utility score, such that high domination values indicate that one party benefited significantly more than the other). Inter-correlations between outcome measures followed expected patterns. For example, integrativeness and domination should be negatively correlated, as one represents the extent to which the agreement benefits both parties and the other represents the extent to which the agreement benefits one party over the other. Consistent with this, these variables correlated at \( r(64) = -0.88, p < .001 \).

Linguistic Analyses

The audio recordings of the negotiation dialogues were transcribed from audio into text and Egyptian transcripts were translated into English. Negotiation dialogue was analyzed using categories from the LIWC (Pennebaker et al., 2007), the new honor dictionary that we created, and the virtue dictionary from moralfoundations.org. For all linguistic dictionary categories, we calculated the percentage of words in the transcripts across the entire duration of the negotiations.

LIWC’s Cognitive Mechanisms Category. The cognitive mechanisms category reflects inference, cause, effect, and order, which is indicative of a distinctly Western form of logical reasoning. It includes words such as rational, reason, analyze, logic, deduce, idea, infer, think, knowledge, statement, basis, believe, cause, consider, choice, change, solution, problem, complete, allow, because, issue, and intention among others (Pennebacker et al., 2007).

Honor Dictionary. We developed a new dictionary to assess honor talk and its predictive validity in negotiations in the U.S. and Egypt. The LIWC’s internal dictionary is an excellent tool to assess constructs particularly relevant in the West, such as cognitive mechanisms, but it is ill-equipped to assess critical focal concerns in other cultures, such as the Middle East. Appendix
A details the development and validation of the honor dictionary. The relevant subcategories of the dictionary for this research and sample words within each category include:

**Honor-Moral Integrity.** This category includes words related to morals, values, and ethics. Sample words include: honest, responsible, value, offer, help, right, approve, trust, commit, depend, credibility, obligatory, expect, and agree.

**Honor-Protection.** This category includes language related to (a) public image, including words such as reputation, look, display, public, name, image, front, face, and appear; (b) prevention (protection and safety) including words such as prohibit, limit, boundary, forbid, protect, save, afraid, restrict, avoid; and (c) security and strength (e.g., strong, power, force, confident, firm).

**Supplemental linguistic analyses.** We also examined the moral foundations dictionary (moralfoundations.org) as an additional validation on the relationship of morals to negotiated agreements in the U.S. and Egypt. This dictionary includes core concepts related to five foundations of morality: harm virtue (e.g., peace, protect, defend, secure), fairness virtue (e.g., equal, balance, reasonable, honest), ingroup virtue (e.g., together, group, community, joint), authority virtue (e.g., honor, respect, order, authority, status, legal, permit), and purity virtue (e.g., clean, integrity). We explored both an Overall Virtue as well as these specific components in the analyses.

**Results**

Table 1 presents descriptive statistics of the linguistic processes and negotiated outcomes in the U.S. and Egypt. As can be seen, there was much more *cognitive mechanisms* language in U.S. negotiations ($M=22.67$, $SD=1.87$) as compared to Egypt ($M=15.79$, $SD=1.70$) ($t(62)=15.29$, $p<.01$). By contrast, there was more overall *honor talk* in Egypt ($M=10.67$, $SD=1.51$).
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SD=1.13) than the U.S. (M=7.52, SD=1.27) (t(62)=-10.40, p<.01). Egyptian negotiations also had a higher level of honor-moral integrity talk (M=1.72, SD=.54) and overall virtue talk (M=1.32, SD=.64) as compared to the U.S. (M=1.54, SD=.46 for honor-moral integrity; M=.79, SD=.27 for overall virtue) (t(62)=-1.73; p=.088 for honor-moral integrity; t(62)=-4.38, p<.01, for overall virtue). Of all of the virtue categories, there was a stronger emphasis on ingroup and authority virtue in Egypt (M=.18, SD=.37 for ingroup virtue and M=.24, SD=.20 for authority virtue), as compared to the U.S. (M=.05, SD=.07 for ingroup virtue and M=.16, SD=.12 for authority virtue) (t(62)=-.97, p=.053, ingroup virtue; t(62)=-1.90, p=.062, authority virtue).

Harm virtue was higher in Egypt (M=.27; SD=.20) than the U.S. (M=.11; SD=.12) (t(62)=-3.88, p=.000. There was a trend that purity virtue was higher in the U.S. (M=.01; SD=.02) as compared to Egypt (M=.003, SD=.11) (t(62)=1.96, p=.054.

U.S. negotiators achieved a higher level of integrativeness (M=4.20, SD=1.49) as compared to Egyptians (M=2.40, SD=1.83; t(65)= 4.44, p<.01), and had lower levels of dominance (M=2.03, SD=1.48) than Egyptians (M=3.91, SD=2.46) (t(65)=-3.89, p<.01). Integrativeness was significantly higher and dominance was lower for Egyptian males (M=3.75, SD=1.76 for integrativeness; M=1.96, SD=2.00 for dominance) than Egyptian females (M=1.13, SD=0.52 for integrativeness; M=5.73, SD=1.03 for dominance); (t(27)=5.51, p<.01, integrativeness; t(27)=-6.43, p<.01, dominance). There were no gender differences in outcomes in the U.S. (t(36)=-1.41, p=.165 for integrativeness) (t(36)=1.44, p=.16 for dominance).

Hypothesis Testing

Our central question was not about cultural main effects on linguistic processes and negotiated outcomes, but rather whether linguistic processes differentially predicted the quality of agreements in the U.S. and Egypt. Because our main focus is dyadic creativity, which is
inherently a group level property in our task, similar to other negotiation studies, all of our analyses are done at the dyadic level. To test our hypotheses, we first examined the correlations between the linguistic categories and creativity in negotiations (both integrativeness and dominance), and conducted z tests for the differences between the correlations in Egypt and the U.S. (Table 2), and then conducted hierarchical multiple regression analyses (Tables 3 and 4).

Cognitive Mechanisms

We predicted that greater use of cognitive mechanism language from the LIWC internal dictionary would be related to more creative agreements in the US, but would hinder such agreements in Egypt. In support of this, the correlation between cognitive mechanism speech and integrativeness was $r=.38, p=.024$ in the US whereas it was $r=-.37, p=.047$ in Egypt, and the difference between these correlations was significant ($z=3.01, p=.003$). Similarly, cognitive mechanism speech was negatively related to dominance in the US ($r=-.33, p=.056$) and positively (but non-significantly) related to dominance in Egypt ($r=.26, p=.17$) ($z=-2.29, p=.02$). Accordingly, using “rational talk” was helpful for creative agreements in the U.S. but harmful in Egypt, supportive of Hypotheses 1 and 3.

Moral Integrity and Virtue

Language related to honor-moral integrity (e.g., honest, help, trust, responsible) was positively related to integrativeness in Egypt ($r=.36, p=.06$) but unrelated to integrativeness in the U.S. ($r=.01, p=.994$) ($z=-1.42, p=.077$). Similarly, honor-moral integrity language was negatively related to dominance in Egypt ($r=-.35, p=.066$) and unrelated to dominance in the US ($r=.18, p=.30$) ($z=2.12, p=.034$). Consistent with these findings, language related to overall virtue negatively predicted dominance in Egypt ($r=-.47, p=.010$), but was unrelated to dominance in the US ($r=.05, p=.77$) ($z=2.12, p=.034$). Likewise, overall virtue language positively predicted
integrativeness in Egypt ($r=.46, p=.012$), but was unrelated to integrativeness in the US ($r=.05, p=.79$) ($z=-1.72, p=.086$), all of which support Hypothesis 2.

Examining the subcomponents of the moral foundations dictionary revealed particularly strong effects for moral language related to ingroup-virtue (e.g., together, group, community) in Egypt. Ingroup-virtue language was significantly related to integrativeness in Egypt ($r=.37, p=.049$) and non-significantly related in the U.S. ($r=-.06, p=.72$) ($z=-1.71, p=.088$). Ingroup-virtue language negatively predicted dominance in Egypt ($r=-.32, p=.096$) but positively predicted dominance in the US ($r=.32, p=.061$) ($z=2.49, p=.013$). Likewise, moral language related to authority-virtue (e.g., honor, order, authority) backfired in the U.S.—it was positively related to dominance ($r=.35, p=.041$), but was unrelated in Egypt ($r=-.19, p=.324$) ($z=2.10, p=.036$). Interestingly, fairness-virtue (e.g., equal, balance, reasonable, honest) was the only part of the dictionary that approached significance in predicting integrativeness in the U.S. ($r=.29, p=.09$) and this was negatively though nonsignificantly related to integrativeness in Egypt ($r=-.19, p=.317$) ($z=1.88, p=.06$). Neither harm-virtue nor purity-virtue related to integrativeness nor dominance in either culture. In all, moral integrity and virtue play an important role in facilitating agreements in Egypt and either are unrelated or negatively related in the U.S., with the exception of fairness-virtue.

**Protection**

Language related to honor-protection (e.g., public image, prevention, and strength) from the honor dictionary was positively but non-significantly related to integrativeness in Egypt ($r=.24, p=.204$) and negatively but non-significantly related to integrativeness in the US ($r=-.27, p=.122$) ($z=-1.97, p=.049$). Honor-protection was negatively and significantly related to dominance in Egypt ($r=-.38, p=.041$), but positively and significantly related to dominance in the
US ($r=.40, p=.017) (z=3.13, p=.002). Honor-protection language was therefore helpful for quality agreements in Egypt but harmful in the U.S., supporting Hypothesis 2.

**Multiple Regression Analyses**

In addition to the within-group analyses and $z$ score differences discussed above, we conducted hierarchical regression analyses to illustrate cultural differences in getting to creative agreements. In the analysis, we examined the main effects of country, cognitive mechanisms, honor-protect, and honor-moral integrity in the first step, followed by the interactions of country with the linguistic dictionaries in predicting a) integrativeness and b) dominance. Table 3 presents the results for integrativeness, which illustrate that these interactions were significant above and beyond the main effects for the interaction between country and cognitive mechanism language ($\beta=-.92, p=.001$), country and honor-protect language ($\beta=.41, p=.004$), and country and honor-moral integrity language and ($\beta=.30, p=.048$). Table 4 presents the results for dominance, which also illustrate that these interactions were significant for the interaction between country and cognitive mechanism language ($\beta=.83, p=.002$), country and honor-protect language ($\beta=-.59, p<.001$), and country and honor-moral integrity language ($\beta=-.44, p=.004$). Controlling for gender did not affect the results. Figures 1-3 illustrate the effects and simple slopes.

**Discussion**

This is of the first work to examine how linguistic processes differentially predict creative agreements in the U.S. and Middle East. We complemented the dominant *rational* model of negotiation found in the West with an *honor model* of negotiation found in the Arabic-speaking Middle East. In order to assess core focal concerns in each culture, we expanded upon the seminal LIWC internal dictionary that has been used extensively to understand psychological processes in the West to include a new dictionary that assesses *honor talk*. The results illustrated
that the same language that predicts integrative agreements in U.S., namely that which is rational
and logical, actually hinders agreements in Egypt. Creativity in Egypt, by contrast, reflects an
honor model of negotiating with language that promotes honor gain (i.e., moral integrity) and
honor protection (i.e., image, prevention, and strength).

More specifically, consistent with rational models of negotiation, cognitive mechanism-
related speech positively predicted creative agreements in the U.S. The focus on rationality in
dignity cultures such as the U.S. is consistent with previous research demonstrating that Western
negotiators employ rational negotiation tactics, and rely on facts, logic, and reasoning (Adair &
Brett, 2005; Glenn et al., 1977). In employing a rational approach, negotiators are encouraged to
separate the person from the task and to focus on the underlying interests of both parties in order
to create win-win agreements for both parties (Fisher & Ury, 1991). Indeed, the results
illustrated, as Bazerman & Neale (1992) suggest, that negotiating rationally pays—it translates
into high joint gains—at least for U.S. subjects. The results also showed that focusing on
fairness was helpful for creativity in the U.S. This is consistent with advice from Getting to Yes
(Fisher & Ury, 1991) which urges negotiators to focus on objective standards for fairness when
evaluating options for mutual gain, and more generally with Western culture which embraces
swift trust and egalitarian and meritocratic ideals. In all, the results supported a rational-based
model of negotiation in the U.S. where “rational actors” engage in an exchange to maximize
resources (Atran & Alexrod, 2008).

The results illustrated a different road to getting to yes in Egypt where honor is a focal
concern. We argued that in cultures where one’s self worth is continually negotiated in the eyes
of others—where it can be gained, lost, and stolen—parties must successfully negotiate honor in
order to reach creative agreements. Consistent with an honor model of negotiation, the results
showed that language that signifies one is virtuous (i.e., that one has high moral integrity and adheres to codes of loyalty, honesty, and trustworthiness) and one is committed to moral values, particularly related to the ingroup, predicted creative agreements in Egypt. We also hypothesized that while it is crucial to promote honorable behavior, it is also important to protect one’s own honor to achieve successful negotiation outcomes. Continuously protecting one’s public image conveys that one is cautious and vigilant against threats that might compromise one’s reputation (Nisbett & Cohen, 1996). Consistent with this, results showed that honor talk related to protection (image, prevention, and strength) was helpful for achieving better quality agreements in Egypt. Quite clearly, honor talk—the promotion of honor gain and honor protection—pays in the context of Egypt. A focus on promoting honor, we believe, is particularly critical when dealing with strangers in Arabic-speaking countries which tend to have high betrayal aversion (Bohnet et al., 2006; 2008). Indeed, in this research, which was conducted with strangers, overall Egyptians achieved lower outcomes than Americans. Most notably, however, those dyads that emphasized honor talk were able to achieve high quality creative agreements.

Taken together, this research advances a culturally sensitive understanding of how negotiators get to yes, and illustrates the different linguistic pathways that negotiators use to achieve success in the U.S. and Egypt. It moves beyond a largely Western definition of what “successful” negotiation strategies entail, and shows that rational-based negotiation strategies that are so useful in the West can be ineffective in Middle Eastern contexts such as Egypt. It also shows the value of expanding our constructs in the science of negotiation to include honor. An honor-based approach, which has been largely ignored in the negotiation literature, predicted successful negotiation agreements in Egypt. Similarly, our research illustrates the need to
develop and validate new tools such as the honor dictionary to complement tools that have been developed in the West.

From a practical point of view, the findings illustrate that “best practice” negotiation techniques are, in fact, moderated by the cultural context. The identification of culture as a crucial moderator of the success of different negotiation strategies suggests that negotiators should be encouraged to match their language to the cultural context. In other words, there is no “one size fits all” approach when it comes to negotiating cross-culturally. Rather, negotiators must first identify the focal concerns in their current cultural context (e.g., honor, dignity) and choose language that communicates a consideration of these concerns. In honor cultures, this means communicating one’s moral integrity and protecting one’s honor. In dignity cultures, this means considerations of logic, facts, and fairness.

Limitations and Future Directions

While the current study makes an important contribution to our understanding of what predicts creative agreements in Western and Middle Eastern contexts, it also has limitations. The current study only examined two cultures, the U.S. and Egypt. Other dignity and honor cultures should be examined to assess whether our findings replicate in other nations that share these same cultural logics, as well as within cultures where there is variation on the constructs (e.g., the U.S. North and South). In addition, while we found that linguistic processes differentially predicted creativity in agreements in the U.S and Egypt, we didn’t examine the mechanisms through which this occurred. We theorized that virtuous and protection language would elicit trust and respect which enable the creation of value, yet future research needs to test this supposition. Furthermore, examining the linguistic correlates of getting to yes in countries with cultural logics other than dignity and honor (e.g., face cultures) is an important task for future
research. As noted previously, honor cultures are related to but distinct from face cultures. While both share concerns for reputation, honor cultures focus on virtuous behavior and images of strength, whereas face cultures focus on harmony and avoidance of confrontation (Leung & Cohen, 2011). Future research should therefore examine the similarities and differences in linguistic processes that lead to creative agreements in face and honor cultures. More generally, given the increasing focus on relational logics in negotiation—whether it is related to face (Leung & Cohen, 2011; Oetzel & Ting-Toomey, 2003), mindfulness (Kopelman, 2014), empathy and connection (Gelfand et al., 2006; Gray, 1994; Kolb & Coolidge, 1991), and honor, it will be important to integrate these models in order to understand the core similarities and differences.

The current study was conducted in a laboratory setting and thus has limited realism and ecological validity. However, Anderson, Lindsay, and Bushman (1999) compared meta-analytic effect sizes across several constructs (e.g., leadership styles, helping behavior, aggression, social loafing, depression, memory) and found substantial correspondence between lab and field studies. Nonetheless, participants in the current study had no previous relationship nor any expectation of a future relationship with their negotiation partners. Future research would benefit from examining the role of honor and rational talk in actual negotiations, perhaps through the use of archival data. As well, future research would benefit from taking a culture by context approach and manipulate other features of negotiations (e.g., friends versus strangers, deals versus disputes, power asymmetries) to examine if they moderate the current findings. Honor talk, for example, might be particularly important in negotiations involving strangers who have little history or connection through an existing Wasta.

Finally, this study focused on creativity in negotiations, an inherently mixed motive context, which differs from the context of other individual and team level studies of creativity as
seen in this special issue. As such, it highlights the distinct processes that lead to the creation of novel and useful agreements in contexts where people have both a motive to compete and a motive to cooperate with others (Lewicki et al., 2006). To date, there has been very little integration of the negotiation and the individual and team creativity literatures (see Kurtzberg, 1998; Schei, 2013; Wilson & Thompson, 2014, for examples of notable exceptions), yet there are likely many promising synergies between them. Identifying the similarities and differences in the individual and contextual factors that foster versus inhibit creativity across different group tasks and across cultures is an exciting area for future research.

**Conclusion**

This research illustrates, as do other papers in this special issue, that culture affects the way that creative work is accomplished. It underscores the importance of examining the different pathways to creativity in negotiations in different cultures, and suggests that the same processes that may facilitate quality agreements in one culture might actually backfire in another. It also shows the value of developing new models of creativity in negotiations that address core cultural concerns, such as honor, and new tools to assess these constructs, to better predict the ways that negotiators get to yes in different cultures.
References


Footnotes

1. It is useful to contrast both honor and dignity cultures with face cultures (e.g., Leung & Cohen, 2011; Oetzel & Ting-Toomey, 2003; Ting-Toomey & Kurogi, 1998). Face has be described as “the positive social value a person effectively claims for himself by his or her self-presentation” (Goffman, 1967, p. 5) or as “the respectability and/or deference which a person can claim for himself from others by virtue of [his or her] relative position in a hierarchy” (Ho, 1976, p. 883). These definitions convey that face cultures, like honor cultures and unlike dignity cultures, place an emphasis on social standing and external evaluations of the self. However, honor and face orientations differ in many other marked ways (Leung & Cohen, 2011). Most pertinent to our discussion, while the literature on honor explicitly examines morality and virtue as key components of honor (Cross et al., 2014; Lun et al., 2012; see also Dodd 1973), morality and virtue are scarcely discussed in seminal pieces on face (e.g., Ho, 1976, Oetzel & Ting-Toomey, 2003; Ting-Toomey & Kurogi, 1988). There are other notable differences in the constructs. Status differences are generally in flux in honor cultures, and social standing can be gained or taken away through competition with others (Leung & Cohen, 2011). Accordingly, it is critical to demonstrate strength—and quickly reciprocate acts of aggression—in order to cultivate a formidable reputation and prevent future attacks on one’s honor (Nisbett & Cohen, 1995; Severance et al., 2013). Status is largely fixed in face cultures, and thus harmony and humility are emphasized and overt aggression is eschewed (Ohbuchi & Takahashi, 1994; Severance et al., 2013). We return to face and honor cultures again in the discussion.
Table 1

Means, standard deviations, and average mean differences between outcome and linguistic variables in the US and Egypt

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>SD</th>
<th>Egypt</th>
<th>SD</th>
<th>T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrativeness</td>
<td>4.20</td>
<td>1.49</td>
<td>2.40</td>
<td>1.83</td>
<td>4.44***</td>
</tr>
<tr>
<td>Dominance</td>
<td>2.03</td>
<td>1.48</td>
<td>3.91</td>
<td>2.46</td>
<td>-3.89***</td>
</tr>
<tr>
<td>Cognitive mechanisms</td>
<td>22.67</td>
<td>1.87</td>
<td>15.79</td>
<td>1.70</td>
<td>15.29***</td>
</tr>
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<td>Honor dictionary</td>
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<td>1.27</td>
<td>10.67</td>
<td>1.13</td>
<td>-10.40***</td>
</tr>
<tr>
<td>Honor-Moral integrity</td>
<td>1.50</td>
<td>0.46</td>
<td>1.72</td>
<td>0.54</td>
<td>-1.73*</td>
</tr>
<tr>
<td>Virtue (overall)</td>
<td>0.79</td>
<td>0.27</td>
<td>1.32</td>
<td>0.64</td>
<td>-4.38***</td>
</tr>
<tr>
<td>Ingroup virtue</td>
<td>0.05</td>
<td>0.07</td>
<td>0.18</td>
<td>0.37</td>
<td>-1.97*</td>
</tr>
<tr>
<td>Authority virtue</td>
<td>0.16</td>
<td>0.12</td>
<td>0.24</td>
<td>0.20</td>
<td>-1.90*</td>
</tr>
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<td>Purity virtue</td>
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<td>0.02</td>
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<td>0.11</td>
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<td>Fairness virtue</td>
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<td>0.08</td>
<td>0.10</td>
<td>.98</td>
</tr>
<tr>
<td>Harm virtue</td>
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<td>0.11</td>
<td>0.27</td>
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<tr>
<td>Honor-Protection</td>
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<td>0.32</td>
<td>1.01</td>
<td>0.33</td>
<td>.73</td>
</tr>
</tbody>
</table>

*p<.10, **p<.05, ***p<.01

Note: Degrees of freedom are 65 for outcomes variables (integrativeness and dominance); degrees of freedom are 62 for linguistic variables.
Table 2

Correlations between outcome variables, integrativeness and dominance, and linguistic variables for the US and Egypt

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th></th>
<th>Egypt</th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>Integrativeness</td>
<td>Dominance</td>
<td>Integrativeness</td>
<td>Dominance</td>
</tr>
<tr>
<td>Cognitive mechanisms</td>
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<td>-.33*</td>
<td>-.37**</td>
<td>.26</td>
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<tr>
<td>Honor-moral integrity</td>
<td>.01</td>
<td>.18</td>
<td>.36*</td>
<td>-.35*</td>
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<tr>
<td>Virtue (overall)</td>
<td>.05</td>
<td>.05</td>
<td>.46**</td>
<td>-.47**</td>
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<tr>
<td>Ingroup virtue</td>
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<td>.37**</td>
<td>-.32*</td>
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<td>.24</td>
<td>-.19</td>
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<td>Fairness virtue</td>
<td>.29*</td>
<td>-.03</td>
<td>-.19</td>
<td>.20</td>
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<tr>
<td>Honor-Protection</td>
<td>-.27</td>
<td>.40**</td>
<td>.24</td>
<td>-.38**</td>
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</table>

*p<.10, **p<.05, ***p<.01
Table 3

Results of Stepwise Regression Examining Effects of Country and Linguistic Variables on Integrativeness

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>R²</th>
<th>ΔR²</th>
<th>ΔF    (dfs)</th>
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</thead>
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<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td>0.26</td>
<td>0.26</td>
<td>5.19***</td>
</tr>
<tr>
<td>Country</td>
<td>-1.86</td>
<td>0.94</td>
<td>-0.49</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cognitive Mechanisms</td>
<td>0.01</td>
<td>0.12</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honor- Protection</td>
<td>0.07</td>
<td>0.67</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honor- Moral Integrity</td>
<td>0.65</td>
<td>0.43</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td>0.46</td>
<td>0.20</td>
<td>7.09***</td>
</tr>
<tr>
<td>Country</td>
<td>-2.42</td>
<td>0.87</td>
<td>-0.64***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Mechanisms</td>
<td>0.35</td>
<td>0.14</td>
<td>0.72**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honor- Protection</td>
<td>-1.37</td>
<td>0.80</td>
<td>-0.24*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honor- Moral Integrity</td>
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<td>0.58</td>
<td>-0.15</td>
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<tr>
<td>Country * Cognitive Mechanisms</td>
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<td>0.23</td>
<td>-0.92***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country * Honor- Protection</td>
<td>3.51</td>
<td>1.18</td>
<td>0.41***</td>
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<tr>
<td>Country * Honor- Moral Integrity</td>
<td>1.59</td>
<td>0.79</td>
<td>0.30**</td>
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*p<.10. **p<.05. ***p<.01.
Table 4

**Results of Stepwise Regression Examining Effects of Country and Linguistic Variables on Dominance**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE B</th>
<th>B</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
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<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.21</td>
<td>3.86*** (4,59)</td>
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<td>Country</td>
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<td>1.12</td>
<td>0.48*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Mechanisms</td>
<td>0.02</td>
<td>0.14</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honor- Protection</td>
<td>-0.47</td>
<td>0.80</td>
<td>-0.07</td>
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</tr>
<tr>
<td>Honor- Moral Integrity</td>
<td>-0.61</td>
<td>0.52</td>
<td>-0.14</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td>0.50</td>
<td>0.29</td>
<td>11.03*** (3,56)</td>
</tr>
<tr>
<td>Country</td>
<td>2.59</td>
<td>0.97</td>
<td>0.59**</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Cognitive Mechanisms</td>
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<td>0.16</td>
<td>-0.61**</td>
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<tr>
<td>Honor- Protection</td>
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<td>0.89</td>
<td>0.31**</td>
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<td>Honor- Moral Integrity</td>
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<td>0.64</td>
<td>0.28*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country * Cognitive Mechanisms</td>
<td>0.82</td>
<td>0.25</td>
<td>0.83***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country * Honor- Protection</td>
<td>-5.84</td>
<td>1.32</td>
<td>-0.59***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country * Honor- Moral Integrity</td>
<td>-2.66</td>
<td>0.88</td>
<td>-0.44***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.10. **p<.05. ***p<.01.
Figure 1

*Interaction between country and cognitive mechanism language on integrativeness*

![Graph showing the interaction between country and cognitive mechanism language on integrativeness.](image)

*p<.10. **p<.05. ***p<.01.

Figure 2

*Interaction between country and cognitive mechanism language on dominance*

![Graph showing the interaction between country and cognitive mechanism language on dominance.](image)

*p<.10. **p<.05. ***p<.01.
Figure 3

*Interaction between country and honor-moral integrity language on integrativeness*

![Graph showing the interaction between country and honor-moral integrity language on integrativeness.](image)

*<p><sup>1</sup> p<.10.  **p<.05.  ***p<.01.

Figure 4

*Interaction between country and honor-moral integrity language on dominance*

![Graph showing the interaction between country and honor-moral integrity language on dominance.](image)
\*p<.10. \*\*p<.05. \*\*\*p<.01.
Figure 5

*Interaction between country and honor-protection language on integrativeness*

![Graph showing interaction between country and honor-protection language on integrativeness.](image)

*\(p<.10\). **\(p<.05\). ***\(p<.01\).

Figure 6

*Interaction between country and honor-protection language on dominance*

![Graph showing interaction between country and honor-protection language on dominance.](image)

*\(p<.10\). **\(p<.05\). ***\(p<.01\).*
Appendix A: Development and Validation of the Honor Dictionary

The honor dictionary was developed based on 158 structured interviews that we conducted among community samples in seven countries including Egypt, Iraq, Jordan, Lebanon, Pakistan, Turkey, and the US. Our research team developed protocols to examine the words and expressions associated with honor, the means by which honor is gained and lost and the consequences of that loss. Structured interviews were conducted across 7 nations: Egypt, Iraq, Jordan, Lebanon, Pakistan, Turkey, and the US. The interviews primarily took place in the following cities: Amman (N=23), Beirut (N=23), Baghdad (N=22), Cairo (N=23), Hyderabad (N=25), Istanbul (N=19), and Washington D.C. (N=23). In each city, data were gathered from community samples that varied in their age, gender, socio-economic status, and rural-urban living experiences in each country.

Our research methodology was based on the seminal study on *The Analysis of Subjective Culture* (Triandis, 1972), and included word associations, and antecedents and consequences of honor: Participants were asked numerous questions about the psychology of honor, including: 1) What does honor [sharaf] mean to you? 2) What words come to mind when we say honor [sharaf]? 3) How does one demonstrate or prove one’s honor in everyday contexts? 4) Can you give me some examples of ways in which one’s honor can be insulted or threatened? 5) What happens when one’s honor is insulted or threatened? 6) What kind of feelings do you or others experience in these situations? 7) What do you or others do in response to insults or threats to honor? 8) Whose honor is most important to you? The interviews were piloted extensively in each country prior to when they were implemented during the Spring and Fall of 2009.
All interviews, which took approximately one and a half to two hours, were conducted in the local language (Arabic, Turkish, Urdu, and English) with locally trained researchers and were tape recorded for analysis. Interviews were then transcribed verbatim to text. We merged the Arabic responses into one document and then processed them with a software that counted the number of occurrences of each distinct word. From this initial list of words we removed commonly used non-essential words such as pronouns (e.g. they, him, we, you), positions (e.g. of, to, in), and conjunctions (e.g. and, but, or). Additionally, two Arabic speaking researchers, trained in the theoretical framework of honor, acted as judges for selecting honor related words. Each researcher independently removed the words they deemed unnecessary, and if there were disagreements, they were discussed and resolved. Next the Arabic word list was translated into English. Word frequencies were counted for the responses from the United States, and the translated responses from Turkey and Pakistan. In many cases words from the US, Turkey, and Pakistan matched those in the Arabic data. In some cases, if a new word was used in the U.S., Turkey and Pakistan, it would be included if it was high frequency, relevant to the construct of honor, or has similarity to an existing word in the dictionary. Additionally, words in Arabic can have multiple English meanings. A single Arabic word can comprise a set of English synonyms. In order to be as inclusive as possible in the translation process, in all such instances, every possible synonym was included in the lexicon.

After the word lists had been finalized, we collapsed words across their various forms in a process called stemming. Stemming takes a derived word and clusters it with all other words that have the same stem. For example, a word such as respect* is a stem; when stemming words such as respecting, respects, respected, respectful all are clustered together with respect.

In the final step of the creation of the dictionary, we began to categorize the words in the
lexicon into theoretical groups based on the prevailing literature on honor. The final categories included: *moral integrity* (words related to integrity, morals, and commitment); *status* (words related to status gains, prestige, social standing); *achievement* (words related to work and education); *protection* and avoiding negative circumstances (prevention, public image, strength/bravery); *honor loss* (words related to harm, aggression, and wrongdoing); *faith* (words related to religion, beliefs, and faith), *sex/body*, and *etiquette* (appropriateness). Lastly, there were a number of words that are clustered together into various contexts in which honor is important, including social relations (neighbors, tribe, country), gender, family, government/nationalism, military, business, ethnicity, and self.

The dictionary was validated with numerous sources. Based on the literature and established theories, we developed a number of theoretical datasets in which we hypothesized one group to use more honor talk more than another group. This included honor talk in U.S. North and South newspapers both during the Civil War and contemporary times, honor talk in constitutions around the globe, and honor talk in social media.

**Honor Talk in North Vs South Newspapers**

The U.S. South has been characterized as an honor culture (Nisbett & Cohen, 1996). We expected that cultural differences in honor talk would be reflected in newspapers. We first examined this with historical data and then with contemporary newspapers. For the historical data, samples were collected from corpora of newspapers articles written by two newspapers for which there is available digitized data during the civil war between 1860-1865: the New York Times (*N* = 33.48 million words) and the Richmond Daily Gazette (*N* = 7.22 million words). These corpora include all available articles published in these two newspapers over the course of those 5 years. For the analysis, the documents for each newspaper were truncated into 58 equal
documents in each newspaper. We indeed found that there was a significant difference in the scores for honor in the North ($M=19.40, SD=0.27$) and the South ($M=23.60, SD=0.49$) during the civil war; $t(55)=31.61, p < .001$. When comparing two values where neither can be considered the ‘correct value’ or the ‘reference value’, it is more appropriate to calculate the difference between two samples relative to the average of the two samples. This applies to analyzing language across cultures because neither culture can be considered the ‘reference’ culture. Therefore, for this study we used the following equation: $\frac{(\text{Sample 1} - \text{Sample 2})}{(\text{Sample 1} + \text{Sample 2})/2}$ for purposes of “percent difference” (see www.phy.ilstu.edu/slh/percent%20difference%20error.pdf).

We also analyzed contemporary newspapers in the North and South. We chose four cities, two small and two larger cities and selected the main newspapers in those cities. Using the archives on their websites we collected articles from the Jackson Clarion-Ledger ($N=57,545$ words) written in Jackson, Mississippi, articles from the Worcester Telegram & Gazette ($N=66,874$ words) written in Worcester Massachusetts, articles from the Dallas Morning News ($N=102,467$ words) and articles from the Philadelphia Inquirer ($N=174,232$ words). These articles were selected on a date ranging between January and March 2012. For the contemporary newspapers the articles were not of standard length because some of the articles were letters to the editor and others were opinion pieces and editorials. For this reason, we combined all of the articles found in a newspaper into a single document and randomly segmented them into 10 groupings of equal length.

The results from the civil war were replicated in the contemporary context. There was a significant difference in the scores for honor use in the large cities in the North (Philadelphia, $M=13.50, SD=0.54$) and the South (Dallas, $M=14.77, SD=0.48$) ($t(19)=3.05, p = 0.01$). There
was also a significant difference in the scores for honor in the small cities in the North (Worcester $M=13.67$, $SD=1.00$) and the South (Jackson $M=15.00$, $SD=1.09$); $t(19)=2.72$, $p=0.02$.

**Honor Talk in Constitutions Worldwide**

We also explored international differences in honor talk in countries’ constitutions. Constitutions as founding documents embody the ideals and values of a culture. We expected that constitutions around the world will show marked difference in honor orientations, with Middle Eastern and African cultures, Asian cultures, and Mediterranean cultures extending from Southern Europe to their descendants in Latin America being higher on honor talk and countries in Northern and Western Europe as well as countries where the predominant population is of Northern and Western European descent being lower on honor talk.

We used the Constitution Finder provided by the University of Richmond School of Law and Online’s World Constitutions Illustrated to access English translations of constitutions from the countries where we conducted our initial interviews (U.S., Pakistan, Turkey, Egypt, UAE, Lebanon, Jordan, Iraq) as well as other countries from around the globe. By region we acquired 79 constitutions from the Middle East/North Africa ($N=24$), Latin America ($N=10$), Northern Europe ($N=13$), Southern Europe ($N=5$), Non-European English Speaking Countries (including the U.S., Canada, Australia and New Zealand ($N=4$), Eastern Europe ($N=12$), Sub-Saharan Africa ($N=6$), and East Asia ($N=5$).

As predicted, honor language in constitutions differed significantly across regions ($F(7, 71) = 4.28$, $p=.001$). Globally the average use of honor language is 16.52%. The regions highest on honor language are East Asia (18.56%) and the Middle East and Africa (17.10%). The regions lowest with regards to the use of honor language are northern Europe (15.17%) and English
speaking countries outside of Europe (13.88%), including the United States, Canada, Australia, and New Zealand. Results for the remaining regions include Latin America (16.42%), Southern Europe (16.44%), Eastern Europe (16.72%), and Sub-Saharan Africa (16.97%) all roughly fall around the global Honor baseline.

**Honor Talk in the Bitter Lemons Website**

Finally, we examined a data source that was standardized to test for predicted differences in honor talk in the Middle East. Bitter Lemons is a digital discussion space for Palestinians and Israelis to share their opinions on current events in the Middle East. Each week Yossi Alpher and Ghassan Khatib write an opinion piece on a topic and two guest writers, one Palestinian and one Israeli also write about the same topic. We took a sample from 1/3/2005 until 12/29/08 for a total of 182 weeks, with a total of 308,126 words in the Israeli data set and a total of 274,000 words in the Palestinian set. We expected that Palestinians would have higher levels of honor talk than Israelis. As expected, there was a significant difference in the use of honor language by the Palestinian writers ($M=13.54, SD=1.81$) and the Israelis writers ($M=12.98, SD=1.52$) ($t(181)=5.66, p<.001$).

In all, there is strong validity evidence for the honor dictionary. For the full dictionary, contact the authors.