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Culture Matters: Individualism *vs.* Collectivism in Conflict Decision-Making

Rebecca LeFebvre and Volker Franke *

International Conflict Management, Kennesaw State University, 1000 Chastain Road, Kennesaw, Georgia 30144, USA

* Author to whom correspondence should be addressed; E-Mail: vfranke@kennesaw.edu; Tel.: +1-678-797-2931; Fax: +1-770-423-6312.

Abstract: Does culture matter in decision-making? Existing literature largely assumes that the cognitive processes that inform decision-making are universally applicable, while only very few studies indicate that cultural norms and values shape cognitive processes. Using survey based quasi-experimental design, this research shows that subjects with higher levels of individualism tend to be more rational in their decision processing, while those with higher levels of collectivism tend to be more dependent and less likely to betray the interests of members of more central ingroups in favor of less central ingroups. Furthermore, the results indicate that in conflict settings that seem familiar, individuals are more likely to compromise in order to achieve peace.

Keywords: individualism; collectivism; social identity; culture; decision-making

1. Introduction

In August of 2012, Erick Barrondo became Guatemala's first ever Olympic medal winner. After finishing second in the men's twenty kilometer walk race, Barrondo said, "It's well known that Guatemala has problems with guns and knives. I hope that this medal inspires the kids at home to put down guns and knives and pick up a pair of trainers instead" [1]. Even today, Guatemala feels the effects of its 36-year civil war that ended in 1996, as individuals throughout the country make decisions regularly on whether to cooperate or fight, and whether to pursue peaceful activities or use violence. The country's history of armed conflict and polarized politics created a complex social

environment prompting the presence of a United Nations (UN) peacekeeping operation, MINUGUA, for ten years ending in 2004. In its final report on the mission, the UN noted that "the most difficult challenge for MINUGUA was to operate in the multi-ethnic, multi-cultural and multilingual environment of Guatemala" [2]. This raises the question of how significant the impact of culture is on the decisions made not only by deployed peacekeeping troops, but also by the individuals living in the conflict society [3]. Decision-making as an activity is considered to be a rational universal practice in human behavior, as people of all cultures have problems and opportunities that require making choices from among alternatives. Most research studies presume that the cognitive processing behind decision making is also universal, although a small set of literature suggests that cultural variation does make a difference in cognitive processes [4]. If the argument for cultural variation can be more fully supported, particularly in the context of conflict, then culturally-relevant constraints in decision-making environments become more applicable to models of decision processing and conflict prevention.

The main research question of this study is: how do cultural norms and values affect decision-making in conflict situations? Using a comparative case study, we examined cross-country differences in decision-making processes between sample populations in the U.S. and Ghana. We selected these two countries based on significant cultural differences, with the U.S. being highly individualist and Ghana being highly collectivist [5]. The design of our study centered on a survey that examined key individual attributes such as individualism-collectivism and styles of decision making in response to a quasi-experimental decision scenario presented to a sample of university students from each country.

The article is divided into four main sections. The first section provides a review of the current literature on conflict theory, decision theory, culture, and group identity. The second section presents a theoretical framework and develops a set of testable hypotheses. The third section provides a discussion of the methodology and data collection techniques and the fourth section presents our findings and some preliminary suggestions for future research.

2. Decision-Making in Conflict

In this section, we review relevant literature from conflict resolution theory, decision theory, cultural dimensions, and group identity in an attempt to systematically explore the impact of cultural dimensions on decision-making processes, especially in the context of conflict resolution and transformation.

2.1. Conflict Resolution Theory

Conflict resolution emerged as a field of study in the 1950s and 1960s when a group of scholars began to develop specific approaches and techniques for analyzing the cultural generalizability of conflict resolution [6]. Early theorists in the field of conflict resolution did not find cultural variation to be particularly relevant. For example, Burton and Sandole characterized conflict resolution approaches as generic, based on universal behaviors thought to transcend cultural differences, because the root of conflict was seen not through the impact of social institutions and cultural values, but rather through the drive to satisfy basic human needs [7]. Anthropologists such as Avruch and Black brought increased awareness to the culture question, challenging some of the assumptions made about the universality of human nature. Avruch and Black introduced the notion of *ethnoconflict theory* which

precedes discussion of interests, needs, and values in the analysis of conflict by focusing on the implicit knowledge contained within a culture that is often taken for granted and may rarely be verbalized [8]. They refer to this knowledge as "local common sense". The importance of cultural relevance to conflict resolution theory emerged partly as a result of specific case studies that demonstrated the ineffectiveness of taking North American-based conflict resolution techniques and trying to transfer them to other parts of the world without accounting for local common sense [9,10].

Conflict resolution techniques often involve various aspects of negotiation, and in the study of negotiation processes, we find that cultural variation becomes apparent while building relationships, communicating, setting goals, and reaching agreements [11]. Cohen considered negotiations to be a special case of communications, with all the inherent traps of misunderstandings and misinterpretations [12]. In international negotiations, the potential for miscommunication is characteristic of intercultural interaction in general, for in order to have true communication, the parties must have a common base of semantic assumptions. People who have no shared experience or common history have no guarantee that the intended meaning by the sender is decoded correctly by the receiver. In this sense, culture becomes a key variable when people from different cultures interact.

Although there are differences of opinion on the relevance of culture to conflict resolution, the field has evolved to a point where culture is considered to be an important factor in settings of interactive conflict resolution. However, just how does culture factor in, and how does it affect the individual level, shaping how people make personal decisions about whether to participate in conflict escalation or resolution activities?

2.2. Decision Theory

How do people go about making a decision? In particular, we are interested in how people make decisions when faced with a situation of conflict. We briefly review four types of decision theory.

2.2.1. Theories of Rationality

The *rational choice theory* was the dominant paradigm in decision making from World War II until the late twentieth century. Rational choice theory makes three broad assumptions: actors know what they want, are able to order their wants, and will choose the best means to reach their desired ends [13]. For instance, in expected utility theory, different people attribute different value to risk, so each seeks to maximize their own "expected utility" rather than maximizing an overall "expected value" that is mathematically calculated [14]. In other words, people make a rational choice by analyzing the costs, benefits, and risks and seeking to optimize their outcome based on their own preference for risk.

One flaw in any rational approach is the assumption that people have perfect information and the perfect ability to calculate all the costs and benefits before making a decision [15]. In order to accommodate the more imperfect real world, Simon introduced his famous *satisficing* theory to include shortcuts in the optimization process [16], allowing individuals to set a threshold and accept the first choice that crosses their threshold, leaving the rest of the alternatives without analysis.

Some scholars believe that rationality provides the only scientific approach to social theory [13]. Theories of rationality do simplify or generalize the problem at hand, and generalization is seen to be of great value because it allows for prediction. However, critics of the rational choice approach argue

that it is inherently inconsistent with observed human behavior [17–20]. For example, more lottery tickets are sold as the size of the prize increases, indicating that the size of the jackpot is more important to players than the probability of actually winning [21].

2.2.2. Theories of Emotion

Although much of the criticism against rational choice stems from cognitive theory (described in the next section), there are a few emotion-based decision factors worth mentioning. The concept of *affect* in decision-making is one that arises when emotions such as fear are particularly strong. Affect enables a person to make decisions quickly in the face of danger, but can also cloud judgment [15]. Gordon and Arian studied the relationship between feelings of threat and decision processing from data on the Arab/Israeli conflict as well as local U.S. conflict situations such as neighborhood crime [22]. They found that when people felt threatened, their decision process was dominated by emotion, not logic or rational considerations. Their findings showed that the stronger the level of threat, the more belligerent the policy choice; the lower the level of threat, the more pacific the policy choice. They argued that even though logic has as role in decision-making, much of the process is driven by emotion.

2.2.3. Theories of Cognition

Observation has shown that people often make choices that are not rational, and many social scientists have pursued an explanation for this unpredictable behavior via a cognitive approach. Cognitive approaches focus on human processing of information, including how individuals gather information and then use it to evaluate situations [23]. This approach has led to a model of human behavior broadly referred to as "behavioral decision theory", which shows that people use cognitive shortcuts and preferences when processing information, deviating predictably from rational choice theories [18].

Kahneman and Tversky researched why people seem to exhibit inconsistent behavior when making decisions in risky situations and published their ground-breaking research on *prospect theory* in 1979 [19]. In prospect theory, the objects of choice are prospects with value assigned in terms of gains and losses, rather than final outcomes. People react differently depending on how the situation is presented in terms of those gains and losses. Underlying the work on prospect theory are the concepts of *heuristics* and *biases*. Heuristics are essentially cognitive shortcuts, which reduce complex tasks to simpler operations of judgment. Judgmental heuristics, however, can introduce error and lead to suboptimal outcomes [18,23–25]. These errors are usually referred to as biases, which can vary depending on the heuristic being used. Three commonly discussed heuristics are: *availability*, *representativeness*, and *adjustment and anchoring*. The availability heuristic is based on information that is most accessible to a person or occurrences that can be most easily brought to mind. In the representativeness heuristic, others are grouped into types with assumed similarity of characteristics, as in stereotypes. Using the adjustment and anchoring heuristic means starting from an initial value that is known and making adjustments from there based on the current situation [25]. There are many other heuristics that have been identified in political science and psychological literature, with more than fifty distinct heuristics named [26]. The danger of this seemingly endless proliferation of heuristics is that keeping track of them all and discovering how individuals coordinate these multiple judgment strategies becomes

overwhelmingly complex. A more productive approach would be to focus on the cognitive processes behind the decisions rather than on the individual heuristics themselves.

There are varied examples in the literature of how social scientists have applied aspects of cognitive theory to specific situations. The application of the cognitive approach to domestic politics and voting practices is the most prevalent [26,27]. Other applications include understanding how heuristics are used by political elites [23] and security policy makers [24]. The application of heuristics to decision making in situations of conflict has been studied only infrequently.

2.2.4. Blended Theories

One can imagine various ways to combine theories of rationality, emotion, and cognition, but there is one particular blended approach that has received the most attention in the literature: *poliheuristic theory*. Poliheuristic theory offers an alternative to the traditional rational actor model by integrating aspects of both the cognitive and rational approaches to decision-making. Poliheuristic theory is conceptualized as a two-stage decision process. The first stage is a cognitive process, which screens the possible alternatives and narrows the choices by eliminating options based on one or more heuristics. In the second stage, the remaining alternatives are then evaluated in a rational way in order to minimize risk and maximize benefit [28–30]. Poliheuristic theory has made important contributions to understanding the decision making process in the realm of foreign policy [31], but its application to other types of decisions made by individuals and groups has been limited [29].

2.3. Cultural Dimensions

The 1948 Universal Declaration of Human Rights states that "everyone has the right to a nationality," but what determines nationality? Is it culture? From a legal point of view, nationality is about reflecting an individual's genuine link with a country, based on objective factors such as place of birth, descent, and residency [32]. On the other hand, culture, even though it is often associated with a country, is more difficult to define and measure [33]. One common definition of culture is based on the anthropological conception of a learned system of meanings rooted in symbols and language that allow people to adapt to their environment and interpret their experiences [34]. Hofstede's 1980 study defined culture as "the collective programming of the mind which distinguishes the members of one human group from another" [35].

In attempts to understand and categorize national cultures, a number of scholars have narrowed their focus to the study of values. Values are principles that give order and guidance to people in their thoughts and actions as they face common human problems and issues [36]. By observing the principles that different social groups use in their thoughts and actions, researchers have been able to infer the values shared by various social groups. Societies can then be categorized and compared based on commonly shared values. In 2008, Thomas reviewed the five major frameworks that have emerged out of these value studies, each allowing for the categorization and comparison of national cultures: the Kluckhohn and Strodtbeck framework, Hofstede's model, the Schwartz Value Survey, Trompennars's value dimensions, and the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study [37]. Each of these five studies categorized culture in terms of value measurements, deriving a set of four to nine dimensions depending on the framework. The only dimension to appear in all five

values studies is the individualism-collectivism dimension. The individualism-collectivism dimension has been used extensively in the study of social behaviors, especially in efforts to predict behavioral patterns [37–40]. For example, conducting a meta-analysis of 253 studies on individualism-collectivism, Osyerman *et al.* concluded that the individualism-collectivism construct does impact basic psychological processing, and that cultural differences in the dimension "provide a powerful explanatory tool for understanding the variability in the behavior of individuals in different parts of the world" [39].

The term individualism is used to define the degree to which members of society define their self-image as an individual or as part of a larger group. On the other hand, those who define themselves from the social and collective aspects of the self-concept are described with the term collectivism. Individualism and collectivism are sometimes seen as opposite ends of a single continuum, but it is more accurate to describe them as worldviews that make different aspects of the self-concept salient. The core elements of individualism are independence and uniqueness, whereas the core elements of collectivism are duty to in-group and maintaining harmony. Triandis writes about the prototypical social relationships that describe each of these two constructs [41]. For collectivism, the prototypical relationship is the family. The family cares for its members and cooperates together, often acting as a single unit with common goals. Each member of the family has a well-defined role and status determined by position within the group. Family members have strong emotional ties to one another and are linked typically for life. For individualism, the prototypical relationship is the marketplace where an individual makes a payment and receives a good or service in return. The relationships are emotionally distant and although members of the market interact frequently, each member maintains his or her own distinct identity. The marketplace encourages competition, and status is usually determined by individual achievement and success and not by membership in a particular group.

The individualism-collectivism construct is useful as a mechanism for systematically describing ways in which cultures differ. The construct is helpful for understanding how culture influences not only what people think but also how they think. How could the measured difference in individualism-collectivism play out in terms of decision making? Chen and Li explored cultural differences of decision-making between individualist and collectivist societies by looking at Chinese (collectivist) *versus* Australian (individualistic) cultures [42]. They found that the Chinese were less cooperative with foreigners than with Chinese, whereas Australians were equally cooperative with members of either group. However, such research studies into the cultural impacts on decision making are rare and there are many unresolved and unanswered questions in this area. Do individualist and collectivist cultures differ in the values they apply to decisions made in the face of conflict? Do such differences enhance or aggravate peacekeeping efforts that are initiated in conflict prone zones? Can peacekeeping personnel be trained to manage cultural differences and achieve peace more efficiently? There is a need for further research to gain an improved understanding of how cultural differences manifest themselves in the decision making process, particularly in conflict contexts. The well-established differences in the individualism-collectivism dimension between the two countries make the U.S. and Ghana an excellent test case for a cross-country comparative study on culture and its impact on decision-making.

2.4. Social/Group Identity

Most generally, identity represents "the process by which the person seeks to integrate his (sic) various statuses and roles, as well as his diverse experiences, into a coherent image of self" [43]. Individuals draw on multiple, sometimes even competing subidentities (e.g., religious, political, social, ethnic, or occupational) to derive their self-conceptions. These subidentities become consequential for behavior in situations when their salience is invoked [44]. A person's various subidentities form specific links between the self and his or her membership in social groups. Hofman specified salience as the probability by which a subidentity is remembered and activated in a given context [45]. Prolonged salience upgrades the subidentity in the "prominence hierarchy" thereby enhancing its "centrality" and the degree to which it connects with other subidentities. The more central a subidentity is to an individual's self-conception and the more interconnected it is with other subidentities, the more committed the individual will be to preserving and enhancing that identity and to display attitudes, values, and social behaviors consistent with it.

In the present context, the concept of "social identity" refers to "that part of individuals' self concept which derives from knowledge of their membership in a social group (or groups) together with the value and emotional significance attached to that membership" [46]. Theories of social identity are typically based on three premises:

(1) people are motivated to create and maintain a positive self-concept;

(2) the self-concept derives largely from group identifications; and

(3) people establish positive social identities through normative comparisons between favorable in-groups and unfavorable out-groups [47].

Social identity research has demonstrated that individuals tend to invoke their group identifications in many decision contexts, since the norms, values, stereotypes and behavior patterns associated with a particular identity provide a sense of certainty and may inform their choice among decision alternatives [48–54].

3. Theory and Hypotheses

The main research question of this study asks with regard to cultural variation: (1) how are decisions made (the decision-making process), and (2) what are the actual decisions (the decision-making outcome). We operationalized the decision-making process using the scale developed by Spicer & Adler-Smith which identifies a self-reported general decision making style (GDMS) falling into one of five categories: rational, intuitive, dependent, avoidant, or spontaneous [55]. A rational style is a logical and structured approach to decision making. An intuitive style relies upon hunches, feelings and impressions. A dependent style relies upon the direction and support of others. An avoidant style tends to postpone or avoid making decisions. In addition, a spontaneous style is impulsive and prone to making spur of the moment decisions.

The independent variable, "cultural norms and values", was measured analyzing: (1) the cultural traits of the individual decision maker, (2) the society that the individual lives in, and (3) the cultural context of the conflict setting. Recognizing that Hofstede's cultural dimensions of decision-making operate at the country level and variation occurs across people within each country, we measured the

cultural traits of the decision maker by employing the Auckland Individualism Collectivism Scale (AICS) [56]. Individualists are those that exhibit traits of uniqueness, responsibility, and competitiveness, while collectivists seek advice and harmony.

To measure societal aspects, we collected data using survey-based quasi-experimental design at an American university and compared results to data collected at a university in Ghana, The cultural dimensions of these two countries vary across Hofstede's measures, as shown in Figure 1, with the most marked difference seen in the individualism-collectivism score [5]. Even if individuals within a country do not align with Hofstede's dimensions for that country, we anticipated that living in a society with particular cultural dimensions would affect how the individual behaved.

Figure 1. Hofstede's Cultural Dimensions for the U.S. and Ghana.
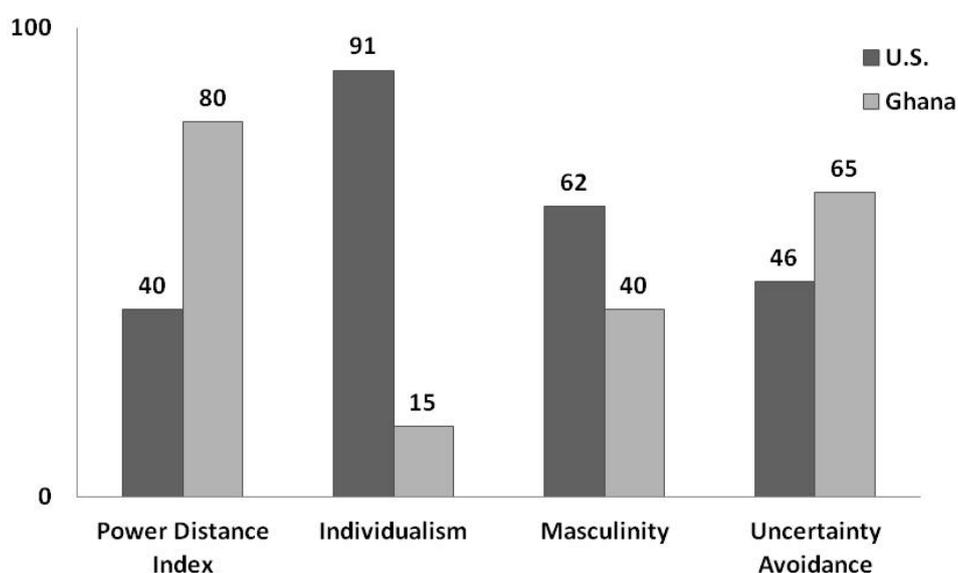
Source: The Hofstede Center 2012 [5].

For the final cultural aspect, the setting of a particular conflict scenario was varied randomly between two descriptions that differed distinctly in the individualist/collectivist nature of the groups involved. The conflict scenario was written as a short fictional vignette depicting a mining operation under protest. Participants were asked to take on a specific role within the vignette and make decisions that would potentially affect themselves and the various groups to which they belonged (see below for a more detailed description of the scenario). The vignette itself was designed to make salient different layers of social identity, as shown in Figure 2. Both versions of the vignette followed this layered model. The key difference between the versions was in the description of the overall community— individualist versus collectivist—and reference to friends and family.

We hypothesized that each of the three aspects of culture would impact decision making. First, the individualist-collectivist nature of a person should affect their decision-making style. The desire for uniqueness and the competitive drive are likely to reflect a more rational decision making style, while the desire for harmony and the drive to seek advice from others are likely to result in a more dependent decision making style for collectivists. We tested the following hypotheses:

H1: Individuals with more individualist traits are more rational in their decision-making.

H2: Individuals with more collectivist traits are more dependent in their decision-making.

With regard to the second cultural aspect, society, we hypothesized that people living in a more collectivist society (Ghana over the U.S.) would be more likely to prioritize the needs and interests of their more central ingroups, namely those identity groups that are at more salient at the inner layers.

H3: Individuals from a more collectivist society are more likely to prioritize the interests of members of social groups that are closer to the core of their salient identities.

We also anticipated an effect of the cultural setting of the scenario, expecting that when decision makers were presented with a conflict scenario in a cultural setting that did not align with their own cultural experiences, their style of decision-making would adjust and become more avoidant. Additionally, we expected that when decision makers were presented with a scenario in a cultural setting that generally felt similar to their own social surroundings, their decisions would more often lean toward cooperation and the pursuit of peace, rather than continued protests. This type of effect can be considered a "representativeness" heuristic where the opposition is judged to be more trustworthy because they represent something more familiar.

H4a: The more individualistic a person is, the more avoidant his/her decision-making style will become in collectivist contexts.

H4b: The more collectivist a person is, the more avoidant his/her decision-making style will become in individualist contexts.

H5: When the setting of the story assimilates one's own cultural context, decision makers more often choose to cooperate and achieve peace, than resist and continue protesting.

**Figure 2.** Layers of Group Identity in the Vignette.
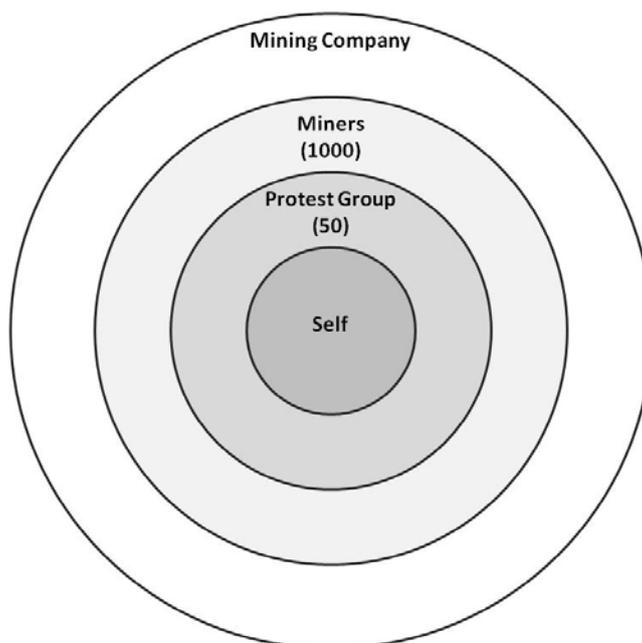
4. Methods and Data

Data was collected from 469 undergraduate students across two universities: Kennesaw State University (KSU) located in Kennesaw, Georgia where 265 respondents participated through an on-line survey system implemented through introductory psychology classes, and the University of

Cape Coast (UCC) in Ghana, where 204 participants completed a paper survey. UCC participants came from three classes: 84 participants from an introductory level history class; 67 participants from a junior level sociology class; and 53 students from a senior level business class. The resulting samples from KSU and UCC were compared on key demographic characteristics, such as gender, age, religion, ethnicity, major, and country of origin, indicating that both samples were similar in terms of age, percent native born, religion, and distribution of ethnicities with one dominant ethnicity and one secondary ethnicity. The largest demographic difference was in terms of gender, where KSU had an unusually high participation of females, much higher than the university average.

Selecting our sample from student populations presents a well-recognized limitation to the generalizability of our findings, because college students are not representative of society or the public at large. However, the primary goal of this experiment is not to generalize to society, but to test for the impact of culture on decision-making in a laboratory-like setting, controlling as much as possible for other, non-cultural, decision factors [57]. Surveying student participants is justified by the fact that they represent likely future leaders [58], a population of interest as exemplar carriers of social identity and values and, as such, a valid target group for research into the cultural dynamics of local conflict and its resolution and/or transformation.

Employing the quasi-experiment previously described, participants were randomly assigned one of two versions of the story: one set in an individualistic culture and the other set in a collectivist culture. Prior to being presented with the vignette, participants were asked to complete the AICS instrument to determine their individualism-collectivism traits, and the GDMS instrument to determine the general decision making style. After reading the vignette, participants were presented with two decisions to make. The first decision was whether to reveal fellow protest members who were dangerously sabotaging the mine, and the second decision was whether to take an offer from the company CEO that would provide additional benefits to the protest group, but not all the miners. Each of these decisions was presented as a binary choice. Finally, the GDMS instrument was administered again in modified form, with references to the particular decision just made in order to assess the extent to which their decision was affected by type of setting/cultural context. The flow of the experiment is represented in Figure 3.

Figure 3. Experimental Design.
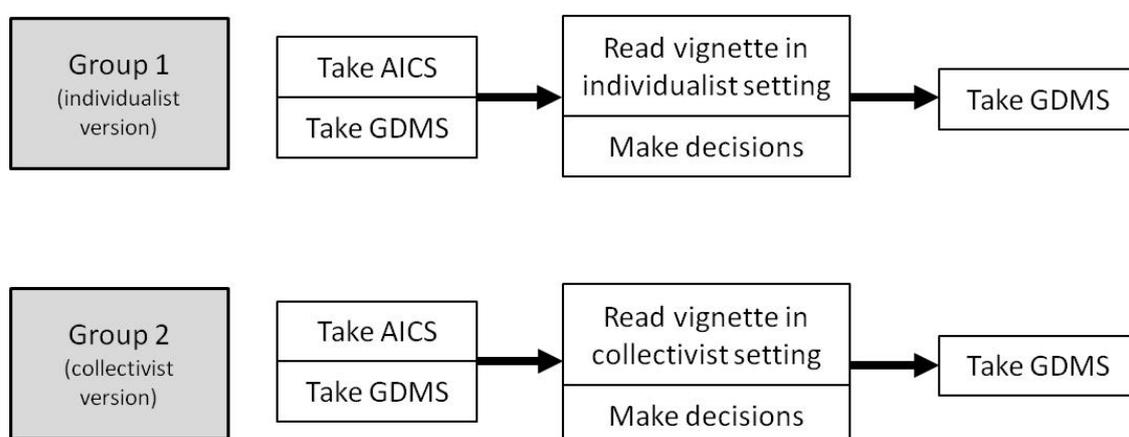
The AICS instrument consisted of 26 items measuring traits divided between individualism and collectivism that had been previously validated and shown to be reliable with α > 0.70 [59]. Responses were given on a 5-point Likert-type scale ranging from strongly disagree to strongly agree. Based on participant feedback from a pretest conducted earlier, the most repetitive questions in the survey were removed, resulting in 14-item instrument with a slightly reduced reliability of α > 0.67. See Appendix A for the 14-item question set. The GDMS instrument consisted of 25 items with five items identified for each of the five decision-making styles and a previous validation shown to be reliable with α > 0.67 [55]. Again based on participant feedback from the earlier pretest, the most repetitive questions in the survey were removed, resulting in 17-item instrument with a slightly reduced reliability of α > 0.64. See Appendix B for this 17-item question set.

5. Findings

We tested the first two hypotheses using regression analysis. H1 anticipates a positive relationship between individualism and rational decision making, and this was reflected in the results. The correlation between the rational decision-making style and individualism was statistically significant (p < 0.05), remaining so when controlled by age, gender, country, and religion[1]. Another factor that emerged as significant was the country location, with participants from the U.S. being less rational, whereas those from Ghana being more rational. H2 anticipates a correlation between dependent decision making and collectivism, as reflected by the negative sign on the individualism coefficient (see Table 1). The correlation between a dependent decision-making style and collectivism was significant (p < 0.01), remaining so when controlling for age, gender, country, and religion. The coefficient for individualism-collectivism was small and again country location emerged as a significant factor with a larger coefficient value indicating that those from the U.S. were less dependent and those from Ghana tended to be more dependent. No issues of heteroskedasticity were present in the models. Adjusted R-squared was 4% and 5% for the rational and dependent models respectively, with statistical significance for the F-stat of both, indicating robust models. Overall, our statistical analysis showed support for both H1 and H2, revealing significant relationships between individualism and rational decision-making (H1), and collectivism and dependent decision-making (H2). The small coefficients and low R-squared values suggest, however, that individualism-collectivism traits are only a small part of the decision-making equation. Tables 1 and 2 show a summary of the results.

H3 anticipates that in a more collectivist society (Ghana), decision makers will prioritize interest of members of more central ingroups over those of less central ingroups. This hypothesis was tested via the first decision made after reading the vignette. In this case, the participants must decide whether to reveal the names of the people sabotaging the mine (the inner group circle of protestors) to the head of the mining company (the most outer group circle, see Figure 2). Revealing their names could get the people into trouble with the law or cause them to lose their jobs. However, not revealing their names puts all the miners in physical danger (the group circle between the other two layers), and puts the company at risk (the most outer group circle). There were many factors for participants to consider, and the dilemma had no straightforward or obvious answer, but a general indicator of prioritizing inner

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[1]   Due to the dominance of the Christian religion in both samples (93% in Ghana and 77% in the U.S.), we controlled for religion as a dummy variable of Christian or not-Christian.

group circle interests should show in the decision not to reveal the names. We therefore hypothesized that participants from the U.S. were more likely to reveal the names, and participants from Ghana were less likely to reveal the names. The results of our logistic regression did support this hypothesis when controlling for age, gender, and religion ($p < 0.05$). Gender also emerged as a significant factor ($p < 0.05$), with men more often deciding to reveal the names. See Table 3 for the results.

Table 1. OLS Regression Results for Rational Decision-Making Style.

DV=Rational	I	II	III	IV	V
Individualism	0.108	0.122	0.121	0.103	0.110
(variable of interest)	(0.028) **	(0.012) **	(0.013) **	(0.034) **	(0.026) **
Age		−0.325	−0.325	−0.380	−0.391
		(0.128)	(0.129)	(0.075) *	(0.065) *
GenderMale			−0.463	−2.475	−1.858
			(0.853)	(0.338)	(0.472)
USParticipant				−7.087	−5.750
				(0.004) ***	(0.023) **
ReligionChristian					7.218
					(0.025) **
Adjusted R-Squared	0.008	0.013	0.011	0.028	0.037
F-Stat	4.867	3.872	2.561	4.035	4.268
	(0.028) **	(0.022) **	(0.054) *	(0.003) ***	(0.001) ***
N	469	425	424	424	424

P-value in parentheses; *** = significant at 0.01; ** = significant at 0.05; * = significant at 0.1.

Table 2. OLS Regression Results for Dependent Decision-Making Style.

DV=Dependent	I	II	III	IV	V
Individualism	−0.152	−0.139	−0.141	−0.172	−0.169
(variable of interest)	(0.003) ***	(0.013) **	(0.011) **	(0.002) ***	(0.002) ***
Age		−0.064	−0.081	−0.172	−0.178
		(0.793)	(0.741)	(0.477)	(0.462)
GenderMale			3.121	−0.197	0.135
			(0.279)	(0.946)	(0.964)
USParticipant				−11.692	−10.972
				(0.001) ***	(0.001) ***
ReligionChristian					3.888
					(0.291)
Adjusted R-Squared	0.016	0.011	0.011	0.049	0.049
F-Stat	8.747	3.284	2.607	6.407	5.351
	(0.003) ***	(0.038) **	(0.051) *	(0.001) ***	(0.001) ***
N	469	425	424	424	424

P-value in parentheses; *** = significant at 0.01; ** = significant at 0.05; * = significant at 0.1.

Table 3. Logit Regression of Country Location and Choice to Reveal Saboteurs.

DV=Reveal	I	II	III	IV
USParticipant	0.310	(0.387)	0.494	0.520
(variable of interest)	(0.115)	(0.057) *	(0.020) **	(0.018) **
Age		0.021	0.021	0.021
		(0.227)	(0.252)	(0.269)
GenderMale			0.455	0.465
			(0.044) **	(0.041) **
Religion: Christian				0.134
				(0.633)
% of cases correctly predicted	60%	59%	58%	58%
N	446	417	416	416

P-value in parentheses; *** = significant at 0.01; ** = significant at .05; * = significant at 0.1.

Statistical analysis did not support H4a and H4b, indicating that there was no effect of individualist *versus* collectivist cultural context on the tendency to avoid decision-making. However, an individual's country of residence emerged as a factor that affected the avoidance tendency. Individuals from Ghana were more likely to want to avoid making the vignette-based decisions altogether.

Finally, H5 was tested to determine if the familiarity of the vignette setting had an effect on the decision to compromise with the company management and take an offer that met part but not all of the protesting group's stated objectives. Participants were asked if the location of the vignette was similar to where they lived. Analysis showed that the coefficient for the familiarity of the cultural context did have the hypothesized effect and was significantly correlated to the decision to cooperate, remaining so when controlled by age, gender, country, and religion ($p < 0.05$). See Table 4 for a summary of the results.

Table 4. Logit Regression Results for Similarity-of-Setting.

DV=Cooperate	I	II	III	IV	V
LocationFeltSimilar	0.562	0.634	0.613	0.742	0.743
(variable of interest)	(0.037) **	(0.021) **	(0.029) **	(0.012) **	(0.013) **
Age		−0.044	−0.044	−0.038	−0.039
		(0.049) **	(0.048) **	(0.092) *	(0.059) *
GenderMale			0.060	0.128	0.130
			(0.797)	(0.596)	(0.588)
USParticipant				0.357 (0.133)	0.364 (0.133)
Religion: Christian					0.032 (0.916)
% of cases correctly predicted	67%	67%	68%	67%	66%
N	432	410	409	409	409

P-value in parentheses; *** = significant at 0.01; ** = significant at 0.05; * = significant at 0.1.

6. Discussion and Conclusions

Analysis of the data collected in the U.S. and Ghana indicate that culture does indeed have an impact on decision making, showing indications of cultural impact across individual traits, societal traits, and conflict setting. First, the two hypotheses regarding personal traits were well-supported by

the data, indicating that cultural traits such as individualism and collectivism can have an effect on the general decision making style of individuals. Those who are more individualist tend to be more rational, and those who are more collectivist tend to be more dependent. This is an important finding for those who work in mediation and conflict resolution. When attempting to bring parties together to form an agreement, one ought to understand the cultural traits of the parties involved and tailor one's approach accordingly. Our findings lead us to conclude that we ought not to expect collectivists to make long lasting decisions without the involvement of others in their group or individualists to toss aside the thoroughly researched and logical choice to go with a snap decision.

Second, the nature of the society one lives in informs the decision making process. This study shows support for the third hypothesis that those from a collectivist society (Ghana) are more likely to prioritize interests of members of more central social identity groups by, in this case, not revealing the sabotage of associates. The country location emerged several times throughout the study as a relevant factor in determining decision making styles including rational, dependent, and in some cases avoidant thinking. This finding has particular relevance to peacekeeping operations. Preparation and training for peacekeeping missions should be built on an awareness of the cultural traits of the target society, and particularly on the central group identities informing the parties to the conflict. Our research suggests a tendency for collectivist societies to want to solve group problems within the most central and salient ingroup identities and a general reluctance to go to outer circles to find a solution. This potentially makes collectivist societies less prone to accepting external intervention, and is an area worthy of further research.

Third and finally, our analysis indicates that the cultural setting of a situation can alter decision-making processes, but not in all cases. The nature of the conflict setting itself did not appear to have an impact, showing no support for the fourth set of hypotheses. However, the fifth hypothesis was supported, showing an effect of the feeling of familiarity to a conflict setting on the tendency toward peace. This may be an indication that it is advisable to deploy peacekeepers from collectivist societies to conflict settings in collectivist societies because their familiarity will aid their effectiveness. Similarly, peacekeepers from individualist societies should be sent to conflict settings in individualist societies. The importance of aligning cultural traits of peacekeepers with cultural traits of conflict societies needs to be explored more thoroughly in future research.

While the survey method we used is effective for collecting large amounts of standardized data suitable for quantitative analysis, there is a minor limitation to the generalizability of our data because of the use of college students as previously discussed. However, this limitation did not prevent us from revealing the impact of culture on decision-making in our particular experimental setting. A further limitation of our approach is that the artificial nature of the questionnaire poses potential threats to validity. Having respondents self-report their perceptions measured in terms of responses to predetermined Likert-type statements limits the accuracy with which people can respond. However, by presenting all participants in a group with the same stimulus in a controlled setting, experiments and surveys allow for a level of standardization that is effective in eliminating most concerns for reliability.

The field of international conflict theory has recognized the value of considering cultural variation in applications of conflict management such as cross-cultural negotiations and interactive conflict resolution, yet little research has been done to date to understand the implications of cultural variation on individual decision making processes. Decision theory has marginalized the impact of cultural

dimensions to the cognitive process, assuming that findings are universal to human behavior. Conversely, theories of ethnoconflict emphasize "local common sense", or the implied cultural constraints in a society, which can be part of the unconscious cognitive processing. Understanding how local common sense plays into the decision-making process displayed during conflict situations can play a key role in effective conflict transformation efforts.

The results of this research lead us to conclude that there are cultural constraints that have an effect on the decision making process. Consequently, the broader assumption often made in the literature that decision-making has universal characteristics must be tempered. The cultural traits of individuals as well as the general cultural characteristics of the society in which they live factor into the decision making process. This study has focused on quantitative measures attempting to reveal often subconscious factors such as one's own traits and tendencies, the salience of one's group identities, and the effects of where one lives. However, there is also likely to be important information in the conscious part of the decision-making process that could be discovered simply by asking people "why" they make certain decisions. Such a study would be able to reveal trends in justification factors and rationale that become salient when making decisions. This is a prime area for future research that could be used to begin building a conceptual model of the decision-making process in conflict situations from the point of view of cultural constraints.

Further research is also warranted in other locations of the world. This study was limited to just the U.S. and Ghana in an initial cross-country comparison. Incorporating other countries that have similarities and differences in key cultural dimensions would allow for further comparisons and refinement of the conceptual model. In addition, conducting follow-on research on non-student populations within the same country would allow for an informative within-country comparison to highlight cultural differences between populations aside from the country location factor. For example, it would be useful to study the decision-making of a population experienced in the realm of peacekeeping and conflict resolution to compare with the typically inexperienced university student population. How does the conflict decision-making approach vary between these groups? What is the effect of professional experiences, for instance in the military or police, in a person's decision-making process and outcome? Future research should investigate decision theory specifically in the context of conflict resolution practices, peacekeeping strategy development, and pre-deployment troop training to assess the extent to which individuals with different demographic, professional or identity backgrounds make decisions on whether to fight or to cooperate. Central to any such analysis is the need to gain a thorough understanding of the deeper effects of culture on cognitive processing and decision-making. Only through such studies will we be able to help in heeding Erick Barronodo's call to the youth of Guatemala, and understand why some youth choose to pick up guns and knives and others do not.

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Appendix A: Reduced Auckland Individualism Collectivism Scale (AICS) Questionnaire

The following questionnaire is used to measure individualist and collectivist traits. Items are indicated with I or C to indicate they are part of the individualist or collectivist index respectively. Each question is implemented on a scale of strongly agree, agree, disagree, strongly disagree, or don't know.

1. I define myself as a competitive person. (I)
2. Before I make a major decision I seek advice from people close to me. (C)
3. I believe that competition is part of human nature. (I)

4. I consider my friends' opinions before taking important actions. (C)

5. I like to be accurate when I communicate. (I)

6. It is important to consult close friends and get their ideas before making a decision. (C)

7. I ask the advice of my friends before making career related decisions. (C)

8. I sacrifice my self-interest for the benefit of my group. (C)

9. I prefer using indirect language rather than upset my friends. (C)

10. I take responsibility for my own actions. (I)

11. My personal identity independent of others is very important to me. (I)

12. Winning is very important to me. (I)

13. I see myself as "my own person." (I)

14. I consult my family before making an important decision. (C)

Appendix B: Reduced General Decision Making Style (GDMS) Questionnaire

The following questionnaire is used to measure general decision making styles. Items are indicated with an R, I, D, A, or S to indicate they are part of the rational, intuitive, dependent, avoidant, or spontaneous index respectively. Each question is implemented on a scale of strongly agree, agree, disagree, strongly disagree, or don't know.

1. When I make decisions, I tend to rely on my intuition. (I)

2. I rarely make important decisions without consulting other people. (D)

3. When I make a decision, it is more important for me to feel the decision is right than to have a rational explanation for it. (I)

4. I double-check my information sources to be sure I have the right facts before making decisions. (R)

5. I make decisions in a logical and systematic way. (R)

6. When making decisions I do what feels natural at the moment. (S)

7. I like to have someone steer me in the right direction when I am faced with important decisions. (D)

8. My decision making requires careful thought. (R)

9. When making a decision, I trust my inner feelings and reactions. (I)

10. When making a decision, I consider various options in terms of a specified goal. (R)

11. I avoid making important decisions until the pressure is on. (A)

12. I often make impulsive decisions. (S)

13. I often need the assistance of other people when making important decisions. (D)

14. I often put off making important decisions. (A)

15. If I have the support of others, it is easier for me to make important decisions. (D)

16. I generally make important decisions at the last minute. (A)

17. I make quick decisions. (S)