A SENSE OF OBLIGATION:
CULTURE AND THE SUBJECTIVE EXPERIENCE OF MEETING EXPECTATIONS

by

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Abstract

How do we feel about our obligations? And are there cultural differences in our sense of obligation? In this dissertation, I examine the question of the degree to which we believe we “own” our obligations to help others—if, while being motivated by a sense of duty, we also feel motivated by our own desires and sense of choice. In contrast to Confucian “virtue ethics,” which promote feeling unity between one’s desires and social obligations, the autonomy-seeking philosophies of the post-enlightenment West may have inadvertently encouraged a disassociation of duties from self-endorsement. In four studies, I examine cultural differences in the degree to which we feel congruency between our sense of obligation to help others and our sense of agency about helping. Comparing participants from East Asian and Western European cultural backgrounds, I find that a) East Asians are more likely than Westerners to feel a sense of congruency between agentic and obligated motivations to help others; b) these cultural differences are partially mediated by positive attitudes towards hierarchy and filial values; and c) East Asians are more likely to have positive emotional associations with both obligated and agentic motivations to help others. The studies suggest that East Asians, in comparison to Westerners, are more likely to feel that their obligations are self endorsed and involve a positive emotional experience. Implications for theories of motivation, in particular Self-Determination Theory (Ryan & Deci, 2000), are discussed.
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Chapter 1: Introduction

*It is not doing the things we like to do, but liking the things we have to do that makes life blessed.* –Goethe

Every society must find a way to balance the needs of individuals with those of the collective. Prosocial behavior, which is a fundamental building block of community, requires sacrifice on the part of the actor. How far must individuals go in sacrificing themselves for others? Among the “small portion of mankind” that holds up the freely choosing individual as the ideal of personal life (Schooler, 1990, p. 19), sacrificing one’s own enjoyment to do things for others is usually seen as unhealthy. But in contrast with that individualist stance, the majority of the rest of the world is said to welcome the primacy of the needs of the collective over those of individuals (Chen, Brockner, & Katz, 1998; Triandis, 1995). In these studies, I will seek to show that in collectivistic cultures such as those of East Asia, fulfilling one’s duties to others can be a satisfying and self-endorsed activity, rather than a forced activity. Instead of experiencing duties as requiring a negative sacrifice, individuals raised to value the fulfillment of duties may be more likely to feel a sense of personal control and satisfaction when doing so. In other words, to do your duty is more likely to feel like something that has been forced on you in Western societies than East Asian societies.

“Collectivistic” and “individualistic” cultures, such as those found in East Asia and North America respectively, have been characterized as differing in their attention to social obligations, roles, and expectations (Markus & Kitayama, 1991). While members of individualistic societies strive to be unique and independent from others, members of collectivistic societies are motivated to fit in with important ingroup members and to adopt group goals over their own (Triandis, 1995). Current Western psychological theories of motivation, which emphasize the
need for individuals to feel self-directed and in control, have difficulty explaining how people who live in collectivist societies deal psychologically with constant “subservience” to the demands of society (Miller, 2003). Some have suggested that individuals in collectivist societies simply follow social conventions out of habit, drifting through their duties peacefully and without a sense of choice or personal opinion about the matter (Bontempo, Lobel, & Triandis, 1990), while others argue that this life of submission actually leads to a lower sense of well-being (Diener & Suh, 1999). However, others contend that collectivists not only gain a sense of pleasure out of meeting their duties (Miller, 2003; Miller & Bersoff, 1995; Triandis, 1995), but may even have a sense of choice and fulfillment of personal values while doing so (Menon & Shweder, 1998). While agreeing that collectivists are more dutiful than individualists, cultural psychologists are still not certain of what it feels like to be a “dutiful chooser” (Iyengar & DeVoe, 2003).

In the following studies, I will examine the possibility that among East Asian participants, fulfilling one’s duties does not mean “giving up” one’s personal will. In recent years there have been many studies detailing negative effects of a sense of forced subservience, mainly within Western societies but also across the world (Chirkov, Ryan, Kim, & Kaplan, 2003; Ryan & Deci, 2006a). And yet there is also growing evidence that in different cultures, a sense of "doing what one ought to do" may be differently experienced (Bao & Lam, 2008; Yeh & Yang, 2006). As will be detailed below, relative to members of individualistic cultures, members of collectivistic cultures exhibit more energetic efforts to complete tasks chosen by close others (Iyengar & Lepper, 1999); they may not theoretically identify a dichotomy between duties and personal desires (Miller, 2003); and having uncoerced “family goals” is more important to psychological health (Rudy, Sheldon, Awong, & Tan, 2007). Still controversial, however, is what the subjective experience of “doing your duty” feels like. Can doing what one ought to do feel good?
To what extent does it involve a sense of “agency” (a sense of self-endorsement and personal volition)? Can we “unpackage” the cultural difference, to better understand what the underlying cultural factors are that lead to "liking to do what we have to do?"

These studies will aim to directly measure the subjective experience of fulfilling others’ expectations for help, especially how much this experience is associated with a sense of personal agency, and how the experience may be different in East Asian and Western cultures. I shall seek to gain a more idiographic, subjective understanding of the effects of different cultural constructions of fulfilling others’ needs. A sense of agency and satisfaction has been proposed to exist when East Asians are carrying out actions that fulfill expectations of appropriate others, but the qualitative experience of this “endogenous social agency” (Miller, 2003, p. 82) has not yet been described. With these studies, I hope to fill that gap.

Overview. In this Introduction, I shall first briefly compare the philosophical treatments of social obligations in East Asia and the West to argue that social obligations are more likely to be perceived as having intrinsic value for self-fulfillment in East Asia. I shall then review a distinction between two types of collectivism—hierarchical vs. relational—in the cross-cultural psychology literature, suggesting that the former more than the latter form of collectivism might affect attitudes towards social obligations. I shall then review recent research on cultural differences in the motivation to fulfill social obligations, and finally discuss the highly influential Self-Determination Theory (SDT) of motivation, which argues that there is a universal need for autonomy. The hypotheses of the following four studies will use measures aimed at directly testing whether cultural differences in the experience of social obligations imply that SDT’s method of measuring “autonomy” will be less accurate in East Asian cultures than in the West.
Hierarchy, Confucianism and Obligations

East Asian and Western philosophical traditions have reflected different attitudes towards fulfilling one’s social obligations. Despite a history of differing traditions within both Western and Eastern philosophies, contrasting points of view between Confucian and Post-Enlightenment Western philosophies may capture some major differences between the traditions that have heavily influenced East Asian and Western cultures respectively (Rosemont, 2006). While a predominant emphasis in the post-Enlightenment West has been on determining what duties are necessary and how to protect autonomy, the predominant emphasis in East Asian, particularly Confucian, philosophy has been on the value of self-refinement through successful fulfillment of social roles. Though obligations in the West are potentially coercive and negative in emotional valence, obligations in the East have taken on a more positive sheen.

In a broad sense, East Asian cultures (Chinese, Korean, and Japanese) are unique among cultures in their common influence by a combination of Confucianism, Daoism, and Buddhism. Particularly relevant to the question of social obligations, Confucianism emphasized a moral system rooted in the value of the proper fulfillment of social roles.

A salient aspect of Confucian ethics is its emphasis on interpersonal harmony within a hierarchy. The fulfillment of duties tied to one’s social role is seen as the route to self-refinement and attainment of virtue. In the Analects, the cultivation of an ethical character is importantly based on the proper performance of li (Wong, 2008): the rituals and rules of respectful ways of interacting with others “that bind human beings and the spirits together in networks of interacting roles within the family, within human society, and with the numinous realm beyond” (Schwartz, 1985, p. 67). It is only through the practice of these rules of courteous behavior toward others,

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1 The Analects (of Confucius) are one of the four major texts of “classical Confucianism,” including the Analects of Confucius, the Mencius, the Xun Zi, and the Records of Ritual, probably written and edited between 450-150 BC (Rosemont, 2006).
each specific to one’s social role, that one could refine and cultivate one’s ethical character (Rosemont, 2006).

Confucian ethics is sometimes described as “virtue ethics,” in which one’s moral duties are not determined by rules of what is the right action but instead are promoted by the cultivation of a virtuous character, through which one’s obligations can then be directed wholeheartedly and naturally. A natural lack of conflict between one’s desires and one’s obligations is the mark of a virtuous person. Rather than being motivated by rational deduction of the correct action or the effortful overcoming of one's natural inclinations, the performance of duty is ideally a result of a spontaneous and whole-hearted sense of the right thing to do in a particular situation (Slingerland, 2008). The paragon of Confucian ethics is one who sincerely embodies a set of virtues, which then cause one to perform the right action through a genuine and appropriate emotional commitment to this action. Virtuous action is typified by a lack of a sense of coercion: not only for the virtuous individual, for whom the virtuous action is spontaneous and unified with one's emotions, but even within a political state, in which leadership is accomplished not "through rule by law and punishment [but] through the non-coercive, transformative power of Virtue (德)" (Slingerland, 2008, p. 238).

Filial values are a particularly important illustration of this valued combination of emotion with duty. In his discussion of the “familiar yet different” ethical principles of classic Chinese philosophy, David Wong emphasizes the unusual “centrality of xiao” or “filial piety” in Confucianism (Wong, 2006, p. 16). More than simply taking care of one’s parents, filial piety is defined as having an attitude of respect and devotion as one fulfills one’s filial duties. Gratitude toward one’s parents, and a sincere effort to fulfill one’s duties to them, is emphasized again and again in the Analects, and remains a prominent aspect of East Asian culture (Schwartz, 1985; Wong, 2006). In a story from the Analects, Cengzi, one of Confucius’s students, calls his
students to him to observe his hands and feet as he lies on his deathbed. He tells them that he has carefully protected his body, keeping it fully intact all his life, “as part of his duty to his parents.” “This… idea, that one must keep one’s body intact as a duty of gratitude to one’s parents, has remained a central idea in Chinese culture” (Wong, 2006, p. 17). The requirements of filial piety are stringent, but most importantly for my thesis, they are intrinsically wrapped up with the positive attitude that one should have towards proper fulfillment of one’s duty; a sense of true gratitude and respect. Wong goes on to argue that Confucian ethics sees an “aesthetic dimension” in the performance of one’s obligations, in which one becomes a virtuous person by becoming practiced in the performance of “right action” with “fitting attitudes” until it becomes second nature; “to attain the proper balance between form and feeling is ennoble and beautify human nature” (Wong, 2006, p. 18).

In the Western tradition, a parallel moral system exists in Aristotle's virtue ethics, which until recently had been relatively neglected in the development of post-Enlightenment western moral philosophy (Anscombe, 1958; Homiak, 2008). As in Confucian ethics, an ideal Aristotelian virtuous person is motivated by a unified and unconflicted enactment of his or her own virtuous character (Hursthouse, 2008). In fact, a person who carries out a good action after struggling with other motivations is less virtuous than one who naturally performs good actions simply by following his or her own characteristic motivations (Foot, 1978). Moreover, Aristotle emphasizes that it is "the mark of a good person to take pleasure in moral action" (Engstrom & Whiting, 1996, p. 10; Korsgaard, 1996, p. 204). In both the Confucian and Aristotelian views, duties enacted by a virtuous person will be characterized by harmony and a sense of well-being; moral action and "eudemonia" (happiness or “flourishing”) are achieved through the acquisition and enactment of virtue.
As opposed to these systems of virtue ethics, the post-Enlightenment Western moral tradition has concentrated on “deontology,” or developing sets of rules by which one can logically determine what is a moral action (Hursthouse, 2008). Moral actions are not motivated by an intuition of right action as felt by those who have developed a virtuous character, but instead motivated by rationality. Immanuel Kant, for example, in his "Grounding for the Metaphysics of Morals," makes it a requirement of a truly moral person that his duties be motivated only by the application of rationality, and not by "feelings, impulses, or inclinations" (Kant, 1785/1993, AK p. 343). Kant takes care to coolly separate the emotional aspects of interpersonal connection from the reasons one carries out one's duties. One should attempt to help others not because of any sense of satisfaction that might arise from doing so: "Thus, for example, I ought to endeavor to promote the happiness of others, [but] not as though its realization were any concern of mine (whether by immediate inclination or satisfaction gained through reason)" (Kant, 1785/1993, AK p. 441). Although Kant admits that one might feel satisfaction after the fact from having accomplished one's duty, he emphasizes that doing one’s duty requires willpower and forbearance: "When the reflective man has overcome the incentives to vice and is conscious of having done his often painful duty, he finds himself in a state which could well be called happiness... [but this cannot be achieved unless he decides] to do his duty before he thinks of the fact that happiness will result from doing it" (Kant, 1797/1964, AK p. 377).

In addition to disconnecting pleasure from duty, Kant’s system is designed to allow us to have duties and yet at the same time be purely self-directed. The failure of previous attempts to determine moral duty, proposes Kant, is that men were defined as being "merely subject to a law" (Kant, 1785/1993, AK p. 432), rather than following their own will in doing their duty. Any set of moral principles that involved subjugation of the self to moral laws could not succeed,
because individuals would have to be coerced to follow these laws either by fear of punishment or in order to gain something. Kant’s proposal, in contrast, allows each person to be the sole lawmaker of his or her moral duties. With a line of reasoning that I will not detail here, Kant argues that it is through a person’s rational will to create universal laws that apply to oneself as well as all others that duties such as "do not lie" become a simple logical necessity. One's duties are purely self-determined, directed by rationality; and a community of such free people is the ideal result. "I want, therefore, to call my principle the principle of the autonomy of the will, in contrast with every other principle, which I accordingly count under heteronomy [subject to external /foreign laws]" (Kant, 1785/1993, AK p. 433).

Kant’s desire to avoid subjugation of the individual self to “foreign” laws reflects a typically Western, individualist identification of freedom with self-development, in contrast to the Confucian emphasis on the centrality of interpersonal obligations to self-cultivation. Indeed, a strength of Confucian ethics is that “it conceives of a fully human life in terms of relationship to others, structured by a set of duties to them that realize the self rather than constrain it” (Shun & Wong, 2004, p. 2 [emphasis added]). In contrast, the early American intellectual Ralph Waldo Emerson declares, in his essay on “Self-Reliance,” that “Society everywhere is in conspiracy against the manhood of every one of its members… It loves not realities and creators, but names and customs. Whoso would be a man must be a nonconformist” (Emerson, 1993 / 1841, p. 21). Obligations to others may still be important, but should be secondary to the pursuit of one’s individual truth; “I shall endeavor to nourish my parents, to support my family, to be the chaste husband of one wife, —but these relations I must fulfill after a new and unprecedented way. I appeal from your customs. I must be myself” (Emerson, 1993 / 1841, p. 31). This fear of accepting an identity defined by society is described by philosopher Richard Rorty as having increasingly pervaded modern Western thought since the 1800’s (Rorty, 1989, p. 25). Nietzsche,
perhaps one of the more extreme proponents of the rejection of social conventions, believed that “to fail as a human being is to accept somebody’s else’s description of oneself” (Rorty, 1989, p. 28); Harold Bloom’s “The Anxiety of Influence” vividly describes the poet’s “horror of finding himself to be only a copy or a replica” (Bloom, 1973, p. 80, as cited in Rorty, 1989, p. 24). In this view, it is only by being unique that a poet can even have a self; if one’s creations are merely “shoving around already coined pieces,” then “one will not really have had an I at all” (Rorty, 1989, p. 24).

In conclusion, a contrast can be made between a Confucian ideal of perceiving one’s duty in one’s specific social roles—and fulfilling those duties and the self through an exquisite unity of feelings and form—versus a Western ideal of rationally determining general moral rules and fulfilling those obligations through free and self-determined willpower. What might be the consequences for these different points of view on the subjective experience of those duties? Those who are constantly on guard against duties, obligations, and expectations of others that might force them to do something against their will may actually be more likely to feel that their duties are coercive, having been highly attuned to the possibility. Conversely, those who do not attend as much to the potentially coercive nature of duties— instead respecting and valuing hierarchy and accepting norms of filial piety and other relationship-based duties to others— may more often feel that their duties are self-endorsed. Fulfilling such duties is in fact congruent with their own values. Paradoxically, it may be that a fear of duty-self conflict makes it more likely for coercion to be experienced.

Hierarchical Collectivism: a subset of collectivistic values

These differences have not escaped the notice of those interested in mapping the dimensions of cultures. Hofstede’s (1980) research on individualism-collectivism and power distance has provided a fruitful framework for research into cultural differences, but a new wave
of cultural psychology research was ushered in by Markus and Kitayama (1991), who helped advance the study of culture within the individual by describing the effects of individualism-collectivism on the self-concept, differentiating between the independent and interdependent self-concepts (Markus & Kitayama, 1991). In both individualist and collectivist cultures, individuals strive to fully cultivate and fulfill the self; but cultural differences in the very content of a self-concept can influence what is meant by self-fulfillment (Markus & Kitayama, 2003). In individualist societies, the fully developed self is one that is independent of others, and free as much as possible from the constraints of social expectations. The self development of a person in a collectivist culture, on the other hand, is achieved through the successful meeting of the expectations of others and fulfillment of one’s social roles (Markus & Kitayama, 2003). Sparked by this powerful theory, the vast majority of cultural psychology research has concentrated on individualism-collectivism differences, and the wide-ranging effects of these differences on psychological phenomena such as cognition, personality, and motivations (e.g. Heine & Buchtel, 2009; Nisbett, Peng, Choi, & Norenzayan, 2001; Oyserman, Coon, & Kemmelmeier, 2002).

In some of the seminal work examining individualism-collectivism differences, however, Triandis and colleagues have made a distinction between horizontal and vertical aspects of these two “cultural syndromes” (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis & Gelfand, 1998). Describing at the individual level something similar to Hofstede’s culture-level “power distance,” vertical collectivism describes a form of collectivistic values in which the emphasis is more on finding one’s place in a hierarchy rather than on a self-concept being intertwined with close others. In highly vertically collectivistic cultures, members of society are expected to be attentive to their social “place,” willing to sacrifice their own self-interest in favor of the “group” or people higher in the hierarchy, such as parents (Triandis & Gelfand, 1998). Vertically
collectivistic individuals are relatively accepting of unequal power distributions and willing to show deference to authority.

In the comparisons between East Asian and Western individuals, vertical collectivism may in fact be a stronger source of differences than is the “inclusion of others in the self.” In a review of measures of individualism-collectivism, Oyserman et al. (2002) found that while USA-East Asia cultural differences were weaker or even opposite than expected when participants were asked to what degree they felt connected with close others, questions that focused on “sense of duty to the group” and “accepting hierarchy” were more likely to lead to strong cultural differences in expected directions (Oyserman, Coon et al., 2002, p. 20). In other words, North Americans are likely to be even embarrassed to admit to accepting hierarchy or group-focused duties, while East Asians may have exactly the opposite attitude.

Evidence for cultural differences in attitudes towards obligations

Do East Asians experience obligations differently than Westerners? There is a fair amount of evidence that fitting in to one's social role is more important, and has more positive outcomes, in East Asian cultures than in Western cultures. Psychological research on secondary control has suggested that “fitting in” is more frequently used as a strategy for dealing with unexpected situations in East Asia than it is in the West, where instead it is seen as more adaptive to attempt to change the situation. In management research, measurements of "normative commitment" to a company (loyalty of employees to a company motivated by obligation) have been shown to be of greater importance in East Asia than in the West. These research findings suggest that obligations have different functions in East Asia and the West. However, there is still debate about how East Asians feel about these obligations.

Primary and Secondary Control. What is the best way to deal with a situation that initially does not match one's personal preferences: does one change the situation to better fit
one's desires, or does one shift one's expectations to better fit the situation? A similar debate has emerged in the literature on psychological control (Morling & Evered, 2006, 2007; Skinner, 2007). The traditional Western literature on control has focused on two ways of dealing with situations that do not meet one’s expectations: primary control, in which the person “takes charge” and changes external attributes of a situation, and secondary control, in which a person who cannot change the situation instead changes his or her attributions about the situation so that it becomes more tolerable (Rothbaum, Weisz, & Snyder, 1982). Although the literature and theory about secondary control has been plagued by inconsistencies in its definition, a recent review (Morling & Evered, 2006) redefined secondary control as best characterized by both “adjusting” and “accepting:” adjusting one’s expectations or desires to better fit the circumstances, and also actively accepting those circumstances the way they are (Morling & Evered, 2007, p. 917). Other definitions of secondary control found in the literature tend to emphasize only one or the other, such as adjusting the self but not necessarily accepting the circumstances, which would be more likely to be associated with negative attributions such as “giving up” out of a sense of helplessness and resignation. In cross-cultural research, this newly defined type of secondary control—“fit-focused secondary control”—has been found to be more commonly used than primary control in East Asia (see Morling & Evered, 2006 for review).

In research on cultural differences in what types of emotion are most ideal, Tsai and colleagues (Tsai, Knutson, & Fung, 2006; Tsai, Miao, Seppala, Fung, & Yeung, 2007) have found that emotional states more conducive to adjusting to others are more valued by Chinese participants, while emotions that would help one influence others are more desired by American participants. Relative to Americans, Chinese tend to more greatly value low-arousal positive emotions (such as calm, relaxed) and devalue high-arousal positive emotions (excitement, enthusiasm), a difference that is also reflected in Buddhist vs. Christian religious texts and
Taiwanese and American children’s books (Tsai et al., 2006; Tsai, Louie, Chen, & Uchida, 2007; Tsai, Miao, & Seppala, 2007). Further experimental evidence has been found to suggest that these emotions are tied to influence versus adjustment goals; for example, participants who were told that they would be building an object in accordance with their partner’s directions subsequently chose to listen to calming music, while the participants who were told that they would be the director preferred to listen to exciting, invigorating music (although Americans were still overall more likely to chose the energetic CD than were Hong Kong participants, Tsai, Miao, Seppala et al., 2007). These findings suggest that “going along” with what others expect may not be as negative for East Asians as it would be for Westerners, and in fact may be a valued and actively desired goal.

This “fit focused” definition of secondary control, in which both adjustment and acceptance occur, is most relevant to our questions about cultural differences in the experience of meeting obligations, as it implies that the experience of “fitting in” does not feel coerced. Anecdotally, on several occasions I have asked my students in China why they chose their field of study based on their parents advice, rather than simply following their own desires. The answer is not that my students “had to” go along with what their parents demanded; instead, I have been told that “what my parents think I should do generally turns out to lead to better results than what I wanted to do, so I think that following my parents advice is the best choice.” This anecdotal evidence suggests that the experience of fulfilling others’ expectations does not need to be coercive. If my students had merely adjusted their behavior—resigning themselves to do what their parents wanted them to do, simply because they didn’t think they had any choice about the matter—then they might feel that meeting their parents’ expectations was a coercive experience. On the other hand, when they actively accept the situation as well as adjust the self—such as believing that their parents advice is actually the right choice—then they do not feel
coerced into adjusting to the situation, but instead feel that fitting in better with the situation is a positive goal.

However, whether or not the goal of “fitting in” feels “agentic”—self-willed and self-endorsed—is still under debate. In the review of fit-focused secondary control, Morling and Evered (2006) specifically chose to put aside the question of whether or not secondary control actually led to greater feelings of personal control, saying that the evidence was not yet strong enough to tell.

**Normative commitment: obligations in the workplace.** Within the organizational-behavioral literature, one of the more influential theories of employee motivation is that of Meyer and colleagues (e.g., Allen & Meyer, 1990; Meyer & Allen, 1991; Meyer, Becker, & Vandenberghe, 2004; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). In their studies of the reasons that employees stay committed to their employers, they defined three types of commitment motivations: *affective commitment*, or a personal interest in staying in the job, often defined as “wanting to” stay (Turner Parish, Cadwallader, & Busch, 2008); *continuance commitment*, or a sense of having no choice about the matter—having to stay with the company in order to avoid negative consequences; and most interesting for our purposes, *normative commitment*, or believing that one has a moral obligation to remain—that one “ought to” be loyal to the company (Meyer & Allen, 1991).

In terms of the Western bias against obligations as an important aspect of motivation, it is interesting to note that the normative commitment component has been relatively understudied compared to the other two. Meyer and Allen initially proposed only two components (affective vs. continuance commitment, Meyer & Allen, 1984), later adding the normative component (Allen & Meyer, 1990; Meyer et al., 2002). In their introduction to these three types of commitment, Meyer and Allen (1991) noted that normative commitment, although theoretically
very important for employee motivation, had been little studied in the literature; a decade later, the authors still found that causes and antecedents of normative commitment had not been researched enough to be included in their meta-analysis (Meyer et al., 2002).

The definition of these three types of commitment points to an important distinction between a sense of being “forced” (continuance commitment), a sense of personally “desiring” (affective), and a sense of moral obligation (normative). While continuance commitment tends to lead to less positive forms of employee commitment, both affective and normative commitment generally lead to positive outcomes (Meyer et al., 2002). Of most interest, cross-cultural research has found that the relative importance of normative and affective commitment tends to differ across cultures (Gelfand, Erez, & Aycan, 2007; Huang & Van de Vliert, 2003; Meyer et al., 2002). For example, a cross-cultural study of job satisfaction in 49 countries found that whether or not a job contained elements of intrinsic motivation (being interesting, allowing the employee to work independently) had a weaker relationships to job satisfaction in cultures that were more collectivistic or higher in power-distance (more hierarchical), as defined by Hofstede (Huang & Van de Vliert, 2003).

Research using Meyer’s tripartite measure of commitment also found that normative commitment was more likely to be associated with perceived organizational support and other positive job outcomes in non-U.S. contexts than within the USA. Most relevant to our interest in whether or not “obligations” can feel “self-willed,” a meta-analysis found that the association between affective and normative commitment was generally very strong, and was in fact stronger in studies outside of North America than those within (Meyer et al., 2002). In one study, carried out in South Korea, the association was so strong that the authors suggested that the two components should be merged as one scale (Ko, Price, & Mueller, 1997). However, one argument for measuring the components separately is that normative commitment’s associations
with outcomes appear to be quite different across cultural contexts, especially compared with affective commitment. In non-North American contexts, normative commitment was found to be better correlated with perceived organizational support, job performance, “organizational citizenship behavior” (going beyond the job to help others), and less withdrawal cognitions than in North American contexts (Meyer et al., 2002). While affective commitment remained a strong predictor of positive outcomes in research both inside and outside of North America, it was even stronger within North America than without (Meyer et al., 2002). Finally, single-culture research has found that individual differences in power distance and collectivism were associated with greater normative commitment to the organization (Clugston, Howell, & Dorfman, 2000; Wasti, 2003), thus potentially leading to the different effects of normative commitment in non-North American contexts (Meyer et al., 2002).

Being motivated by obligations to others may be perceived as less good in North American cultures because it is seen as a “extrinsic” motivator—something lying outside the self, and not necessarily reflective of one’s “real” opinions. However, previous research has suggested that among Asian collectivistic cultures in particular, extrinsic motivation (in this case, pay/medical benefits) is perceived to be just as valid of a motivator of good work as intrinsic motivation (enjoyment and interest in the job). DeVoe and Iyengar (2004) found that while American and Latin American managers’ performance evaluations of employees were strongly predicted by their perceptions of how intrinsically, rather than extrinsically, motivated those employees were, Asian managers’ positive appraisals were equally associated with perceptions of both extrinsic and intrinsic motivation in their employees. Moreover, while both North Americans and Latin Americans tended to self-rate themselves as much more highly motivated by intrinsic rather than extrinsic rewards in their job, Asians did not display this imbalance, rating themselves as motivated by both. This suggests that among Asian collectivistic cultures in
particular, both extrinsic and intrinsic motivation are seen as positive forms of employee motivation.

Such studies strongly suggest that social obligations and external expectations are of greater importance, and have greater impact, in East Asian contexts. However, it still does not tell us what other positive or negative psychological experiences are associated with a sense of obligation.

**Self-Determination Theory**

One of the major Western psychological theories on motivation, Self-Determination Theory (SDT), has both been exceptionally influential in the literature and also exceptionally controversial among cultural psychologists (e.g. Chirkov et al., 2003; Deci et al., 2001; Iyengar & Lepper, 1999; Markus & Kitayama, 2003; Miller, 2003; Ryan & Deci, 2000, 2006a). SDT posits that one of the fundamental needs of humans is the “need for autonomy,” along with needs for competence and relatedness. Cultural psychologists have challenged the universality of a “need for autonomy,” but this debate is still unresolved.

SDT’s argument for a universal “need for autonomy” is based on comparing outcomes when behavior is motivated by one’s own personal enjoyment or judgments of the importance of the activity, versus performing the action because one feels forced to do it by external or internal pressures (e.g. Deci & Ryan, 1994; Sheldon & Elliot, 1998). A large research literature on this topic has supported the idea that the more one’s goals tend to be motivated by such positive, “autonomous” reasons, as opposed to “controlled” reasons, the more likely such goals will be carried out; the more creative one will be; and the more psychologically healthy one will be (Ryan & Deci, 2006a). However, until recently, this research has been carried out only within Western cultures. The SDT emphasis on “autonomous” motivators—being motivated by
personal enjoyment and choice—has been criticized by cultural psychologists as being potentially constrained to Western cultures (see Miller, 2003, for review).

One of the reasons for the ongoing confusion about autonomy needs is that the definition and measurement of the need for autonomy are quite fluid. There is no one way of measuring a sense of autonomy, and while different measures have been developed for children, employees, cross-cultural surveys, and a number of specific domains (see, for example, Ryan & Deci, 2006b), independent researchers also generally invent their own specific measures in line with general Self-Determination Theory (see, for example, Bao & Lam, 2008; Chirkov et al., 2003; Chirkov, Ryan, & Willness, 2005; Gore & Cross, 2006; Rudy et al., 2007; Ryan & Connell, 1989). However, one of the most common ways of measuring a sense of autonomy is to calculate a “relatively autonomous index” (RAI). The RAI is meant to measure a sense of self-endorsement of one’s behavior, subtracting the amount that one feels like one’s behavior is controlled by others or coerced from the amount that one feels like one’s behavior is motivated by one’s own values and desires. Because understanding the measurement of the RAI is necessary in order to understand how cultural differences might challenge its universal applicability, I will explain some prototypical examples below.

In practice, a Relatively Autonomous Index is measured by asking a participant to what degree he agrees that various motivations for his behavior are applicable in a certain case. The participant’s degree of agreement with external motivations such as “I’m doing this because my parents want me to” is then subtracted from his agreement with relatively internalized motivations such as “I’m doing this because I personally value doing this.” Motivations are generally categorized into four types from least to most autonomous, ranging from External (to do with “compliance, external rewards and punishments”), Introjected (“self-control, internal rewards and punishments”), Identified (“personal importance, conscious valuing”), and finally to
Integrated (“congruence, awareness, synthesis with self”) (Ryan & Deci, 2000, p. 72); this last category is most recently developed, and in many cases has been conceptualized instead as “intrinsic” (enjoyment). The former two categories are further defined as “externalized” types of motivations and the latter two are “internalized” motivations. One’s RAI score is calculated by weighting one’s agreement with each External motivation by (-2), Introjected by (-1), Identified by (+1), and Integrated by (+2); these numbers are then added up, and one receives a single number that is interpreted to mean the degree to which one’s motivations are self-endorsed and not coerced. Some examples of the ways these different types of motivations have been measured are listed below in Table 1.1.
Table 1.1: Examples of operationalizations of the RAI’s 4 types of motivations

<table>
<thead>
<tr>
<th>Motivation type</th>
<th>Ryan &amp; Connell, 1989 (p. 752; schoolchildren)</th>
<th>Chirkov et al., 2003 (p. 102; adults)</th>
</tr>
</thead>
<tbody>
<tr>
<td>External (weight: -2)</td>
<td>1. Because that’s what I’m supposed to do. (It’s the rule.) 2. So others won’t get mad at me.</td>
<td>Because of external pressures. I would engage in this behavior because someone insists on my doing this, or I expect to get some kind of reward, or avoid some punishment for behaving this way.</td>
</tr>
<tr>
<td>Introjected (weight: -1)</td>
<td>1. Because I want the teacher to think I’m a good student. 2. Because I will feel bad about myself if I don’t.</td>
<td>I would engage in this behavior because people around me would approve of me for doing so, or because I think I should do it. If I didn’t do this I might feel guilty, ashamed, or anxious.</td>
</tr>
<tr>
<td>Identified (weight: +1)</td>
<td>1. Because I want to understand the subject. 2. Because I think it’s important to…</td>
<td>Because it is important. I would engage in this behavior because I personally believe that it is important and worthwhile to behave this way.</td>
</tr>
<tr>
<td>Intrinsic or Integrated (weight: +2)</td>
<td>1. Because it’s fun. 2. Because I enjoy it.</td>
<td>Because I have thoughtfully considered and fully chosen this. I have thought about this behavior and fully considered alternatives. It makes good sense to me to act this way. I feel free in choosing and doing it, and feel responsible for the outcomes.</td>
</tr>
</tbody>
</table>

**Cultural corrections for SDT:** (1) “Me” = “We.” SDT researchers have argued that regardless of culture, a sense of autonomy is important for psychological well-being and motivation. One of the criticisms that cultural psychology researchers have made against SDT is in regards to the "self” in "self-determination. Substituting the "interdependent" self for the
"independent" self, cultural psychologists have suggested that behaviors do not have to be solely self-willed in order to lead to good motivational outcomes, especially in collectivistic societies. In a seminal paper, Iyengar and Lepper (1999) showed that while both Caucasian-American and East Asian-American children were highly motivated to carry out an activity when it had been self-chosen, East Asian children were in fact equally motivated when the activity was chosen for them by an ingroup member, while Caucasian-American children’s motivation was reduced when they could not choose the activity by themselves. Iyengar & Lepper (1999) theorized that for East Asians, an interdependent self-concept with close others caused the preferences of close others to be reacted to in the same way as one’s own preferences. Lending support for Iyengar & Lepper’s theory, Pöhlman, Carranza, Hannover, and Iyengar (2007) found that people higher in independent self-concept were more involved and pleased by choosing a watch for themselves than for their mother, while people higher in interdependent self-concept showed the opposite tendency. A recent study in a Hong Kong sample of students used Iyengar & Lepper’s (1999) methods to show that children’s relationship with the choosing adult impacted their enjoyment of an activity (Bao & Lam, 2008). For children who felt close to an adult, doing something that the adult had chosen for them did not negatively affect their enjoyment.

More evidence for the importance of this type of “group agency” (Miller, 2003, p. 82) in collectivistic societies has been provided by research showing that for people from collectivistic cultures, the relative autonomy of motivations (as measured by RAI-like scales) focused on close others is important for good psychological and achievement outcomes (Gore & Cross, 2006; Rudy et al., 2007). Rudy et al. (2007) differentiated between the person(s) feeling the motivation and the relative autonomy of the motivation, and showed that for Chinese participants, both the relative autonomy of one’s family’s motivations and the relative autonomy of one’s personal motivations were important for one’s psychological well-being, while for Euro-Canadian
participants, only the relative autonomy of one’s personal motivations were related to well-being. Similarly, Gore and Cross (2006) showed that pursuing goals for relationally-autonomous reasons could lead to better goal achievement. These researchers have shown that one can also feel “relatively autonomous” even when the person feeling the motivation is not a single self.

Cultural corrections for SDT: (2) External ≠ Coercion. There is a second type of cultural criticism of SDT, put forth by Miller (2003), that has been less emphasized in the research literature: that the conceptualization of autonomy does not take into account potential cultural differences in how one feels about fulfilling other’s expectations and social obligations. An important aspect of the above studies in the SDT tradition is that SDT implicitly confounds external motivations with negative, “forced” feelings, assuming that any external motivations are by definition opposed to one’s internal motivation (see, for example, Barrett et al., 2004; Ryan & Deci, 2006a). Because of the way autonomy is measured in constructs such as the RAI, stating that one is motivated to fulfill social obligations will cause one to receive a lower autonomy score. As a lower autonomy score is meant to reflect a higher sense of coercion, this RAI score cannot accurately reflect the feelings of people who view the fulfillment of social obligations as in line with their values and self-endorsed. SDT's operationalization of the theory, as reflected in the RAI measurement, accidentally puts "obligations" and "roles" into pigeonholes of coercion. While in individualistic societies this may be a relatively good fit to psychological reality, in which a sense of obligation may be reflective of a sense of coercion, the RAI is likely to be biased in duty- and hierarchy-valuing cultures.

In the above examples of measurements of the RAI displayed in Table 1.1, some aspects of the external items are likely to be problematic across cultures. For example, in Chirkov et al. (2003), the phrases “because someone insists on my doing this,” “because people around me would approve of me for doing so,” and “because I think I should do it” may be interpreted more
positively by people who value fitting in with social demands. In fact, having those types of external and introjected motivations may be accompanied by identified or integrated motivations, such as “because I personally believe that it is important,” or “I have fully chosen this behavior.” Duty-valuing participants are thus more likely to have lower autonomy scores even when they might be very high on the identified or integrated motivations.

In ongoing work with Indian and American populations, Miller and colleagues (as described in Miller, 2003) have found that Indian participants are more likely than American participants to associate obligations with not only satisfaction but also a sense of agency. For example, when asked to sort motivations by how likely one would be to experience them at the same time, American participants followed a typical SDT pattern, saying that they would be very unlikely to experience internal and external motivations at the same time. Indian participants, however, distinguished between two types of external motivations: "punishing" external motivations (such as avoiding another person's disapproval) and "dutiful" motivations, associating the latter but not the former with internal motivations. In a second study, when asked to describe their motivations in a situation where there were strong social expectations to help, Americans reported feeling less satisfaction and less of a feeling of choice than when in a situation where there were not strong social expectations to help. Indian participants, however, reported having a high sense of choice and satisfaction in both situations, being unaffected by the presence or absence of expectations to help. These findings would suggest that while Americans experienced meeting social expectations as disenfranchising, Indian participants did not. Miller calls this “endogenous social agency,” when “an agent acts consciously out of both a sense of fulfilling what is socially required and a sense of their own personal commitment” (Miller, 2003, p. 82).
Rather than changing the “self” in self-determination, then, this second cultural criticism of SDT suggests that greater attention needs to be paid to whether or not external motivations are accurately conceived of as being opposite to internal motivations. If in fact East Asians feel more self-willed about their obligations, then this points to a blind spot in the SDT operationalization of “autonomous” motivation. Instead of “autonomy,” a more universal goal may be to have a sense of “agency,” defined as self-endorsement of one’s behavior, or a feeling that one’s behavior is in line with one’s values and desires. A sense of obligation, rather than being a sign of coercion, may instead be better conceptualized as agency-supportive, and especially so in hierarchically collectivistic, duty-valuing cultures.

The below Figure 1.1 illustrates this hypothesis. A person who is solely concerned with “seeking Independence” would experience situations as falling mainly in the Controlled or Autonomous quadrants, which are the only quadrants that the RAI measures. Independence-seekers would move along a line from being motivated solely by obligation and not by agency (a sense of being controlled), or be motivated solely by agency and not by obligation (a sense of being fully autonomous). A “Virtue Ethicist,” on the other hand, would be more likely to move between the Amotivated and Dutiful Choosing quadrants. Virtue ethicists would experience their behavior as either being motivated both by a sense of obligation and a sense of agency (the dutiful choosing quadrant), or would simply be not motivated at all—have neither agentic or obligated motivations (the amotivated quadrant). By focusing on the experience of “relative autonomy,” SDT theoretically assumes that the important situations to measure are the ones that exist in the Controlled and Autonomous quadrants, and accordingly the RAI scale forces motivations to vary only along the Independence Seeker’s line. But are most people independence-seekers, with a negative relationship between agentic and obligated motivations? Or is this a tendency that is encouraged in Western societies, while in East Asian societies more
people tend towards being virtue ethicists, feeling obligated and agentic motivations simultaneously?

Figure 1.1: Motivation quadrants

Building on this theoretical background, this dissertation will explore the meaning of having a “sense of obligation to help” for individuals influenced by East Asian culture. As the above literature summary shows, the question of how much cultural differences impact the universality of a “need for autonomy” is still a matter of hot debate. The following studies are designed to examine whether or not one’s sense of “obligation” and “agency” are more congruent—more highly associated with each other—for individuals influenced by East Asian
cultures relative to members of Western cultures. To what degree are one’s sense of obligation and one’s sense of agency tied to one another, as opposed to working in opposite directions or simply operating independently (see Table 2.1 for illustrative examples)?

In addition to observing the congruence of obligated and agentic motivations, we will examine a) individual difference variables (especially attitudes towards hierarchy) that can explain cultural and individual variance in agentic-obligated associations, and b) the emotional experiences associated with obligated and agentic motivations. These studies will allow us to examine whether having a sense of agency is a positive experience for individuals of both East Asian and Western cultures, but obligations are more positive, and agency-supportive, for East Asians. If this is the case, this would have important implications for both Self-Determination Theory and our understanding of how both East Asians and Westerners react to the motivation to help from a sense of duty and obligations.

Table 1.2: Examples of higher and lower associations between Obligations and Agency

<table>
<thead>
<tr>
<th>Helping situation</th>
<th>“Western,” low-association answers: When high in agency, obligations are not necessarily high, and vice versa</th>
<th>“East Asian,” high-association answers: When high in agency, obligations are also high, and vice versa</th>
</tr>
</thead>
<tbody>
<tr>
<td>...helping your mother carry groceries</td>
<td>“I should help, but I don’t want to.” <em>(Controlled)</em></td>
<td>“I should help, and I also want to; it’s important to me to help my mother.” <em>(Dutiful Choice)</em></td>
</tr>
<tr>
<td>…helping your friend with her homework</td>
<td>“I want to help, but I don’t feel like I OUGHT to help. It is just my free choice.” <em>(Autonomous)</em></td>
<td>“I ought to help, because that’s what friends do; and I also want to.” <em>(Dutiful Choice)</em></td>
</tr>
<tr>
<td>…giving up your seat on the bus to a stranger</td>
<td>“I kinda want to, even though there is no reason that I should do it.” <em>(Autonomous/Amotivated)</em></td>
<td>“I don’t much feel like I ought to do it, and I don’t much want to do it, either.” <em>(Amotivated)</em></td>
</tr>
</tbody>
</table>
Overview of studies

The following four studies are designed to examine a) whether or not agentic and obligated motivations are more congruent for those more influenced by East Asian, vs. Western, cultures; b) whether or not there are equivalent cultural differences in the emotional associations with obligations and agency; and c) whether or not hierarchically collectivistic values, rather than relationally collectivistic values, explain those cultural differences. In Studies 1 and 2, I ask participants to report on their motivations for helping others in their own daily lives (Study 1) and by imagining themselves in typical helping situations (Study 2). In these two studies, I examine the differences between Canadians of East Asian cultural backgrounds and Canadians of Western European cultural backgrounds. Our primary measure of interest is the association between a sense of obligation and a sense of agency: as participants perceive increasing amounts of obligation to help, do they also feel increasing amounts of agency? We predict that Euro-Canadians will have weaker associations between these motivations than East Asian Canadians, and that these differences will reflect cultural differences in the perceived value of fulfilling social obligations.

In Study 3, I examine associations between obligations and agency in a comparison between Chinese participants living in China and Canadian participants, and use a typical “collectivistic culture prime” to attempt to experimentally increase obligation-agency associations in participants by getting them to think in a more collectivistic way. In Study 4, I use an unconscious sentence-unscrambling task to prime Chinese and Canadian participants with a sense of “expectations,” versus freedom, to see if Chinese participants would feel an increased sense of agentic motivations to help others when given an increased sense of expectations.
Chapter 2: Study 1, Daily Helping Behavior

How do people feel when they are actually helping someone out in their daily lives? In this first study, I used a “daily diary” method. Participants filled out an online survey at the end of each day for eight days, reporting on a time when they had helped someone that day. This type of method is ideal for “psychological realism,” as it hinges on relatively recent memories of helping situations that participants actually experience, maximizing participants’ psychological involvement in giving accurate reports. Another advantage of this daily diary method is that reports are relatively less likely to be influenced by participants’ theories of what they ought to have been feeling and thinking at the time, and more influenced by the actual vivid recent memory (Conner, Barrett, Tugade, & Tennent, 2007).

In previous research, Janoff-Bulman and Leggat (2002) found that under certain circumstances, Latino (compared to Euro-American) participants reported both higher feelings that they “should” and “wanted to” help others. In other words, the average of the Latino group was higher on both “should” and “want” than it was for the Euro-American group. But did this group-level difference reflect a within-individual process? What was the individual’s subjective experience of feeling an obligation to help others? The current study examines this question in a comparison between East Asian and European-American cultures, and expands upon their analysis by looking within individuals to see if a greater sense of obligated motivations was in fact connected to a greater sense of agency.

In this study, I measured the “obligated” motivations and “agentic” motivations by asking participants the degree to which they felt each of these motivations while engaged in helping the other person. I used a selection of phrases from typical SDT measures of motivations, to examine
whether phrases taken from the “bottom of the heap” of the Relative Autonomy Index (RAI) will in fact be highly associated with phrases taken from the “top” of the RAI, and especially so among East Asians. These motivations to help ranged from the extremes of “feeling expected” to help to “wanting” to help. It should be noted, however, that our descriptions of the extrinsic motivations did not include negative connotations as is commonly done in SDT. This allowed participants to use their own interpretation of the valence of the external motivations, rather than precluding positive connotations of the external motivation. We hypothesized that even at the extremes of extrinsic and intrinsic motivations, participants who were more influenced by East Asian culture, relative to European Canadian culture, would indicate a higher correlation between feeling expected to help and wanting to help.

Presuming that we find cultural differences in the degree to which obligations and agentic motivations are associated, why do these group-level differences appear? Can we trace this group-level difference down to individual differences in values, showing that East Asians are more likely to personally value doing their duty, and that is why they feel more agency when they fulfill obligations? Despite known methodological difficulties in the measurement of individual differences across cultures (Heine, Lehman, Peng, & Greenholtz, 2002; Peng, Nisbett, & Wong, 1997), this study will also explore the effect of individual-differences variables that should mediate the group cultural differences. Specifically, I will examine the mediating effect of relational and hierarchical collectivism on extrinsic-intrinsic motivation correlations. I hypothesize that measures of hierarchical collectivism, rather than relational collectivism, should most strongly mediate the cultural differences found above. Participants who personally value fulfilling duties and responsibilities should feel more agentic as they do so; and participants more influenced by East Asian culture should be more likely to have such personal values. Secondly, I hypothesize that the measures of relational collectivism, which concentrate on the degree to
which a person feels interconnected with others but not the degree to which a person values fulfilling obligations to others, will not mediate the cultural differences.

Finally, I will also examine the emotional experience of helping others, by asking participants to report on the positive and negative emotions they feel at the time of helping. Do East Asian Canadians actually feel more positively about fulfilling their obligations than Euro-Canadians?

Method

Participants. A total of 128 participants (below the age of 30) were divided into three groups based on self-reported cultural heritage and language spoken with friends: 29 Western-European Canadians who spoke English with friends (17% male, mean age = 21), 72 East Asian Canadians who spoke English with friends (the acculturated East Asian group, or EA-ENG; 24% male, mean age = 20), and 27 East Asian Canadians who spoke an East Asian language with friends (the unacculturated East Asian group, or EA-EA; 19% male, mean age = 21). The three groups did not significantly differ in gender proportion (Kruskal-Wallis test, $\chi^2 = 0.64$, n.s.), but the groups significantly differed in age ($F(2, 133) = 10.16$, $p < .001$). To be consistent with later studies in this dissertation, we will control for gender and age in all analyses.

Procedure. Participants filled out an initial online questionnaire including measurements of self-concept and cultural values, and then completed an online daily diary for eight days, reporting on motivations and emotions experienced when they had helped someone that day. Participants were required to fill out the survey each day before noon, following general procedures for ensuring that the memory was relatively fresh. On average, participants were able to report a time that they helped someone on 5.7 out of the 8 days, with 47% of the participants reporting a helping behavior on 7 or 8 out of the 8 possible reports. The three cultural groups did differ on the proportion of completed reports that reported helping behavior, $F(1, 125) = 4.297$, $p$
=.016, with the unacculturated East Asian group having the lowest proportion of helping reports out of all completed reports (M = 69%), the acculturated East Asian group in the middle (M = 73%), and the Euro-Canadian group having the highest proportion (M = 84%). There were no cultural differences in the number of times particular types of persons were helped, with friends being helped an average of 1.6 times per participant, strangers and older relatives each being helped an average of 1 time, younger relatives and classmates each being helped an average of about half a time, and boyfriends/girlfriends and professors/bosses each being helped less than a quarter of a time per participant.

**Initial questionnaire: Potential mediators.** Participants filled out a number of individual-difference measures of individualism-collectivism. These measures were selected to help pinpoint which particular aspect of cultural effects might best explain cultural differences in the DVs: hierarchical collectivism, relational collectivism, or dialectical thinking. We expected that individual differences that best reflected being influenced by a duty-valuing culture (Hierarchical Collectivism) would be more likely to mediate the cultural effect than the Relational Collectivism scales. We also included the measure of dialectical thinking to see if higher correlations between Obligations and Wants could possibly be explained simply because East Asians tend to see less conflict between “opposing” concepts in general (Spencer-Rodgers et al., 2008).

Participants completed two measures of hierarchical collectivism: Vertical Collectivism (Singelis et al., 1995), and the Family Obligations scale (Fuligni, Tseng, & Lam, 1999) (see Appendix A for items). To simplify interpretation and presentation, these two scales were combined as a 32-item measure of Hierarchical Collectivism. This scale showed good reliability in all three cultural groups, with Cronbach’s alpha of .92 for both the Euro-Canadian and EA-ENG groups, and .86 for the EA-EA group. Items in these scales aim to measure, respectively, a)
an acceptance of hierarchy and endorsement of accepting appropriate others’ goals over one’s own (e.g. “I would sacrifice an activity that I enjoy very much if my family did not approve of it”), and b) an acceptance of filial values about family (e.g. “[It is important to me to] treat my parents with great respect”). Taken together, these scales should capture something similar to the Confucian values discussed in the introduction, reflecting an endorsement of and respect for hierarchical relationships.

Participants also completed two measures of relational collectivism: the Independent-Interdependent Self-Concept Scale (SCS, Singelis, 1994), and the Relational-Interdependent Self Concept scale (RISC, Cross, Bacon, & Morris) (see Appendix A for items). These scales were combined into a single 35-item scale estimating relational collectivism, with adequate reliability in all three cultural groups (α = .68 among Euro-Canadians, .76 in the EA-ENG group, and .78 in the EA-EA group). The RISC scale focuses exclusively on the degree to which one’s close relationships are an aspect of one’s self concept, using items such as “My close relationships are an important reflection of who I am.” The SCS, on the other hand, is a more general measure meant to capture a family of differences between independent and interdependent ways of conceiving of the self (Singelis, 1994), with the Independent subscale using items such as “I act the same way no matter who I am with” and the Interdependent subscale using items such as “I often have the feeling that my relationships with others are more important than my own accomplishments.”

Finally, participants also completed a measure of dialectical thinking. Due to time constraints we selected 10 items from the Dialectical Self-Concept Scale (Spencer-Rodgers et al.,

---

2 The SCS also uses items that tap into hierarchical relationships; in fact, variations of some items appear again in the measure of Vertical Collectivism used here (Singelis et al., 1995). However, Singelis intended these scales to have a general aim at the connection vs. separation of the self from others (Singelis, 1994), and the scales do not focus on attitudes towards hierarchy and acceptance of social roles enough to separate those aspects of the interdependent self from the simple “connection of self with others” aspect. The Vertical Collectivism scale, on the other hand, pulls out and adds to the hierarchy-focused items to direct attention to attitudes towards hierarchy more exclusively.
which in a previous sample of 546 participants at the University of British Columbia had been found to have the highest interitem correlations with the full 32-item scale (Buchtel, 2009, see Appendix A for items). The items measure the general tendency to change one’s personality and beliefs in different contexts, and the whole scale has been previously found to be associated with a greater tendency to describe the self in contradictory terms (Spencer-Rodgers, Boucher, Mori, Wang, & Peng, 2009; Spencer-Rodgers, Peng, Wang, & Hou, 2004). This shortened scale also showed adequate reliability among the three cultural groups (Euro, \( \alpha = .83 \); EA-ENG, \( \alpha = .77 \); EA-EA, \( \alpha = .81 \)).

Motivations and Emotions. Our main DVs of interest were the motivations and emotions participants felt about helping others. Each day, participants described a time when they had helped someone. After describing the event briefly, including basic data about their relationship to the person helped, participants were asked to what degree they felt obligated to help (three items: should help, felt expected to help, and felt it was their duty to help), and to what degree they felt agentic about helping (three items: wanted to help, felt it was personally important to help, and felt like they chose to help). Participants answered on a 6-point labeled likert scale ranging from “not at all” to “extremely.” Each set of three items was then combined to form an Obligated Motivations scale and an Agentic Motivations scale. Cronbach’s alphas for these two scales were good in all cultural groups. The Obligated scale had alphas of .79 for the Euro-Canadian group, .84 for the EA-ENG group, and .85 for the EA-EA group, and the Agentic scale had alphas of .76 for the Euro-Canadian group, .78 for the EA-ENG group, and .85 for the EA-EA group.

We also asked participants about their experienced emotions. We used a selection of emotion words used in previous cross-cultural work (Kitayama, Mesquita, & Karasawa, 2006) that seemed potentially relevant to helping situations, with the addition of a few additional
theoretically relevant words. Participants answered on a 6-point labeled likert scale ranging from “not at all” to “extremely.”

Two scales were constructed for use in the below HLM analyses: Positive emotions (13 items: Close, Respect, Friendly feelings, Appreciated, Proud, Self-respect, Superior, Respected, Calm, Elated, Happy, Relaxed, Competent) and Negative emotions (9 items: Guilty, Ashamed, Sulky feelings, Frustrated, Angry, Unhappy, Annoyed, Disgusted, Bored). Cronbach’s alphas, computed across all events for each scale and culture separately, were adequate, ranging from .82 to .93 on the comprehensive Positive emotions and Negative emotions scales, and without evidence of overall cultural differences in reliability (see below Table 2.1).  

Table 2.1: Study 1, Average reliabilities of emotion scales across events

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euros</td>
<td>.87</td>
<td>.85</td>
</tr>
<tr>
<td>EA-ENG</td>
<td>.88</td>
<td>.84</td>
</tr>
<tr>
<td>EA-EA</td>
<td>.93</td>
<td>.82</td>
</tr>
</tbody>
</table>

Results

Overview. I first test whether there are cultural differences in the strength of the association between external and internal motivation, here operationalized as the “obligations” scale and the “agency” scale. I then test to see if there are cultural differences in the emotional experience of these motivations. Finally, I test for mediators of these cultural differences, examining the above individual-difference measures. For the below analyses, I test hypotheses with multilevel modeling using the Hierachical Linear Modeling (HLM) program (version 6.04,  

3 Further analyses looking at differences across the engaging, disengaging, and socially neutral emotions suggested that cultural differences might be stronger for the socially engaging and disengaging emotions than the neutral emotions, but these patterns were not statistically significant. See Appendix B for detailed analyses of these emotions.
Raudenbush, Bryk, Cheong, & Congdon, 2004). As I was interested in both individual and within-person relationships, I computed all of the following analyses with uncentered level 1 variables. This allowed us to capitalize on both within-person and across-person variability to examine cultural differences in the relationship between the level-one variables.\(^4\)

**Relationship between Obligated and Agentic motivations.** First, I tested for cultural differences in the strength of the association between feeling that one was *obligated* to help another person and *wanting* to help another person. The relationship between the scale scores of *obligated* and *agentic* was modeled as follows:

**Level 1:** \( Y_{ji} = \beta_{0j} + \beta_{1j} \text{Agentic} + \epsilon_{ji} \)

**Level 2:**

\[
\begin{align*}
\beta_{0j} &= \beta_{00} + \beta_{01} \text{Age} + \beta_{02} \text{Gender} + \beta_{03} \text{Euro/EA-ENG} + \beta_{04} \text{Euro/EA-EA} + u_{0j} \\
\beta_{1j} &= \beta_{10} + \beta_{11} \text{Age} + \beta_{12} \text{Gender} + \beta_{13} \text{Euro/EA-ENG} + \beta_{14} \text{Euro/EA-EA} + u_{1j}
\end{align*}
\]

In this equation, at Level 1 the association between Obligated and Agentic ratings (both on the original scale of 1-6) is estimated at the participant level; at Level 2, the effects on this association of the participant’s age, gender, and cultural background of the participant are estimated.

Specifically, at Level 1, \( Y_{ji} \) is the scale score on Obligated for participant \( j \) in helping report \( i \), \( \beta_{0j} \) is a random coefficient representing the Obligated intercept for participant \( j \),\(^5\), and \( \beta_{1j} \)

\(^4\) In general, within-person and across-person relationships are not necessarily the same (e.g. Fleeson, Malanos, & Achille, 2002). For each of the following analyses, however, both the within-individual and across-individual patterns of interactions with culture were in the same direction. This suggests that using uncentered Level 1 variables is the proper method to use in this case, rather than within-person centered variables, which might lead to inaccurate estimation of cultural differences if there are meaningful cultural differences reflected in the between-individuals relationships. Because most past research using HLM has been focused on educational research in which the between-school differences were not of interest to researchers, there has been a bias towards using only within-person analyses in the literature; however, this is not an absolute rule, and the choice between type of centering depends on one’s hypotheses (Enders & Tofighi, 2007).

\(^5\) Note that because Obligated and Agentic are on their original 1-6 scales, the intercept of Obligated is when Agentic = 0, which is not a meaningful data point. As the object of interest is the relationship between
represents the level of association between obligated and agentic motivations for participant \( j \) across the helping situations. Agentic is the scale score (from 1-6) for participant \( j \) in helping report \( i \), and \( e_{ij} \) represents error.

At Level 2, the two random coefficients \( \beta_{0j} \) and \( \beta_{1j} \) are predicted by participant’s age (centered), gender (Male: -1; Female: 1), and two dummy codes for culture comparing the Euro-Canadian group to the two East Asian groups in turn: Euro/EA-ENG comparing Euro-Canadians (0) to East Asian Canadians who speak English with friends (1), and Euro/EA-EA comparing Euro-Canadians (0) to East Asian Canadians who speak an East Asian language with friends (1). (To complete the dummy codes, the other East Asian group is coded as 0 for each culture dummy code respectively (West, Aiken, & Krull, 1996).) The error terms \( u_{0j} \) and \( u_{1j} \) represent random effects error.

The coefficients of most interest to us are \( \beta_{10} \), the relationship between Obligated and Agentic motivations for Euro-Canadians; \( \beta_{13} \), indicating the interaction effect of being Euro-Canadian or acculturated East Asian Canadian on the Obligated-Agentic association; and \( \beta_{14} \), indicating the interaction effect of being Euro-Canadian vs. unacculturated East Asian Canadian on the Obligated-Agentic association.

The results of this analysis are shown in Table 2.2. For the average Euro-Canadian, there was a significant relationship between Obligated and Agentic motivations, \( \beta_{10} = 0.19, p = .035 \). The Obligated-Agentic relationship was uninfluenced by age or gender. Central to our hypothesis, the association between Obligated and Agentic motivations was higher in both of the East Asian Canadian groups compared to the European Canadian group. This difference was largest between the European Canadian and unacculturated East Asian group, \( \beta_{14} = .55, p < \)

Obligated and Agentic, rather than their mean levels, I retained the original scale to ease the graphic depiction of the results.
0.001, with the difference between the Euro-Canadian and more acculturated East Asian group in the middle, $\beta_{13} = 0.36, p = 0.002$.

Table 2.2: Study 1, Obligated-Agentic associations

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>$t$ Ratio</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Obligated)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
<td>2.36</td>
<td>0.32</td>
<td>123</td>
<td>7.44</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{01}$</td>
<td>0.00</td>
<td>0.08</td>
<td>123</td>
<td>0.04</td>
<td>0.971</td>
</tr>
<tr>
<td>Gender, $\beta_{02}$</td>
<td>0.18</td>
<td>0.16</td>
<td>123</td>
<td>1.13</td>
<td>0.263</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
<td>-1.33</td>
<td>0.39</td>
<td>123</td>
<td>-3.34</td>
<td>0.001</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
<td>-1.96</td>
<td>0.36</td>
<td>123</td>
<td>-5.37</td>
<td>0.000</td>
</tr>
<tr>
<td>For Agentic slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
<td>0.19</td>
<td>0.09</td>
<td>123</td>
<td>2.130</td>
<td>0.035</td>
</tr>
<tr>
<td>Age, $\beta_{11}$</td>
<td>0.00</td>
<td>0.03</td>
<td>123</td>
<td>-0.23</td>
<td>0.823</td>
</tr>
<tr>
<td>Gender, $\beta_{12}$</td>
<td>-0.05</td>
<td>0.05</td>
<td>123</td>
<td>-1.03</td>
<td>0.307</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
<td>0.36</td>
<td>0.11</td>
<td>123</td>
<td>3.33</td>
<td>0.002</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
<td>0.55</td>
<td>0.10</td>
<td>123</td>
<td>5.62</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Individual differences in Obligated-Agentic associations. One of the advantages of using multi-level modeling, as mentioned above, is that it allows us to measure and model the within-person relationship between Obligations and Agentic motivations across the helping situations as well as the between-persons relationships. Along with the measurement advantages of this model, it allows us to comment on the degree to which individuals do in fact differ in their Obligated-Agentic associations. This may be especially useful for cultural psychologists, as this information could help prevent readers from assuming homogeneity within cultural groups (Heine & Norenzayan, 2006; Stuart, 2004).

As an illustration, in the above analysis the HLM estimate of the random effects for the Obligated-Agentic association indicated that individuals varied significantly in this association,
\chi^2_{(123)} = 155.54, \ p = .025. \ \text{In Figure 2.2 below, a histogram of these individual-level coefficients illustrates this considerable individual variability. Useful for counteracting essentialistic assumptions about culture, this histogram also suggests that there is a) larger within-culture than between-culture variation and b) a significant amount of overlap between cultural groups along the continuum. Nevertheless, individuals’ Obligated-Agentic associations are reliably predicted by their cultural background, with Euro-Canadians’ estimated individual-level unstandardized coefficients ranging from approximately (-0.36) to (+0.57); EA-ENG individuals’ coefficients ranging from approximately (-0.23) to (+1.02); and EA-EA individuals’ coefficients ranging from approximately (+0.26) to (+1.02).}^6

\footnote{The random effect coefficient distributions used in this illustration are the empirical bayes estimates, with variance adjusted based on McDonald’s (1981) constrained covariance estimate to accurately preserve the true-modeled mean and variance of the random effects (e.g., see Louis & Shen, 1999).}
Mediators of the cultural difference in association between Obligated and Agentic motivations? Recall that if the relatively higher Obligated-Agentic associations among the East Asian groups (relative to the Euro-Canadian group) are due to cultural differences in the value associated with “fitting in” to social hierarchies, that these cultural differences should be
mediated by individual differences in endorsement of Hierarchical Collectivism, and not by
individual differences in Relational Collectivism or dialectical thinking.

As one of the minimal requirements for mediation, the potential mediator must
independently predict the DV, controlling for culture (MacKinnon, Fairchild, & Fritz, 2007).
Table 2.3 shows the relevant $\beta$ coefficients for the two cultural codes and the potential mediators,
after the mediator (centered) was entered into the prediction equation at Level 2 along with the
two cultural codes, gender, and age (centered). As can be seen in Table 2.3, the only single scale
that reached significance was the Vertical Collectivism scale. However, the combination of the
Vertical Collectivism scale and the Family Obligations scales, titled Hierarchical Collectivism,
also marginally partially mediated the cultural differences, while neither the Relational
Collectivism scale (a combination of the RISC scale with the Interdependent and Independent
(reverse-scored) Self-Construal Scales) nor the Dialectical Self-concept Scale (DSS-10) showed
any sign of mediating the cultural difference.

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7 For analyses with Vertical Collectivism only, see Appendix C.
Table 2.3: Study 1, Mediators of cultural differences in Obligated-Agentic associations

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Independent effect on Obligated-Agentic association:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>No mediator</td>
<td>$\beta_{13} = 0.36, p = 0.002$ $\beta_{14} = 0.55, p &lt; 0.001$</td>
</tr>
<tr>
<td>Vertical Collectivism</td>
<td>$\beta_{15} = 0.11, p = 0.025$ $\beta_{13} = 0.28, p = 0.010$ $\beta_{14} = 0.47, p &lt; 0.001$</td>
</tr>
<tr>
<td>Family Obligations Scale</td>
<td>$\beta_{15} = 0.09, p = 0.147$ $\beta_{13} = 0.32, p = 0.003$ $\beta_{14} = 0.52, p &lt; 0.001$</td>
</tr>
<tr>
<td>Hierarchical Collectivism</td>
<td>$\beta_{15} = 0.12, p = 0.056$ $\beta_{13} = 0.30, p = 0.007$ $\beta_{14} = 0.49, p &lt; 0.001$</td>
</tr>
<tr>
<td>RISC</td>
<td>$\beta_{15} = 0.06, p = 0.293$ $\beta_{13} = 0.35, p = 0.002$ $\beta_{14} = 0.56, p &lt; 0.001$</td>
</tr>
<tr>
<td>SCS-Interdependent</td>
<td>$\beta_{15} = 0.10, p = 0.205$ $\beta_{13} = 0.34, p = 0.005$ $\beta_{14} = 0.53, p &lt; 0.001$</td>
</tr>
<tr>
<td>SCS-Independent</td>
<td>$\beta_{15} = 0.10, p = 0.234$ $\beta_{13} = 0.39, p = 0.001$ $\beta_{14} = 0.61, p &lt; 0.001$</td>
</tr>
<tr>
<td>Relational Collectivism</td>
<td>$\beta_{15} = 0.07, p = 0.358$ $\beta_{13} = 0.34, p = 0.003$ $\beta_{14} = 0.53, p &lt; 0.001$</td>
</tr>
<tr>
<td>Dialectism (DSS-10)</td>
<td>$\beta_{15} = 0.06, p = 0.299$ $\beta_{13} = 0.33, p = 0.004$ $\beta_{14} = 0.49, p &lt; 0.001$</td>
</tr>
</tbody>
</table>

The fact that the 10-item Dialectical Self-concept Scale (DSS-10) did not mediate the cultural differences in the Obligated-Agentic associations merits special attention. This is particularly informative as both of the East Asian groups were indeed higher than the Euro-Canadian group on average DSS-10 scores; a regression equation predicting DSS-10 scores from gender, age, and the two Culture dummy codes showed a significant effect of both culture dummy codes (Euro vs. EA-ENG, $\beta = 0.19, t(123) = 2.27, p = .025$, and Euro vs. EA-EA, $\beta = 0.22, t(123) = 4.01, p < .001$). The fact that there were cultural differences in dialectical self-concept scores, and yet these differences did not mediate the cultural differences in Obligated-Agentic associations, strongly suggests that the higher Obligated-Agentic associations among
East Asians are not simply due to a general East Asian tendency to perceive concepts to be less contradictory than do Westerners (Peng & Nisbett, 1999).

Hierarchical Collectivism as mediator of cultural differences in Obligated-Agentic associations. Evidence for mediation is established with two steps: first, that the independent variable is related to the proposed mediator, and secondly that the proposed mediator is significantly related to the dependent variable when controlling for the independent variable (MacKinnon et al., 2007).

As depicted in Figure 2.3, our mediation model first predicts that both East Asian groups would be higher than the Euro-Canadian group in Hierarchical Collectivism scores. A multiple regression equation predicting Hierarchical Collectivism from Age, Gender, and the two culture dummy codes supported this prediction. While neither gender nor age were related to Vertical Collectivism, the Euro-Canadian group was lower on Vertical Collectivism than both the acculturated East Asian Canadian group, $B = 0.45$, $\beta = 0.14$, $t(123) = 3.24$, $p = .002$, and the unacculturated East Asian group, $B = 0.35$, $\beta = 0.16$, $t(123) = 2.15$, $p = .033$.

The second step (as we have already observed in Table 2.3) requires testing whether Hierarchical Collectivism was a significant independent positive predictor of the Obligated-Agentic motivations relationship, when added into the HLM equation with culture, gender, and age. As shown in Table 2.3., Hierarchical Collectivism was a marginally significant independent predictor of the Obligated-Agentic motivations relationship, $\beta_{15} = 0.12$, $t(122) = 1.94$, $p = .056$, such that those higher in Hierarchical Collectivism had a higher relationship between Obligated and Agentic motivations for helping. Although reduced in magnitude, both cultural codes remained significant predictors of the Obligated-Agentic motivations relationship, with both acculturated East Asian Canadians ($\beta_{13} = 0.30$, $t(122) = 2.76$, $p = .007$), and unacculturated East Asian Canadians ($\beta_{14} = 0.49$, $t(122) = 4.78$, $p < .001$) having higher relationships between
Obligated and Agentic motivations. Therefore, evidence was found for Hierarchical Collectivism as a partial mediator of the cultural differences in the degree to which Obligated and Agentic motivations to help are positively associated.

Figure 2.3: Study 1, Mediation model for Hierarchical Collectivism

*** = p<.001; ** = p < .01; † = p < .06

Cultural differences in emotional experience of Obligations: Positive and Negative emotions. Secondly, I tested for cultural differences in the emotional experience of obligations, by testing to what degree Obligations were associated with positive and negative emotions. As
will be seen below, as predicted, East Asian-Canadians felt more positive emotions about feeling obligated to help than did Euro-Canadians.

As described in the Methods section, I first constructed two scales of general Positive emotions (13 items) and Negative emotions (9 items). Scale scores were calculated for each time a participant filled out a helping report. The relationship between Obligations, Positive emotions, and Negative emotions was then modeled at Level 1 (within-person), as follows:

Level 1: \( Y_{ji} = \beta_{0j} + \beta_{1j} \text{Positive} + \beta_{2j} \text{Negative} + \epsilon_{ji} \)

\( \beta_{0j} = \beta_{00} + \beta_{01} \text{Age} + \beta_{02} \text{Gender} + \beta_{03} \text{Euro/EA-ENG} + \beta_{04} \text{Euro/EA-EA} + u_{0j} \)

\( \beta_{1j} = \beta_{10} + \beta_{11} \text{Age} + \beta_{12} \text{Gender} + \beta_{13} \text{Euro/EA-ENG} + \beta_{14} \text{Euro/EA-EA} + u_{1j} \)

\( \beta_{2j} = \beta_{20} + \beta_{21} \text{Age} + \beta_{22} \text{Gender} + \beta_{23} \text{Euro/EA-ENG} + \beta_{24} \text{Euro/EA-EA} + u_{2j} \)

In this equation, at Level 1 the association between Obligated and Positive and Negative ratings (both on the original scale of 1-6) is estimated at the participant level; at Level 2, the effects on this association of the participant’s age, gender, and culture of the participant are estimated.

Specifically, at Level 1, \( Y_{ji} \) is the scale score on Obligated for participant \( j \) in helping report \( i \), \( \beta_{0j} \) is a random coefficient representing the Obligated intercept for participant \( j \), \( \beta_{1j} \) is a random coefficient representing the level of association between Obligated and Positive emotions for participant \( j \) across the helping situations, and \( \beta_{2j} \) is a random coefficient representing the level of association between Obligated and Negative emotions. Positive and Negative are the scale scores (from 1-6) for participant \( j \) in helping report \( i \), and \( \epsilon_{ji} \) represents error.

At Level 2, the three random coefficients \( \beta_{0j}, \beta_{1j} \) and \( \beta_{2j} \) are predicted by participant’s age (centered), gender (Male: -1; Female: 1), and two dummy codes for culture comparing the Euro-
Canadian group to the two East Asian groups in turn: Euro/EA-ENG comparing Euro-Canadians (0) to East Asian Canadians who speak English with friends (1), and Euro/EA-EA comparing Euro-Canadians (0) to East Asian Canadians who speak an East Asian language with friends (1). (To complete the dummy codes, the other East Asian group is coded as 0 for each culture dummy code respectively (West et al., 1996).) The error terms \( u_{0j} \), \( u_{1j} \), and \( u_{2j} \) represent random effects error.

The coefficients of most interest to us are \( \beta_{13} \) and \( \beta_{23} \), indicating the interaction effect of being Euro-Canadian or acculturated East Asian Canadian on the Obligated-Positive and Obligated-Negative associations respectively; and \( \beta_{14} \) and \( \beta_{24} \), indicating the interaction effect of being Euro-Canadian vs. unacculturated East Asian Canadian on the Obligated-Positive and Obligated-Negative associations respectively.

As can be seen in Table 2.4, in support of our predictions, both East Asian groups associated significantly greater amounts of positive emotions with a sense of Obligation than the Euro-Canadian group did: \( \beta_{13} = 0.53, p = 0.002 \) for the comparison with the relatively acculturated East Asian group and \( \beta_{14} = 0.47, p = 0.006 \) for the comparison with the less acculturated East Asian group. There were no cultural differences, however, in associations with negative emotions. For negative emotions, women were more likely than men to associate negative emotions with a sense of obligation, \( \beta_{22} = 0.39, p = 0.007 \).
Table 2.4: Study 1, Emotional experience of Obligations

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Obligations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
<td>2.35</td>
<td>0.53</td>
<td>123</td>
<td>4.46</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{01}$</td>
<td>0.00</td>
<td>0.12</td>
<td>123</td>
<td>-0.04</td>
<td>0.972</td>
</tr>
<tr>
<td>Gender, $\beta_{02}$</td>
<td>0.46</td>
<td>0.26</td>
<td>123</td>
<td>-1.78</td>
<td>0.077</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
<td>-1.55</td>
<td>0.62</td>
<td>123</td>
<td>-2.47</td>
<td>0.015</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
<td>-1.33</td>
<td>0.69</td>
<td>123</td>
<td>-1.93</td>
<td>0.056</td>
</tr>
<tr>
<td>For Positive Emotions slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
<td>0.14</td>
<td>0.15</td>
<td>123</td>
<td>0.96</td>
<td>0.340</td>
</tr>
<tr>
<td>Age, $\beta_{11}$</td>
<td>-0.01</td>
<td>0.03</td>
<td>123</td>
<td>-0.31</td>
<td>0.755</td>
</tr>
<tr>
<td>Gender, $\beta_{12}$</td>
<td>0.01</td>
<td>0.08</td>
<td>123</td>
<td>0.07</td>
<td>0.945</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
<td>0.53</td>
<td>0.17</td>
<td>123</td>
<td>3.18</td>
<td>0.002</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
<td>0.47</td>
<td>0.17</td>
<td>123</td>
<td>2.82</td>
<td>0.006</td>
</tr>
<tr>
<td>For Negative Emotions slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{20}$</td>
<td>0.26</td>
<td>0.23</td>
<td>123</td>
<td>1.12</td>
<td>0.267</td>
</tr>
<tr>
<td>Age, $\beta_{21}$</td>
<td>0.01</td>
<td>0.07</td>
<td>123</td>
<td>0.08</td>
<td>0.935</td>
</tr>
<tr>
<td>Gender, $\beta_{22}$</td>
<td>0.39</td>
<td>0.14</td>
<td>123</td>
<td>2.78</td>
<td>0.007</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{23}$</td>
<td>0.21</td>
<td>0.30</td>
<td>123</td>
<td>0.70</td>
<td>0.484</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{24}$</td>
<td>0.22</td>
<td>0.37</td>
<td>123</td>
<td>0.59</td>
<td>0.557</td>
</tr>
</tbody>
</table>
Note: Emotions graphed at the average level of the other emotion (Positive M = 2.66, Negative M = 1.23)

Mediation of cultural differences in Obligations-Positive relationship? Above, I found that Hierarchical Collectivism mediated the cultural differences in Obligations-Agency associations. I would predict, therefore, that the above differences in emotional associations with obligations should also be mediated by the Hierarchical scales and not by the Relational scales.

Importantly, one reason that East Asian participants might report more Positive emotions could be because they are being dialectical; that when they report having negative emotions, they also report having positive emotions, while Euro-Canadians would only report feeling one or the other. Previous research has found that East Asians tend to report more “mixed feelings,” including higher correlations between positive and negative emotions, than Westerners (Bagozzi, Wong, & Yi, 1999; Spencer-Rodgers et al., 2004). I examined this possibility by testing whether
or not the Dialectical Self-Concept Scale (10 items) would mediate the cultural differences found in emotions.

As in the above examination for mediators of the Obligations-Agency association, I entered each (centered) mediator in turn into the Level 2 HLM equation predicting Obligations from Positive emotions and Negative emotions, along with Gender, Age, and the two dummy codes for Culture. In Table 2.5, the regression coefficients for each mediator and for each cultural dummy code are listed for the overall Positive and Negative emotion scales. As can be seen, none of the individual-difference scales was found to be a significant independent predictor of the positive emotions-obligations link. Surprisingly, the Dialectical Self-concept Scale was found to be a significant independent predictor of the negative emotions – obligations connection, but thereby actually slightly increased cultural differences in how much the negative emotions were connected to obligations, with East Asian Canadians (especially the less acculturated EA-EA group) now showing a trend of feeling more negative emotions than Euro-Canadians, while at the same time still feeling more positive emotions than Euro-Canadians. This is a rather puzzling result: controlling for dialecticism, East Asian Canadians actually look more dialectical than Euro-Canadians, feeling both more positive and more negative emotions about obligations. Regardless, it is clear that dialectical thinking is not the reason why East Asian Canadians feel more positive emotions than Euro-Canadians do about obligations.
Table 2.5: Study 1, No mediators of cultural differences in Obligations-Emotions associations.

<table>
<thead>
<tr>
<th>Mediators in turn, for Positive and Negative emotions</th>
<th>Independent effect on Obligations-Emotions associations:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Potential Mediator</td>
</tr>
<tr>
<td>Positive</td>
<td>No mediator</td>
</tr>
<tr>
<td>Negative</td>
<td>No mediator</td>
</tr>
</tbody>
</table>

Hierarchical Collectivism:

| Positive                                              | $\beta_{15} = 0.14$, $p = 0.173$ | $\beta_{13} = 0.48$, $p = 0.008$ | $\beta_{14} = 0.39$, $p = 0.034$ |
| Negative                                              | $\beta_{25} = 0.38$, $p = 0.144$ | $\beta_{23} = 0.12$, $p = 0.703$ | $\beta_{24} = -0.12$, $p = 0.774$ |

Relational Collectivism:

| Positive                                              | $\beta_{15} = 0.04$, $p = 0.762$ | $\beta_{13} = 0.51$, $p = 0.004$ | $\beta_{14} = 0.44$, $p = 0.016$ |
| Negative                                              | $\beta_{25} = -0.27$, $p = 0.397$ | $\beta_{23} = 0.27$, $p = 0.386$ | $\beta_{24} = 0.29$, $p = 0.480$ |

DSS-10:

| Positive                                              | $\beta_{15} = -0.02$, $p = 0.781$ | $\beta_{13} = 0.50$, $p = 0.005$ | $\beta_{14} = 0.44$, $p = 0.013$ |
| Negative                                              | $\beta_{25} = \mathbf{-0.08}$, $p = 0.004$ | $\beta_{23} = 0.40$, $p = 0.155$ | $\beta_{24} = 0.63$, $p = 0.096$ |

Cultural differences in emotional experience of Agency: Positive and Negative emotions. Finally, I examined whether or not there were cultural differences in the emotional experience of feeling agentic about helping others. If a sense of agency is less important to East Asian Canadians than Euro-Canadians, then a sense of agency might be less correlated with positive emotions for East Asian Canadians. However, as will be seen below, it was found that in fact, a sense of agency was more likely to feel positive for East Asian Canadians than it was for
Euro-Canadians. However, as with the experience of Obligations, no individual-difference scales were found to mediate the cultural differences.

Following the same procedure as in the analysis of emotional associations with Obligations, an HLM equation predicting Agency from Positive and Negative emotions at Level 1, and gender (Male, -1, Female, 1), age (centered), and two dummy codes comparing the Euro-Canadian group with the acculturated East Asian Canadian group (EA-ENG) and less acculturated East Asian Canadian group (EA-EA) at Level 2 was run. As displayed in Table 2.6, the EA-ENG group had a significantly higher Positive-Agentic slope than the Euro-Canadian group, $\beta_{13} = 0.24, p = 0.019$, while the EA-EA group had a marginally higher Positive-Agentic slope than the Euro-Canadian group, $\beta_{14} = 0.20, p = 0.066$. There were no cultural differences in the degree to which Negative emotions were associated with Agency.

**Mediation of cultural differences in Agency-Positive relationship?** Results for mediation analyses were entirely null and are thus not displayed here. No individual-difference scales predicted Positive-Agentic associations independently of culture. In particular, the Dialectical Self-concept Scale did not independently predict either positive or negative associations with agency, and did not change either the cultural differences in the positive-Agency association or the lack of cultural differences in the Negative-Agency association.
Table 2.6: Study 1, Emotional experience of Agency

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Agency)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
<td>2.76</td>
<td>0.39</td>
<td>123</td>
<td>7.10</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{01}$</td>
<td>0.03</td>
<td>0.10</td>
<td>123</td>
<td>0.32</td>
<td>0.751</td>
</tr>
<tr>
<td>Gender, $\beta_{02}$</td>
<td>-0.21</td>
<td>0.27</td>
<td>123</td>
<td>-0.77</td>
<td>0.441</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
<td>-0.66</td>
<td>0.46</td>
<td>123</td>
<td>-1.44</td>
<td>0.153</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
<td>-1.06</td>
<td>0.52</td>
<td>123</td>
<td>-2.03</td>
<td>0.044</td>
</tr>
<tr>
<td>For Positive Emotions slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
<td>0.65</td>
<td>0.08</td>
<td>123</td>
<td>7.23</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{11}$</td>
<td>0.00</td>
<td>0.02</td>
<td>123</td>
<td>0.05</td>
<td>0.959</td>
</tr>
<tr>
<td>Gender, $\beta_{12}$</td>
<td>0.04</td>
<td>0.05</td>
<td>123</td>
<td>0.75</td>
<td>0.453</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
<td>0.24</td>
<td>0.10</td>
<td>123</td>
<td>2.38</td>
<td>0.019</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
<td>0.20</td>
<td>0.11</td>
<td>123</td>
<td>1.86</td>
<td>0.066</td>
</tr>
<tr>
<td>For Negative Emotions slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{20}$</td>
<td>-0.49</td>
<td>0.25</td>
<td>123</td>
<td>-1.96</td>
<td>0.051</td>
</tr>
<tr>
<td>Age, $\beta_{21}$</td>
<td>-0.02</td>
<td>0.07</td>
<td>123</td>
<td>-0.29</td>
<td>0.776</td>
</tr>
<tr>
<td>Gender, $\beta_{22}$</td>
<td>0.18</td>
<td>0.17</td>
<td>123</td>
<td>1.09</td>
<td>0.277</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{23}$</td>
<td>-0.06</td>
<td>0.30</td>
<td>123</td>
<td>-0.20</td>
<td>0.840</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{24}$</td>
<td>0.28</td>
<td>0.32</td>
<td>123</td>
<td>0.86</td>
<td>0.392</td>
</tr>
</tbody>
</table>
Figure 2.5, Study 1: Emotional experience of Agentic motivations

*Emotions graphed at the average level of the other emotion, Positive M = 2.66, Negative M = 1.23

Summary of results

In this study, I looked for answers to the following questions: first, when remembering a recent episode of helping another person, would I find that East Asian Canadians report a closer relationship between having obligated motivations and having agentic motivations to help others than would Euro-Canadians? Secondly, would I find that East Asian Canadians would feel more positively about having Obligated motivations than Euro-Canadians do? Thirdly, would I find that East Asian Canadians experience Agentic motivations as positively as Euro-Canadians do? And finally, would I be able to see evidence of these cultural differences within the individual values of the participants, finding that measures of hierarchical collectivism mediated the cultural differences in positive and agentic feelings about obligated motivations?
The results answered most of these questions in the affirmative. First, both East Asian Canadians and Euro-Canadians reported a surprisingly positive association between “obligated” and “agentic” motivations, and East Asian Canadians to an even higher degree than Euro-Canadians; in other words, even when participants felt that they were “expected” to help, they also “wanted” to help, and indeed the MORE they felt expected to help, the MORE they wanted to help. This suggests that the SDT definition of “autonomy” as being a combination of more agency and less obligation is in fact missing out on a large source of positive, agentic motivation: positive reactions to the obligations themselves. It also suggests that this will be an even bigger problem when attempting to measure “autonomous” motivation in East Asia.

Secondly, East Asian Canadians in this study experienced more positive emotions than Euro-Americans did, both when they wanted to help others and, more importantly to the main questions, when they felt obligated to help others. In general, this suggests that East Asian Canadians feel more positively about all motivations to help others. Most pertinent to questions about the applicability of the SDT “autonomy” concept to East Asia, it suggests that East Asian Canadians are even more likely than Euro Canadians to feel positively about obligatory motivations. This again suggests that the SDT assumption that obligatory motivations will lead to negative outcomes cross-culturally is not valid (Deci & Ryan, 2000).

It is also telling that East Asian Canadians also have positive feelings about agency, and even more positive feelings than Euro-Canadians. This suggests that agency—a sense of personally wanting, choosing, and finding it personally important to engage in a given behavior—is just as important and positive for East Asians as it is to Westerners. This is in agreement with some cultural psychologists (Miller, 2003), but suggests that strong arguments that choice is not important to collectivists (e.g. Iyengar & DeVoe, 2003) may be overblown. Other research has suggested that making a choice free from the influence of others is not as
important for those influenced by duty-valuing cultures as it is to those influenced by individualist cultures (Iyengar & Lepper, 1999; Savani, Markus, & Conner, 2008). However, the current findings suggest that a better interpretation of this is that a sense of personal agency can be experienced even when others are making the choices; and that a sense of agency is experienced positively by both East Asians and Westerners.

Taken together, East Asian Canadians appear to not just be doing their duty because they “have” to, it is also because they want to; and they also have more of a positive emotional experience while doing so than do Euro-Canadians.

Finally, I found some evidence that these cultural differences are mediated by individual-level differences in values. First, in terms of pinpointing what aspect of cultural differences is the “key variable” producing the group-level differences we see here, for both the cultural differences in emotional and agentic experience of obligations, the measures of hierarchical collectivism were better than the measures of relational collectivism in mediating the cultural differences. Although none of these individual-level measures of collectivism reached significance in mediating the cultural differences in emotional experience of obligations, the hierarchical measures of collectivism did partially mediate the cultural differences in obligated-agentic associations. This suggests that the influence of Confucian values in East Asian cultures may be a reason why we found these cultural differences.

To summarize, when reporting on their own daily experience of helping people, East Asian Canadians (and especially those who are less acculturated to Canada) were more likely that Euro-Canadians to report feeling simultaneously motivated by an obligation to help as well as feeling that they wanted to and chose to help; and both types of motivation were experienced more positively by East Asian Canadians than Euro-Canadians.
Chapter 3: Study 2, “20 Favors”

Introduction

In Study 1, I found that in reports of daily helping behavior that compared to Euro-Canadians, East Asian Canadians were more likely to feel a greater sense of agency and also more positive emotions when experiencing increased obligations to help. Moreover, I was able to identify a potential individual difference, encouraged by one’s cultural background, that explained why East Asian Canadians had more positive and agentic subjective experiences of helping obligations: that East Asian Canadians were more likely to hold hierarchically collectivistic values. This supports the interpretation that as East Asian Canadians performed actions that showed that they were responsibly fulfilling others’ expectations and social roles, that they felt these to be fulfilling their own values of what it meant to be a good person, and thus felt both more agentic and more emotionally positive about fulfilling those obligations. The cultural difference in those hierarchically-collectivistic values, measured at the individual level, was found to partially mediate the cultural differences found in the association between obligations and agentic motivations.

This was an important step in establishing the idea that agentic motivations to help might be more encouraged by social obligations to help among duty-based collectivistic societies than in individualistic societies such as the West.

One limitation, though it is also a strength, of Study 1 is that each person remembered events occurring in his or her life. The strength of this method is that the study maximizes ecological validity, as these reports reflect the actual experience of daily life among participants. However, its weakness is that each person’s events are necessarily different from one another. Because each person is reporting on different events, it could be the case that the cultural
difference emerges not because of a psychological tendency to feel differently about obligations, but because East Asians tend to encounter different types of helping situations than Westerners—in which a sense of obligation to help is in fact more likely to be accompanied by a sense of wanting to help. In sum, Study 1 shows that in one’s actual daily experience, hierarchical collectivists (and those more influenced by East Asian culture) are more likely to experience events in which obligations and agentic motivations are highly associated; but it does not show that East Asians are more likely than Westerners to interpret the same events as involving the co-occurrence of both obligations and agentic motivations.

If it were the case that the typical situations that East Asians and Westerners encounter encouraged different attitudes towards obligations, this would not preclude the possibility that individuals have psychological “habits” of interpretation. In fact, repeated exposure to situations that encourage a certain attitude towards obligations in those situations would be likely to result in individuals being more likely to interpret future situations in the same light (see, for example, Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Morling, Kitayama, & Miyamoto, 2002). This suggests that if placed in the exact same situations, East Asians and Westerners might still display different associations between obligations and agentic motivations. At the same time, it might be the case that typically East Asian situations might induce a more “East Asian” sense of congruence between obligations and agency in participants from all cultures, while typically Western situations might induce a more “Western” lack of congruence between obligations and agency.

Can we show that through its influence on personal values, one’s cultural heritage influences one’s interpretation of the same event? Additionally, can we find evidence that the situations typically encountered by our East Asian-Canadian and Euro-Canadian subjects in Study 1 encourage different ways of thinking about obligations? In Study 2, I asked participants
to read a larger number of pre-selected scenarios (20 in total) from the daily experiences of Study 1’s participants, 10 described by East Asian Canadian participants and 10 described by Euro-Canadian participants. A brief selection of Study 1’s motivational and emotion questions were asked for each scenario, and individual-difference measures, including hierarchical collectivism, relational collectivism, and dialectical self-concept, were similar to Study 1.

Method

Participants. A total of 157 participants were divided into three groups based on self-reported cultural heritage and language spoken with friends: 44 Western-European Canadians who spoke English with friends (32% male, mean age = 22), 79 relatively acculturated East Asian Canadians who spoke English with friends (EA-ENG; 19% male, mean age = 20), and 34 relatively unacculturated East Asian Canadians who spoke an East Asian language with friends (EA-EA; 30% male, mean age = 22). The three groups did not significantly differ in gender proportion (Kruskal-Wallis test, $\chi^2 = 2.96$, n.s.), but the groups significantly differed in age ($F(2,154) = 12.41$, $p < .001$).

Procedure. Participants took part in an online survey in return for partial course credit. Participants responded to 20 scenarios in which they were asked to imagine they were being asked for help, and filled out a number of individual difference scale measures (described below).

Selection of scenarios. In order to best reflect situations that actually occur in the lives of students here at UBC, I selected 20 situations from the events reported by students in Study 1 (see Appendix D for scenarios). Scenarios were selected that participants had self-rated as being medium in difficulty. Ten were selected from East Asian participants, and ten were selected from Euro-Canadian participants. Within each ten, the distribution of helpees was chosen to reflect the distribution found within the data: four involved helping a relative; four involved
helping a friend; and two involved helping a classmate. Within these limitations, scenarios were selected randomly.

**DVs.** After reading each scenario, participants were asked to what degree they would feel that they *should* help; that they *wanted* to help; and a selection of positive and negative emotion words, selected from a list of socially engaging (close, ashamed), socially disengaging (proud, frustrated), and socially neutral (happy, unhappy) emotion words (Kitayama et al., 2006). Participants answered on a 6-point labeled likert scale ranging from “not at all” to “extremely.” Though the single items “should” and “want” were used to measure obligated and agentic motivations respectively, the three positive emotions (happy, close, proud) and the three negative emotions (unhappy, ashamed, frustrated) were combined to create a Positive emotions and Negative emotions scale score for each scenario. Across the twenty scenarios, the three positive and three negative emotions showed adequate reliability (average Cronbach’s alpha = .84 and .74 respectively).

**Potential mediators.** Participants also filled out a subset of Study 1’s individual-difference measures of individualism-collectivism and dialectical thinking. As in Study 1, participants completed two measures of Hierarchical Collectivism: Vertical Collectivism (Singelis et al., 1995) and the Family Obligations scale (Fuligni et al., 1999). As in Study 1, these two scales were combined as a 32-item measure of Hierarchical Collectivism, $\alpha = .90$ in each of the three cultural groups. Only one scale was used to estimate Relational Collectivism: the Relational-Interdependent Self Concept scale (RISC, Cross et al.). This 11-item scale also had high reliability in all cultural groups (Euro, $\alpha = .89$; EA-ENG, $\alpha = .90$; EA-EA, $\alpha = .85$). Finally, as in Study 1, 10 items from the Dialectical Self-concept scale (Spencer-Rodgers et al., 2008) were used as a measure of dialectical thinking, with adequate reliability in all three cultural groups (Euro, $\alpha = .72$; EA-ENG, $\alpha = .83$; EA-EA, $\alpha = .75$)
Chapter 3: Study 2, “20 Favors”

As in Study 1, cultural differences were expected to be best mediated by Hierarchical Collectivism, and not mediated by Relational Collectivism or Dialectical thinking.

Results

Overview. First, I look for evidence of cultural differences in the strength of the association between external and internal motivation, here operationalized as “should” and “want.” I then examine cultural differences in the emotional experience of these motivations. Finally, I test for mediators of these cultural differences, examining the above individual-difference measures. For the below analyses, I test hypotheses with multilevel modeling using the Hierarchical Linear Modeling (HLM) program (version 6.04, Raudenbush et al., 2004). As in Study 1, all Level 1 variables were uncentered, while continuous Level 2 variables were mean-centered.

Relationship between Should and Want. First, I tested for cultural differences in the strength of the association between feeling that one should help another person and wanting to help another person. In this analysis, I examine the effect of both the cultural source of the scenarios as well as the effect of the cultural background of the participants, controlling for gender and age. The relationship between the single items should and want, and the effect of scenario source on the should-want association, was modeled at Level 1 (within-person), as follows:

Level 1: \[ Y_{ji} = \beta_{0j} + \beta_{1j}\text{Want} + \beta_{2j}\text{Scenario} + \beta_{3j}\text{Scenario X Want} + \varepsilon_{ji} \]

\[ \beta_{0j} = \beta_{00} + \beta_{01}\text{Age} + \beta_{02}\text{Gender} + \beta_{03}\text{Euro/EA-ENG} + \beta_{04}\text{Euro/EA-EA} + u_{0j} \]

\[ \beta_{1j} = \beta_{10} + \beta_{11}\text{Age} + \beta_{12}\text{Gender} + \beta_{13}\text{Euro/EA-ENG} + \beta_{14}\text{Euro/EA-EA} + u_{1j} \]

\[ \beta_{2j} = \beta_{20} + \beta_{21}\text{Age} + \beta_{22}\text{Gender} + \beta_{23}\text{Euro/EA-ENG} + \beta_{24}\text{Euro/EA-EA} + u_{2j} \]

\[ \beta_{3j} = \beta_{30} + \beta_{31}\text{Age} + \beta_{32}\text{Gender} + \beta_{33}\text{Euro/EA-ENG} + \beta_{34}\text{Euro/EA-EA} + u_{3j} \]
In this equation, at Level 1 the association between Should and Want (both on the original scale of 1-6) is estimated, as well as the effect of Scenario cultural source (Euro-Canadian, -1; East Asian Canadian, 1). At Level 2, the effects of the participant’s age, gender, and culture of the participant are estimated.

Specifically, at Level 1, $Y_{ji}$ is the participant’s rating on Should for participant $j$ in scenario $i$, $\beta_{0j}$ is a random coefficient representing the Should intercept for participant $j$, $\beta_{1j}$ is a random coefficient representing the level of association between should and want for participant $j$ across the 20 scenarios, $\beta_{2j}$ is a random coefficient representing the effect of Scenario culture source on the mean level of Should for participant $j$ across the 20 scenarios, $\beta_{3j}$ is a random coefficient representing the effect of Scenario culture source on the association between Should and Want for participant $j$ across the 20 scenarios, and $e_{ij}$ represents error.

At Level 2, the four random coefficients are each predicted by participant’s age (centered), gender (Male: -1; Female: 1), and two dummy codes for culture comparing the Euro-Canadian group to the two East Asian groups in turn: Euro/EA-ENG comparing Euro-Canadians (0) to East Asian Canadians who speak English with friends (1), and Euro/EA-EA comparing Euro-Canadians (0) to East Asian Canadians who speak an East Asian language with friends (1). (To complete the dummy codes, the other East Asian group is coded as 0 for each culture dummy code respectively (West et al., 1996).) The error terms $u_{0j}$, $u_{1j}$, $u_{2j}$ and $u_{3j}$ represent random effects error.

The coefficients of most interest to us are $\beta_{13}$ and $\beta_{14}$, indicating the effect of being Euro-Canadian vs. (respectively) acculturated East Asian Canadian or unacculturated East Asian Canadian on the Should-Want association, controlling for Scenario cultural source (i.e. when Scenario = 0); and $\beta_{30}$, indicating the effect of Scenario source on the Should-Want association.
for Euro-Canadians (which will be qualified by any interactions with the participant culture, indicated by $\beta_{33}$ and $\beta_{34}$).

The results, displayed in Table 3.1, replicate Study 1, with East Asian Canadian participants displaying more positive should-want associations than Euro-Canadian participants. Also, the cultural source of the scenarios influences should-want associations for some participants, such that the should-want association is stronger in East Asian-sourced scenarios than in Euro-sourced scenarios (though this was the case for the Euro-Canadian and unacculturated East Asian participants only).

Starting at the highest level of interactions, the significantly positive Scenario X Want intercept coefficient ($\beta_{30}$) shows that in the Euro-Canadian group, participants tended to have higher should-want correlations when responding to the 10 scenarios sourced from East Asian participants than in the 10 scenarios sourced from Euro-Canadian participants ($\beta_{30} = 0.05, p = 0.001$). This was also true in the unacculturated East Asian group (as indicated by the nonsignificant $\beta_{34}$ coefficient) but it was less the case for the acculturated East Asian group, $\beta_{33} = -0.05, p = 0.051$. For the acculturated East Asian group, alternative dummy coding showed that the cultural source of scenarios had no effect on the should-want correlations ($\beta_{30} = 0.00, p = 0.678$). In summary, for the Euro-Canadian and unacculturated East Asian groups, the East Asian-sourced scenarios induced higher should-want correlations in participants than did the Euro-sourced scenarios, but cultural source of scenarios had no effect on should-want correlations for the acculturated East Asian group.

Controlling for Scenario source, a highly positive correlation between Should and Want exists for Euro-Canadians, but this positive correlation is greater in the two East Asian groups. The intercept of the Should-Want slope ($\beta_{10}$) shows the Euro-Canadians to have a significantly positive relationship between Should and Want, $\beta_{10} = 0.42, p<.001$. This relationship was
uninfluenced by age, but females had a lower association between Should and Want than males, $\beta_{12} = -0.06$, $p = .048$. Central to our hypotheses, the correlation between Should and Want was higher in both of the East Asian Canadian groups compared to the European Canadian groups, though surprisingly the difference was larger between the European Canadian and more acculturated East Asian group, $\beta_{13} = 0.22$, $p = .003$, than it was between the European Canadian and less acculturated East Asian group, $\beta_{14} = .17$, $p = .041$. 
Table 3.1: Study 2, Should-Want associations

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Should)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
<td>2.42</td>
<td>0.20</td>
<td>152</td>
<td>12.01</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{01}$</td>
<td>-0.13</td>
<td>0.06</td>
<td>152</td>
<td>-2.11</td>
<td>0.036</td>
</tr>
<tr>
<td>Gender, $\beta_{02}$</td>
<td>0.09</td>
<td>0.12</td>
<td>152</td>
<td>0.71</td>
<td>0.479</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
<td>-0.94</td>
<td>0.26</td>
<td>152</td>
<td>-3.64</td>
<td>0.001</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
<td>-0.50</td>
<td>0.32</td>
<td>152</td>
<td>-1.55</td>
<td>0.123</td>
</tr>
<tr>
<td>For Want slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
<td>0.42</td>
<td>0.05</td>
<td>152</td>
<td>7.80</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{11}$</td>
<td>0.02</td>
<td>0.02</td>
<td>152</td>
<td>1.33</td>
<td>0.186</td>
</tr>
<tr>
<td>Gender, $\beta_{12}$</td>
<td>-0.06</td>
<td>0.03</td>
<td>152</td>
<td>-1.99</td>
<td>0.048</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
<td>0.22</td>
<td>0.07</td>
<td>152</td>
<td>3.05</td>
<td>0.003</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
<td>0.17</td>
<td>0.08</td>
<td>152</td>
<td>2.05</td>
<td>0.041</td>
</tr>
<tr>
<td>For Scenario cultural source slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{20}$</td>
<td>-0.30</td>
<td>0.07</td>
<td>152</td>
<td>-4.40</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{21}$</td>
<td>-0.01</td>
<td>0.02</td>
<td>152</td>
<td>-0.54</td>
<td>0.591</td>
</tr>
<tr>
<td>Gender, $\beta_{22}$</td>
<td>-0.05</td>
<td>0.04</td>
<td>152</td>
<td>-1.27</td>
<td>0.204</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{23}$</td>
<td>0.19</td>
<td>0.09</td>
<td>152</td>
<td>2.08</td>
<td>0.039</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{24}$</td>
<td>0.08</td>
<td>0.10</td>
<td>152</td>
<td>0.86</td>
<td>0.390</td>
</tr>
<tr>
<td>For Scenario X Want interaction slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{30}$</td>
<td>0.05</td>
<td>0.02</td>
<td>152</td>
<td>3.36</td>
<td>0.001</td>
</tr>
<tr>
<td>Age, $\beta_{31}$</td>
<td>0.00</td>
<td>0.00</td>
<td>152</td>
<td>0.71</td>
<td>0.480</td>
</tr>
<tr>
<td>Gender, $\beta_{32}$</td>
<td>0.01</td>
<td>0.01</td>
<td>152</td>
<td>0.73</td>
<td>0.467</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{33}$</td>
<td>-0.05</td>
<td>0.02</td>
<td>152</td>
<td>-1.97</td>
<td>0.051</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{34}$</td>
<td>-0.01</td>
<td>0.03</td>
<td>152</td>
<td>-0.27</td>
<td>0.761</td>
</tr>
</tbody>
</table>
Mediators of the cultural difference in Should-Want relationships? I tested for mediation of these cultural differences by a number of individual difference variables, entering them one by one (centered) into the above equation at Level 2. As one of the two minimal requirements for mediation, the potential mediator must independently predict the should-want association, controlling for culture (MacKinnon et al., 2007). As the regression coefficients displayed in Table 3.2 illustrate, this was not true for any single scale. However, comparatively, the Hierarchical Collectivism scale showed signs of mediating the cultural differences while the Relational Collectivism and Dialectical Thinking scales did not. The Hierarchical Collectivism scale displayed a trend of partial mediation of the cultural differences, with the independent-of-culture effect of this scale being $\beta_{15} = 0.08$, $p = 0.100$, and the independent effects of the two cultural difference dummy codes dropping from $\beta_{13} = 0.22$ to $\beta_{13} = 0.16$ for the relatively acculturated East Asian Canadians and from $\beta_{14} = 0.17$ to $\beta_{14} = 0.13$ for relatively unacculturated
East Asian Canadians. Though this showed only marginal evidence for partial mediation, the
effect of the combined hierarchical values scale is large when compared to the null independent
effects for the relationally collectivistic measure of the RISC (β₁₁₅ = -0.02, p = 0.549) and the
potentially confounding DSS-10 measure of dialectical thinking (β₁₅ = -0.02, p = 0.561). The
below Table 3.2 shows the relevant β coefficients for the two cultural codes and the potential
mediators after the Level 2 mediator (centered) was entered into the prediction equation
simultaneously with the two cultural codes, gender, and age (centered). As in Study 1, the fact
that the DSS-10 measure of dialectical thinking did not mediate the cultural differences in
should-want associations is of note, as although the East Asian groups were higher on the DSS-
10 (ANOVA controlling for gender and age showed a significant effect of culture, F(2, 152) =
13.11, p < .001), this measure of “comfort with contradictions” did not explain why the East
Asian groups had higher should-want associations.

Table 3.2: Study 2, Mediators of cultural differences in Should-Want associations

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Independent effect on Should-Want relationship:</th>
<th>Potential Mediator</th>
<th>Euro vs. EA-ENG</th>
<th>Euro vs. EA-EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mediator</td>
<td></td>
<td>β₁₃ = 0.22, p = 0.003  β₁₄ = 0.17, p = 0.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical Collectivism</td>
<td></td>
<td>β₁₅ = 0.04, p = 0.278  β₁₃ = 0.18, p = 0.021  β₁₄ = 0.14, p = 0.080</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Obligations Scale</td>
<td></td>
<td>β₁₅ = 0.09, p = 0.081  β₁₃ = 0.18, p = 0.016  β₁₄ = 0.15, p = 0.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hierarchical Collectivism:</strong></td>
<td></td>
<td>β₁₅ = 0.08, p = 0.100  β₁₃ = 0.16, p = 0.032  β₁₄ = 0.13, p = 0.102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RISC (Relational Coll.)</td>
<td></td>
<td>β₁₅ = -0.02, p = 0.549  β₁₃ = 0.22, p = 0.003  β₁₄ = 0.17, p = 0.037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSS-10</td>
<td></td>
<td>β₁₅ = -0.02, p = 0.561  β₁₃ = 0.23, p = 0.004  β₁₄ = 0.19, p = 0.044</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hierarchical Collectivism as mediator of cultural differences in Should-Want associations. As depicted in Figure 3.2, both East Asian groups were higher than the Euro-Canadian group in Hierarchical Collectivism scores. A multiple regression equation predicting Hierarchical Collectivism from Age, Gender, and the two culture dummy codes showed that while neither gender nor age were related to Hierarchical Collectivism, the Euro-Canadian group was lower on Vertical Collectivism than both the acculturated East Asian Canadian group, $B = 0.64, \beta = 0.53, t(155) = 6.01, p < .001$, and the unacculturated East Asian Canadian group, $B = 0.41, \beta = 0.28, t(155) = 3.30, p = .001$. As discussed above and displayed in Table 3.2, Hierarchical Collectivism was a marginally significant independent predictor of the Should-Want association controlling for culture, gender, and age, $\beta_{15} = 0.08, t(151) = 1.66, p = 0.100$, such that those higher in Hierarchical Collectivism had a higher relationship between feeling they Should and Wanted to help. As discussed above and shown in Table 3.2, coefficients for both cultural codes were reduced in magnitude, remaining significant for the comparison between the Euro-Canadian and acculturated East Asian Canadians ($\beta_{13} = 0.16, t(151) = 2.16, p = .032$) but not for the comparison between the Euro-Canadian group and unacculturated East Asian Canadians ($\beta_{14} = 0.13, t(151) = 1.64, p = .102$). Overall, weak evidence was found for Hierarchical Collectivism as a partial mediator of the cultural differences in the degree to which Should and Want are positively associated.
**Should-Want in the different relationship categories?** As collectivistic cultures tend to make harder distinctions between members of ingroups and outgroups than individualistic cultures do, whether or not the person being helped was in one’s “ingroup” or not might have an effect on cultural differences. I therefore carried out exploratory analyses separately by relationship with helpee, for the 8 scenarios for a family member, 8 scenarios for a friend, and 4 scenarios for a classmate (i.e. a stranger). Results, below, showed that neither East Asian group had significantly higher should-want correlations than Euro-Canadians in the Classmates situations, while the above pattern of cultural differences remained in the Family and Friend...
situations (though cultural differences were attenuated, likely due to less power due to the reduced numbers of scenarios).

First, there were no cultural differences in the classmate situations (both cultural dummy codes with $p > .50$) indicating that the two East Asian groups had similar should-want correlations to the Euro-Canadians, who had an average should-want relationship of $\beta_{10} = 0.54$, $p < 0.001$. In fact, for the first time the less acculturated East Asian group’s beta indicated that they were leaning towards having lower should-want relationships than the Euro-Canadians, $\beta_{14} = -0.04$, $p = .689$, though this negative beta weight is of course far from statistical significance. It is also notable, however, that the overall relationship between should and want was quite high, with the Euro-Canadians’ 0.54 association indicating a relatively high level of association relative to their overall pattern (i.e. 0.42, as seen in Table 3.1). The East Asian groups’ should-want associations were $\beta = 0.60$ and $\beta = 0.50$ for the EA-ENG and EA-EA groups respectively.

The cultural differences in the Friends situations were strongest of the three relationship types, though again the difference was larger between the Euro-Canadian and more acculturated East Asian group, $\beta_{13} = 0.18$, $p = .047$, than it was between the Euro-Canadian and less acculturated East Asian group, $\beta_{14} = .10$, $p = .274$; the average Euro-Canadian should-want relationship was $\beta_{10} = 0.40$, $p < 0.001$. The East Asian groups’ should-want associations were $\beta = 0.58$ and $\beta = 0.50$ for the EA-ENG and EA-EA groups respectively, not much different from the Classmate situations.

The cultural differences in the Family situations were in the middle, with neither group being significantly different from the Euro-Canadians (who had an average should-want relationship of $\beta_{10} = 0.43$, $p < 0.001$) but the differences still appearing larger than for the classmate situations: the acculturated East Asian group displayed a trend of a stronger relationship between Shoulds and Wants, $\beta_{13} = 0.13$, $p = 0.101$, and the less acculturated group
was again not significantly different from the Euro-Canadians, $\beta_{14} = .08$, $p = .309$. The East Asian groups’ should-want associations were $\beta = 0.56$ and $\beta = 0.51$ for the EA-ENG and EA-EA groups respectively, again not much different from the associations reported in the other situations.

Though only suggestive evidence, this suggests a boundary condition for the cultural differences in should-want correlations, as the cultural differences in should-want associations disappeared entirely in the distant relationships (classmates). However, it is interesting that it is the Euro-Canadians, not the East Asian Canadians, who appeared to change their should-want associations across relationship situations. While East Asian Canadians appear to keep a fairly high association between feeling obligated and feeling like they want to help across situations, Euro-Canadians possibly feel a greater congruence between should and want when they are interacting with a stranger (a classmate) than when they are interacting with friends and family. Interpretations of this difference can be found in the Summary and Discussion section of this chapter.

**Relationship between Obligations and Emotions.** Secondly, I tested for cultural differences in the emotional experience of obligations, by testing to what degree *should* was associated with positive and negative emotions. As will be seen below, as predicted and replicating Study 1, East Asian-Canadians felt more positive emotions about feeling that they should help than did Euro-Canadians. (With one exception the effects of cultural source of scenarios were entirely null, and so for the sake of clarity those results are confined to footnotes.8)

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8 To examine the effect of scenario cultural source on the association of Should with Positive and Negative emotions, an HLM equation with the following Level 1 model was computed: $Y_{ij} = \beta_0 + \beta_1$Positive + $\beta_2$Negative + $\beta_3$Scenario + $\beta_4$Scenario X Positive + $\beta_5$Scenario X Negative + $\epsilon_{ij}$. Each Level 1 coefficient was then predicted by the Level 2 variables of Age (centered), gender, and the two cultural dummy codes. Controlling for Scenario source, the association of Should with Positive and Negative emotions and the cultural effects on those associations were unchanged from the analyses described below. Only one of the remaining 15 higher-level coefficients was significant, showing that East Asian-sourced scenarios encouraged participants of all cultures to associate fewer Negative emotions with Should ($\beta_{40} = -0.14$, $p = 0.007$) than Euro-sourced scenarios. This was conceptually
As described in Methods section above, emotion scale scores were first calculated for the three positive emotions (happy, close, proud) and the three negative emotions (unhappy, ashamed, frustrated) for each scenario an individual responded to. The relationship between Should, Positive emotions, and Negative emotions was then modeled at Level 1 (within-person), as follows:

**Level 1:** \[ Y_{ji} = \beta_{0j} + \beta_{1j}\text{Positive} + \beta_{2j}\text{Negative} + \epsilon_{ji} \]

\[ \beta_{0j} = \beta_{00} + \beta_{01}\text{Age} + \beta_{02}\text{Gender} + \beta_{03}\text{Euro/EA-ENG} + \beta_{04}\text{Euro/EA-EA} + u_{0j} \]

\[ \beta_{1j} = \beta_{10} + \beta_{11}\text{Age} + \beta_{12}\text{Gender} + \beta_{13}\text{Euro/EA-ENG} + \beta_{14}\text{Euro/EA-EA} + u_{1j} \]

\[ \beta_{2j} = \beta_{20} + \beta_{21}\text{Age} + \beta_{22}\text{Gender} + \beta_{23}\text{Euro/EA-ENG} + \beta_{24}\text{Euro/EA-EA} + u_{2j} \]

In this equation, at Level 1 the association between Should and Positive and Negative ratings (all on the original scale of 1-6) is estimated at the participant level; at Level 2, the effects on this association of the participant’s age, gender, and culture of the participant are estimated.

Specifically, at Level 1, \( Y_{ji} \) is the scale score on Should for participant \( j \) in scenario \( i \), \( \beta_{0j} \) is a random coefficient representing the Should intercept for participant \( j \), \( \beta_{1j} \) is a random coefficient representing the level of association between Should and Positive emotions for participant \( j \) across the 20 scenarios, and \( \beta_{2j} \) is a random coefficient representing the level of association between Should and Negative emotions for participant \( j \) across the 20 scenarios. Positive and Negative are the scale scores (from 1-6) for participant \( j \) in helping report \( i \), and \( \epsilon_{ij} \) represents error.

At Level 2, the three random coefficients \( \beta_{0j}, \beta_{1j} \) and \( \beta_{2j} \) are predicted by participant’s age (centered), gender (Male: -1; Female: 1), and two dummy codes for culture comparing the Euro-

consistent with the effect of participant culture, below, and suggests that situations experienced by East Asians might encourage less negative experiences of Should.
Canadian group to the two East Asian groups in turn: Euro/EA-ENG comparing Euro-Canadians (0) to East Asian Canadians who speak English with friends (1), and Euro/EA-EA comparing Euro-Canadians (0) to East Asian Canadians who speak an East Asian language with friends (1). (To complete the dummy codes, the other East Asian group is coded as 0 for each culture dummy code respectively (West et al., 1996).) The error terms \( u_{0j} \), \( u_{1j} \), and \( u_{2j} \) represent random effects error.

The coefficients of most interest to us are \( \beta_{13} \) and \( \beta_{23} \), indicating the interaction effect of being Euro-Canadian or acculturated East Asian Canadian on the Obligated-Positive and Obligated-Negative associations respectively; and \( \beta_{14} \) and \( \beta_{24} \), indicating the interaction effect of being Euro-Canadian vs. unacculturated East Asian Canadian on the Obligated-Positive and Obligated-Negative associations respectively.

As can be seen in Table 3.3, the average Euro-Canadian had a strong relationship between feeling they should help and positive emotions, \( \beta_{10} = 0.34, p < 0.001 \). However, both East Asian groups had significantly stronger associations than the Euro-Canadian group, with interaction effects of \( \beta_{13} = 0.28, p = .001 \) and \( \beta_{14} = 0.30, p = .003 \) for the relatively acculturated and unacculturated East Asian groups respectively. For negative emotions, the average Euro-Canadian felt less negative emotion when feeling that they should help, \( \beta_{20} = -0.27, p = .005 \), and the two East Asian groups did not differ from the Euro-Canadian group in this regard, interaction p’s = .885 and 0.874 respectively. However, females exhibited a stronger relationship than males between negative emotions and a feeling that they should help, \( \beta_{22} = 0.21, p < .001 \).
Table 3.3: Study 2, Emotional experience of Should

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Should)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
<td>3.33</td>
<td>0.26</td>
<td>153</td>
<td>12.91</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{01}$</td>
<td>-0.12</td>
<td>0.07</td>
<td>153</td>
<td>-1.73</td>
<td>0.086</td>
</tr>
<tr>
<td>Gender, $\beta_{02}$</td>
<td>-0.35</td>
<td>0.15</td>
<td>153</td>
<td>-2.37</td>
<td>0.019</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
<td>-1.14</td>
<td>0.34</td>
<td>153</td>
<td>-3.36</td>
<td>0.001</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
<td>-0.98</td>
<td>0.38</td>
<td>153</td>
<td>-2.56</td>
<td>0.012</td>
</tr>
<tr>
<td>For Positive Emotions slope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
<td>0.34</td>
<td>0.06</td>
<td>153</td>
<td>5.45</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{11}$</td>
<td>0.02</td>
<td>0.02</td>
<td>153</td>
<td>1.34</td>
<td>0.183</td>
</tr>
<tr>
<td>Gender, $\beta_{12}$</td>
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<td>0.04</td>
<td>153</td>
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<td>0.515</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
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<td>0.08</td>
<td>153</td>
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<td>0.001</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
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<td>0.10</td>
<td>153</td>
<td>3.04</td>
<td>0.003</td>
</tr>
<tr>
<td>For Negative Emotions slope</td>
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<tr>
<td>Intercept, $\beta_{20}$</td>
<td>-0.27</td>
<td>0.09</td>
<td>153</td>
<td>-2.88</td>
<td>0.005</td>
</tr>
<tr>
<td>Age, $\beta_{21}$</td>
<td>-0.01</td>
<td>0.03</td>
<td>153</td>
<td>-0.23</td>
<td>0.821</td>
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<tr>
<td>Gender, $\beta_{22}$</td>
<td>0.21</td>
<td>0.05</td>
<td>153</td>
<td>3.93</td>
<td>0.000</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{23}$</td>
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<td>0.12</td>
<td>153</td>
<td>0.15</td>
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<tr>
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<td>0.02</td>
<td>0.13</td>
<td>153</td>
<td>0.16</td>
<td>0.874</td>
</tr>
</tbody>
</table>

Chapter 3: Study 2, “20 Favors”
Figure 3.3: Study 2, Emotional experience of Should

Note: Emotions graphed at the average level of the other emotion (Positive M = 3.39, Negative M = 1.44)

**Relationship between Want and Emotions.** Third, I tested for cultural differences in the emotional experience of a sense of agency, by examining to what degree want was associated with positive and negative emotions. As in Study 1, I found that East Asian Canadians also associated more positive emotions with wanting to help than did Euro-Canadians. (With one exception the effects of cultural source of scenarios were entirely null, and so for the sake of clarity those results are confined to footnotes.⁹)

---

⁹ To examine the effect of scenario cultural source on the association of Want with Positive and Negative emotions, an HLM equation with the following Level 1 model was computed: \( Y_{ij} = \beta_0 + \beta_{1i}\text{Positive} + \beta_{2i}\text{Negative} + \beta_{3i}\text{Scenario} + \beta_{4i}\text{Scenario X Positive} + \beta_{5i}\text{Scenario X Negative} + \varepsilon_{ij}. \) Each Level 1 coefficient was then predicted by the Level 2 variables of Age (centered), gender, and the two cultural dummy codes. Controlling for Scenario source, the association of Want with Positive and Negative emotions and the cultural effects on those associations were unchanged from the analyses described below. Only one of the remaining 15 higher-level coefficients was marginally significant, suggesting that East Asian-sourced scenarios encouraged participants of all cultures to associate more Negative emotions with Want (\( \beta_{20} = 0.08, p = 0.058 \)) than did Euro-sourced scenarios. This is inconsistent with the idea that East Asians feel equally positive about Wanting to help as do Westerners.
The HLM model was the same as described for the emotional experience of Should, predicting Want from Positive and Negative emotions at Level 1, and at Level 2 testing for effects of age (centered), Gender (-1, Male; 1, Female) and culture with two dummy codes comparing European Canadians (0) to relatively acculturated East Asian Canadians who spoke English with friends (1) (Euro vs. EA-ENG) and then European Canadians (0) to relatively unacculturated East Asian Canadians who speak an East Asian language with their friends (1) (Euro vs. EA-EA).

As can be seen in Table 3.4, the average Euro-Canadian had a strong relationship between feeling they wanted to help and positive emotions, $\beta_{10} = 0.64$, $p < 0.001$. However, both East Asian groups had significantly more positive associations between positive emotions and want than the Euro-Canadian group, with interaction effects of $\beta_{13} = 0.13$, $p = .031$ and $\beta_{14} = 0.19$, $p = .003$ for the relatively acculturated and unacculturated East Asian groups respectively.

For negative emotions, the average Euro-Canadian felt less negative emotion when feeling that they should help, $\beta_{20} = -0.89$, $p < .001$, and the two East Asian groups did not much differ from the Euro-Canadian group in this regard, although the acculturated East Asian Canadian group had a marginally stronger relationship between negative emotions and wanting to help, $\beta_{23} = 0.20$, $p = .078$.

There were no effects of age or gender on the emotions associated with wanting to help.
Table 3.4: Study 2, Emotional experience of Want

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Intercept (Want)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{00}$</td>
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<td>153</td>
<td>11.02</td>
<td>0.000</td>
</tr>
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<td>Age, $\beta_{01}$</td>
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<td>0.06</td>
<td>153</td>
<td>-1.32</td>
<td>0.190</td>
</tr>
<tr>
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<td>0.14</td>
<td>153</td>
<td>-0.33</td>
<td>0.746</td>
</tr>
<tr>
<td>Euro vs. EA-ENG, $\beta_{03}$</td>
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<td>0.35</td>
<td>153</td>
<td>-2.50</td>
<td>0.014</td>
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<tr>
<td>Euro vs. EA-EA, $\beta_{04}$</td>
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<td>0.36</td>
<td>153</td>
<td>-3.19</td>
<td>0.002</td>
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<tr>
<td>For Positive Emotions slope</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{10}$</td>
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<td>153</td>
<td>14.14</td>
<td>0.000</td>
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<tr>
<td>Euro vs. EA-ENG, $\beta_{13}$</td>
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<td>0.06</td>
<td>153</td>
<td>2.18</td>
<td>0.031</td>
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<tr>
<td>Euro vs. EA-EA, $\beta_{14}$</td>
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<td>0.06</td>
<td>153</td>
<td>3.09</td>
<td>0.003</td>
</tr>
<tr>
<td>For Negative Emotions slope</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept, $\beta_{20}$</td>
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<td>0.09</td>
<td>153</td>
<td>-9.73</td>
<td>0.000</td>
</tr>
<tr>
<td>Age, $\beta_{21}$</td>
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<td>0.02</td>
<td>153</td>
<td>1.12</td>
<td>0.233</td>
</tr>
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<td>Gender, $\beta_{22}$</td>
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<td>Euro vs. EA-ENG, $\beta_{23}$</td>
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<td>1.77</td>
<td>0.078</td>
</tr>
<tr>
<td>Euro vs. EA-EA, $\beta_{24}$</td>
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<td>0.13</td>
<td>153</td>
<td>1.41</td>
<td>0.160</td>
</tr>
</tbody>
</table>
Mediators of the cultural differences in emotional experience of Should and Want relationships? As in Study 1, I tested for mediation of these cultural differences in emotional experience using the same individual difference variables, entering them one by one in turn at Level 2 for both the Should and Want analyses. As a minimal requirement for mediation, the potential mediator must independently predict the DV, controlling for culture. In no cases was this true. When each mediator was entered into the prediction equation simultaneously with the two cultural codes, no mediator was significantly predictive of emotional associations with either should or want, and neither did the cultural codes change from the above analyses.
Summary and Discussion

In this study, I found that even when imagining themselves in the same types of situations, East Asian Canadians tended to report feeling higher associations between feeling that they “should” help and feeling that the “wanted” to help. Moreover, like Study 1, East Asian Canadians felt more positive emotions than Euro Canadians about feeling an obligation to help and also about feeling that they wanted to help. Despite using different scenarios and a reduced number of items to measure the motivations and emotions, the cultural differences found in Study 1 were fully replicated.

We also see that like in Study 1, East Asian Canadians are more likely than Euro-Canadians to be higher in hierarchically collectivistic values, and that these marginally and partially mediated the cultural differences found in should-want correlations. Relationally-collectivistic individual differences, however, did not show any signs of mediating these cultural differences.

A new piece of information is that the cultural source of the situations also affected the should-want associations in a predictable fashion. For both the Euro-Canadian and unacculturated East Asian Canadian groups, participants’ ratings of feeling they should and wanted to help were more congruent when they were imagining themselves in the scenarios that had come from Study 1’s East Asian participants than in those that had come from Euro-Canadian participants.

This study replicates Study 1 in all main effects and marginally replicates in the meditational effects. East Asian cultural background and hierarchical values appear to make people more likely to feel like they purposefully choose to and want to fulfill social obligations. This effect appears both when participants report on the experience of daily helping behavior (Study 1) and also in response to a larger set of scenarios drawn from other participants’
descriptions of daily helping behavior (Study 2). In other words, as hypothesized, both in their own individual daily life experiences and also when imagining themselves in the same situations, East Asian Canadians tend to experience a higher association between experiencing obligatory motivations to help and agentic motivations to help. They also experience more positive emotions in relation to both types of motivation. These findings suggest that part of the reason that Self-Determination Theory proposes that agentic motivations are more healthy than obligated motivations (Ryan, Deci, Grolnick, & La Guardia, 2006) may be that a sense of obligation is relatively unpleasant, and un-agentic, in Western society. However, it is also notable that in all cultural groups, there was a surprisingly strong association of obligations with both agentic and positive emotions. The implications of this “oddly” positive sense of obligation are discussed further in the last chapter of this dissertation.

It is especially intriguing that the cultural source of the scenarios influenced participants’ should-want associations. Despite the skeletal descriptions of the helping scenarios, and the fact that they were all originally rated at the same difficulty level, something about the Euro-sourced scenarios discouraged high congruency between obligated and agentic motivations to help, while the East-Asian sourced scenarios encouraged higher should-want correlations. The fact that the scenario source affected the Euro and unacculturated East Asian groups, but did not affect the acculturated East Asian group, may also help explain why the cultural differences between the Euro and acculturated East Asian group were stronger than the cultural differences between the Euro and unacculturated East Asian group in this study (i.e. the unacculturated East Asian group’s should-want associations were unattenuated by scenario effects). The question of what specific qualities of the scenarios led to the differences in should-want congruence is an interesting one that further research on more of the open-ended scenarios from Study 1 might address.
Finally, one interesting aspect of this study is that in the four classmate situations, there were not even trends of cultural differences in the degree to which agentic and obligated motivations were associated, while cultural differences in the family and friends situations showed a trend of stronger should-want relationships among East Asian Canadians than among Euros. The changes, moreover, seemed to be due more to movement in the should-want correlations for Euro-Canadians than for East Asian Canadians, with Euro-Canadians having relatively low should-want associations in the family and friend scenarios but rising up to the East Asian levels in the stranger (Classmate) scenarios. Caution is advised in drawing strong conclusions about the effect of relationship on the should-want associations in this study, as the smaller number of Classmate scenarios might have made it difficult to capture cultural differences in should-want associations. Speculatively, however, it suggests that East Asian Canadians are in general unlikely to feel obligations to help that are incongruent with their personal desires to help, regardless of who they are helping, while Euros are more likely to have incongruency between their desires and sense of obligation when helping family and friends than strangers. It may be that Euro-Canadians feel a sense of virtue when obliged to help strangers, as if it were a form of charity. With friends and family, on the other hand, they are more likely to report either feeling motivated by a simple desire to help or motivated by feeling that they ought to help, but not by feeling both at the same time. While East Asians appear to have a general policy of self-endorsing their obligations, Westerners may resist this kind of congruency more for people with whom they have a closer relationship.

In conclusion, Study 1 replicated Study 2 in all main effects. Once again, East Asian Canadians were more likely than Euro-Canadians to feel “whole-hearted” about their obligations to help, feeling both obligated and agentic motivations to help others. New in Study 2, it was found that the cultural source of the scenarios participants imagined themselves in had a similar
effect as being of that culture yourself, suggesting that Euro-Canadians, relative to East Asian
Canadians, tend to more often experience daily situations that objectively involve less
congruency between obligated and agentic motivations to help. And finally, some evidence was
found that East Asian Canadians have a general “policy” of feeling agentic when they feel
obligated, regardless of who it is they are helping, while Euro-Canadians report more
congruency between obligated and agentic motivations for strangers than they do when helping
family and friends.
Chapter 4: Study 3, Priming Culture

Introduction

In studies 1 and 2, East Asian Canadians were more likely than Euro Canadians to “want” to do what they “should” do. There was also suggestive evidence that this cultural difference arises because of individual differences in hierarchically collectivistic values, which are more likely to be endorsed by people who have been exposed to East Asian culture, and partially mediate the cultural differences found in should-want correlations.

The advantage of searching for meditational variables explaining cultural differences is that it moves us beyond simply finding cultural differences to exploring what about culture leads to those group differences (Heine & Norenzayan, 2006). However, one of the inherent difficulties in exploring the “why” of group cultural differences through individual-difference scores on scales is that various response biases frequently make cross-cultural comparisons of mean individual differences invalid (Heine, Buchtel, & Norenzayan, 2008; Heine et al., 2002). In general, social comparison theory (Festinger, 1954) suggests that we tend to implicitly compare ourselves to the average behavior of our reference group. When cultures provide different reference groups, whether they be actual average differences in behavior or different implicit norms for how we ought to act, then the responses by individuals from different culture groups may not be comparable. Cultural differences may be masked or indeed found to be opposite to that expected (as in the deprivation effect, in which individuals value behaviors that are less often seen in their own culture, Peng et al., 1997). Given the problems with comparing scale scores across cultures, the fact that there was evidence for partial mediation by individual differences in hierarchical collectivistic values is already quite remarkable, and indeed the actual
individual differences between individuals influenced by different cultures may have been attenuated.

Another method of figuring out “why” cultural differences exist is to temporarily increase the availability of a certain aspect of another culture through “priming” (Oyserman & Lee, 2008). For example, asking Western participants to circle “we” pronouns makes it easier for them to perform holistic cognitive tasks such as memory for where items lay in a grid or more difficult to perform analytic tasks such as identify individual parts of a whole (Kühnen & Oyserman, 2002). This lends support to the theory that the reason East Asians tend to perform better on holistic and worse on analytic tasks than Westerners is due to the greater daily emphasis on paying attention to one’s relationships with others in East Asian societies (Nisbett et al., 2001). Such priming studies allow one to move from correlational evidence of cultural differences to experimental evidence of the causes of those cultural differences (Oyserman & Lee, 2008).

However, can the effect of having been brought up in a particular culture really be fully reflected in the effect of a temporary prime? For certain complex aspects of cultural differences, it may not be the case that priming will be able to create the same mindset as being brought up in that culture will; priming is unlikely to “turn a Chinese communal farmer into a cowboy” (Fiske, 2002, p. 80). Previous research has found that both Westerners’ and East Asians’ reported sense of obligation to help others has been increased through classic cultural priming paradigms, such as reading a description of a Sumerian warrior making a decision that helps his family (vs. himself), or circling “we” pronouns in a paragraph (vs. circling “I” pronouns). But do Westerners and East Asians given these types of primes therefore feel the same way about those increased obligations? In other words, will Westerners who feel a greater sense of obligation to help also feel more agentic and about the obligation to help? In a culture that prototypically emphasizes the freedom of the self over the joy of doing one’s duty, and in which these two things are often
held to be in conflict, it may in fact be the case that simply raising one’s sense of obligation will not lead to a greater sense of agency.

With these caveats in mind, in this study I explored whether or not I could induce greater obligation-agency associations in Westerners and East Asians through one of the typical priming-culture tasks, the Sumerian Warrior task (Trafimow, Triandis, & Goto, 1991), in which participants either read about an ancient Mesopotamian warrior who makes a family-enhancing decision (the “interdependence prime”) or a self-enhancing decision (the “independence prime”). If simply making the obligation to help one’s family more salient will prime a sense of fulfilling one’s obligations as being more concordant with one’s personal values, then we would predict that regardless of cultural background, participants who are primed with the interdependence paragraph should later exhibit higher correlations between their stated obligated and agentic motivations to help, while those who read the independence-priming paragraph should later exhibit lower correlations.

In this study, in addition to the attempt to replicate cultural effects experimentally, I went beyond the past two studies by using a sample of participants currently living in Shanghai, China. In the previous studies, the use of East Asian participants who currently live in Canada may have introduced variables of acculturation, identification with (or rebellion against) heritage culture, and immigrant experiences that could have influenced East Asian participants in Canada. In contrast, Chinese participants in Shanghai represent a sample who have been unaffected by acculturation and immigration to Canada, though, like our Canadian participants, they represent an urban and highly modernized section of society.

Method

Participants. A total of 180 participants took part in this study, consisting of 42 Euro-Canadians (19% male, mean age = 21), 58 East Asian Canadians (47% male, mean age = 21),
and 80 Chinese (23% male; mean age = 20). Both sets of participants filled out the survey during a class break in a Psychology class. The Canadian participants were from the University of British Columbia, and the Chinese participants were from East China Normal University, a large university in Shanghai, China. All participants received candy in return for their participation. The Canadian and Chinese samples differed significantly in age, $F(2, 178) = 8.22$, $p < 0.001$, and the three groups also differed in gender proportion, Kruskal-Wallis test, $\chi^2 = 12.43$, $p = .002$.

**Materials and Procedure.** Participants were randomly assigned to either the Independent or Interdependent prime conditions. On the first page of the survey (see Appendix E), participants read a paragraph about an ancient general in Sumeria who made a decision that either benefitted his family (Interdependent condition) or himself (Independent condition), and rated the degree to which they admired the main character (Trafimow et al., 1991).

To increase the realism of the helping situations, participants were then asked to think of a particular friend (not a boyfriend, girlfriend, or relative), and write down the friend’s initials. Participants then read six stories about situations in which that friend needed help. These situations were based on situations described by students in Study 1, and were elaborated on by Chinese-Canadian undergraduate research assistants to describe relatively troublesome favors (see Appendix E for full text). For each story, participants were asked about their motivations to help in that situation. As in Study 1, Agentic motivations were measured with three items (wanted to help, felt it was personally important to help, and felt like they chose to help), and Obligated motivations were also measured with three items (should help, felt expected to help, and felt it was their duty to help).

Finally, participants were asked for information about the closeness of their relationship with their friend, and basic demographic information.
Results

**Relationship between Obligated and Agentic motivations: HLM analyses.** Did the Interdependence prime increase the relationship between Obligated and Agentic motivations? To examine the effect of condition on the Obligated X Agentic motivations relationship, I adopted a similar analytic strategy to the previous studies. At Level 1, I predicted the Obligated scale scores from the intercept and Agentic motivations, while at Level 2 I entered variables to examine the effect of condition, culture, and condition X culture interactions, controlling for age and gender:

**Level 1:**

\[ Y_{ji} = \beta_0j + \beta_{1j}\text{Agentic} + \epsilon_{ji} \]

\[ \beta_{0j} = \beta_{00} + \beta_{01}\text{Age} + \beta_{02}\text{Gender} + \beta_{03}\text{Euro/EA-Can} + \beta_{04}\text{Euro/Chinese} + \beta_{05}\text{Condition} + \beta_{06}(\text{Condition X Euro/EA-Can}) + \beta_{07}(\text{Condition X Euro/Chinese}) + u_{0j} \]

\[ \beta_{1j} = \beta_{10} + \beta_{11}\text{Age} + \beta_{12}\text{Gender} + \beta_{13}\text{Euro/EA-Can} + \beta_{14}\text{Euro/Chinese} + \beta_{15}\text{Condition} + \beta_{16}(\text{Condition X Euro/EA-Can}) + \beta_{17}(\text{Condition X Euro/Chinese}) + u_{1j} \]

Specifically, at Level 1, \( Y_{ji} \) is the scale score on Obligated (from 1-6) for participant \( j \) in situation \( i \), \( \beta_{0j} \) is a random coefficient representing the Obligated intercept for participant \( j \), and \( \beta_{1j} \) represents the level of association between obligated and agentic motivations for participant \( j \) across the six helping situations. Agentic is the scale score (from 1-6) for participant \( j \) in situation \( i \), and \( \epsilon_{ji} \) represents error.

At Level 2, the two random coefficients \( \beta_{0j} \) and \( \beta_{1j} \) are predicted by gender (Male, -1; Female, 1), age (centered), and Priming Condition (Independent = -1, Interdependent = 1). I also
entered two dummy codes testing for cultural differences between the Euro-Canadian and East Asian Canadian groups (Euro vs. EA-CAN: Euro-Canadian, 0; East Asian Canadian, 1; Chinese, 0) and between the Euro-Canadian and Chinese groups (Euro vs. Chinese: Euro-Canadian, 0; East Asian Canadian, 0; Chinese, 1). Finally, to control for any different effects of condition on cultural groups, I also included interaction terms for condition and culture.

The results, as displayed in Table 6.1, suggested no effect for condition; instead, replicating our main thesis, the Chinese participants had higher obligated-agentic motivation relationships than did Euro-Canadians. Specifically, as can be seen in Table 6.1, the Obligated-Agentic motivations relationship was influenced by neither age, gender, nor condition, nor were there any interactions between culture and condition. However, the overall Obligated-Agentic motivations relationship resembled that found in the previous two studies. As before, for the average Euro-Canadian, there was a strong relationship between feeling Obligated and Agentic motivations, $\beta_{10} = 0.52$, $p < 0.001$. The East Asian Canadian group was not significantly different from this slope $\beta_{14} = 0.06$, $p = 0.489$, but the Chinese group had significantly more positive associations between Obligated and Agentic motivations, $\beta_{15} = 0.19$, $p = .022$. 
### Table 4.1: Study 3, Mediators of cultural differences in Obligated-Agentic associations

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Unstandardized Coefficient</th>
<th>se</th>
<th>df</th>
<th>t Ratio</th>
<th>p</th>
</tr>
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<td><strong>For Intercept (Obligated)</strong></td>
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<td>172</td>
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<td>0.288</td>
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<td>Condition X Euro/EA-CAN, $\beta_{06}$</td>
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<td>172</td>
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<tr>
<td>Condition X Euro/Chinese, $\beta_{07}$</td>
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<td><strong>For Agentic Motivations slope</strong></td>
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<td>Intercept, $\beta_{10}$</td>
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<td>0.03</td>
<td>172</td>
<td>-0.58</td>
<td>0.563</td>
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<tr>
<td>Condition, $\beta_{13}$</td>
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<td>0.07</td>
<td>172</td>
<td>0.00</td>
<td>0.999</td>
</tr>
<tr>
<td>Euro vs. EA-CAN, $\beta_{14}$</td>
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<td>0.09</td>
<td>172</td>
<td>0.69</td>
<td>0.489</td>
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<td>Euro vs. Chinese, $\beta_{15}$</td>
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<td>0.08</td>
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<td>0.08</td>
<td>172</td>
<td>-0.52</td>
<td>0.601</td>
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Mean levels of feeling Obligated to help: did the prime work? In previous research, it had been found that the Interdependent Sostoras prime increased participants’ belief that the helping of others was required. In this study, a similar effect should have taken place on the combined Obligations scale. If the primes had an effect similar to past research, participants in the Interdependence prime condition should rate themselves as more obligated to help than participants in the Independence prime.

To assess the effect of the prime on feeling obligated to help, a scale was first constructed of the three “obligated” items (should, duty, and expected) across the 6 scenarios (18 items; alpha = .94, .90, and .85 among the three cultural groups Euro-Canadian, East Asian Canadian, and Chinese respectively). I first looked for evidence that the Interdependent prime increased feeling obligated to help by conducting an overall ANOVA predicting obligated-
average from culture (3 levels) and condition (2 levels), with gender (2 levels) and age as covariates. This revealed a significant main effect for culture, $F(2, 181) = 61.71, p < .001$, as well as a significant culture X condition interaction, $F(2,181) = 2.19, p = .04$. To examine this interaction I conducted separate ANOVAs within the three cultural groups, predicting obligated-average from condition (2 levels) with gender and age as covariates. Among Euro-Canadians, those in the Interdependent condition had a marginally higher sense of obligation than those in the Independent condition, $F(1, 44) = 3.43, p = .07$, while there was no significant main effect for condition in the East Asian Canadian group ($p = .55$) nor in the Chinese group ($p = .36$).

Overall, it appears that the Interdependent prime replicated other researchers’ findings only marginally for Euro-Canadians, and had no effect on the East Asian and Chinese cultural groups.

**Summary and Discussion**

In this study, I hypothesized that participants given an Interdependent prime should exhibit higher correlations between Agentic and Obliged motivations than those given an Independent prime, regardless of cultural background. However, the results were more complex. Priming condition did not have any effect on Agentic-Obliged associations, regardless of cultural background; instead, I only found a main effect of culture, demonstrating that Chinese living in China had higher Agentic-Obliged associations than Euro-Canadians. For East Asian-Canadian and Chinese participants, the primes simply had no effect at all: they had no influence on DVs that in others’ past research had been influenced by the same prime (i.e. reported obligation to help, Gardner, Gabriel, & Lee, 1999). For Euro-Canadians, the primes did marginally influence mean reported levels of obligation for helping, suggesting that the primes did have similar effects to those found in other studies (Gardner et al., 1999). However, even
among the Euro-Canadians, priming condition still did not have any effect on our new DV of Obligated-Agentic motivation relationships.

Because different processes appear to have been occurring in the Euro-Canadian and East Asian data, I discuss these groups separately. Perhaps the most interesting result is that the priming conditions apparently did replicate past research’s effects on the Euro-Canadians, raising their sense of obligation to help others, but did not have any effect on the relationship between Agentic and Obligated motivations. In other words, the priming appeared to have half of the cultural effect—making obligations to help others seem more salient—but did not have the other half of the effect: making participants feel more willing to help. This might suggest that the type of “interdependent culture” primed by the Sostoras story is not in fact the key cultural variable that explains the cultural differences found previously (and in this study) on Obligated-Agentic concordance.

This set of primes, therefore, might not have been appropriate for priming “Confucian values” in either Euro-Canadians or our East Asian and Chinese samples. The Interdependent prime, in which a Sumerian warrior determines how best to help his family, may not have been an appropriate method of priming a Confucian sense of valuing doing one’s duty. I chose this prime because of the commonly-used cultural primes (Oyserman & Lee, 2008) this prime seemed closest to our theorized cultural variable of vertical collectivism rather than relational collectivism. In the Interdependent Sostoras story, a warrior considers giving a family member a coveted position as general of an army; but his decision is explained by the various advantages that will accrue to himself and his family, such as cementing his family’s loyalty to him and “increasing the family’s power and prestige,” while there is nothing in the story that suggests that Sostoras made these choices out of a sense of personally valuing the fulfillment of others’ expectations. Rather than “fitting in,” Sostoras is a powerful person who can decide the fate of
members of his family at will. The exposure to a story in which a person helps a family member, but does so in a way that aggrandizes himself and his family, may not have primed the “honorably fulfilling one’s duty” concepts that Studies 1 and 2 suggested are behind the cultural differences in obligated-agentic motivations correlations. This may be especially the case for our Euro-Canadian sample, in which the sense of obligations being intrinsically intertwined with a sense of value may be a complex concept that is not automatically primed in Western participants by simply thinking of their family. Finally, though seeking advantages for one’s family could be seen as filial behavior, it might also make participants think of nepotism and corruption (which might have had an especially negative connotation in Shanghai).

This might explain why the Interdependent prime did not make East Asian Canadians and Chinese students have higher obligated-agency associations than usual. But why did Chinese and East Asian participants not become more Western-like upon reading the self-promoting Independent priming condition, compared to the Interdependent priming condition? As the ANOVA results show, the effect of the primes simply does not replicate past effects (even those found in other East Asian participants, such as one study that found this effect in Hong Kong Chinese, Gardner et al., 1999). This suggests that the prime just happened to not affect our East Asian-Canadian and Chinese samples, possibly because the dependent variable—imagining helping one’s friend—was too strong to be influenced by the primes, possibly because the independent prime did not actually cause participants to think differently from usually due to modern emphases on self-advancement in Chinese university students, or possibly simply because of a chance occurrence due to our sample.

For future research, it might be best to branch out beyond the typical primes used in the literature. The primes that are typically used may be more appropriate for cultural differences that tap into the “relational” aspect of collectivism—for example, a sense of the interdependent
self-concept, in which one’s own self-concept is intertwined with close others. As was suggested by the meditational analyses in studies 1 and 2, this aspect of cultural differences between East Asia and the West may not be the “active variable” explaining the correlations between Obligated and Agentic motivations. Instead, a distinction may be made between simply being “close” to others vs. actually having positive associations with fulfilling one’s duty, which might be a more Confucian-specific cultural difference. It would be interesting to try a prime that better captures the cultural variable of the honor of fulfilling one’s social roles, vs. the cultural variable of valuing independence from others. For example, asking participants to read and write about one of the Confucian Analects described in the Introduction, contrasted with reading a passage from J.S. Mill’s On Liberty extolling the virtues of independence, might induce a sense of respecting vs. devaluing the fulfillment of social expectations, thus achieving more “experimental” evidence of the suspected active variable (Oyserman, Kemmelmeier, & Coon, 2002; Oyserman & Lee, 2008).

Finally, it is of note that in this study, I failed to find significant differences between the Euro-Canadian and East Asian Canadian samples, although the difference was in the right direction. In this study, our sample of East Asian Canadians was not large enough to divide participants into reliable more and less acculturated groups, which might have increased our ability to see cultural differences; only 20 of the 58 East Asian participants spoke an East Asian language with friends. In general, however, the difference between East Asian-Canadian and Euro-Canadian groups should be smaller than that between Euro-Canadian and Chinese groups. Comparison of the coefficients for cultural differences suggests that the size of the Euro-Canadian vs. Chinese cultural differences in this study are comparable to the cultural differences between Euro-Canadian and East Asian Canadian participants in Study 2, and smaller than the differences in Study 1, suggesting that perhaps a) the small number of situations in this study and
b) participants imagining themselves in situations, rather than reporting on actual situations experienced, may make it more difficult to find cultural differences.

A major strength of this study, however, is that it moves beyond our past comparisons with East Asian Canadians to a sample of Chinese living in China, which answers some potential questions about the effect of their status as immigrants on the East Asian Canadians’ responses in our previous studies. Overall, despite the null effect of the primes, this study adds to our confidence that individuals more influenced by East Asian culture are more likely to experience social obligations as agency-supportive.

In conclusion, in this study an “interdependent” cultural prime failed to increase the congruency between participants’ obligated and agentic motivations to help. It is likely that the prime was not specific enough, and that primes that focused more explicitly on Confucian values about feeling a sense of virtue by doing one’s duty would have a stronger effect. However, in this study I did find that Chinese participants living in Shanghai showed stronger congruence between obligated and agentic motivations to help than did Euro-Canadians and East Asian Canadians, suggesting that the cultural differences found among Canadians of different cultural backgrounds were generalizable to Chinese living in China.
Chapter 5: Study 4, Priming Expectations

Introduction

In Studies 1, 2, and 3, there was consistent correlational evidence that for East Asians, and those who are more hierarchically collectivistic, the fulfillment of external expectations by helping someone is experienced in a self-willed, agentic manner. This was found in a variety of situations, including personal daily reports on the experience of daily helping behavior (Study 1); in response to a larger set of scenarios drawn from other participants’ descriptions of daily helping behavior (Study 2); and in a small, experimenter-created set of scenarios (Study 3). It was also found both within Canadian samples of participants of East Asian vs. Western European cultural backgrounds (Studies 1 and 2) and between samples of Euro-Canadian participants living in Canada and Chinese participants living in China (Study 3).

In analyzing this data with multi-level modeling, we gain an understanding of the within-person process of experiencing external pressures. However, though in each of these studies I found correlational evidence for culturally different experiences of external pressures, I have not shown evidence for the directionality of this experience: do “shoulds” lead to “wants,” or could it be that “wants” lead to “shoulds?” The previous studies do show that among East Asian Canadians and Chinese, external and internal motivations are more highly correlated than they are among European Canadians. I have interpreted this to suggest that for those more influenced by East Asian culture, an experience of having a strong obligation leads to a sense of agentic fulfillment of those expectations. However, it is also possible that East Asian culture encourages an opposite effect: that the more one wants to do something, the more one perceives (or assumes) that others expect you to do that action.

Study 4 was designed to seek evidence for the former directional argument, using a sentence-unscrambling task (Srull & Wyer, 1979) to implicitly prime Chinese and Euro-
Canadian participants with either the concepts of expectations/obligations or concepts of freedom/choice. Participants are then asked to respond to four helping scenarios, measuring how likely they would be to help, how agentic they would feel about helping, and how positive and negative they would feel about helping.

In this study, I included three conditions: an expectations priming condition, a freedom priming condition, and a neutral condition.

**Hypothesized effect of condition on Chinese participants.** How should the conditions influence a sense of agency about helping in the Chinese participants? Relative to the freedom and neutral conditions, Chinese participants should be more likely to feel agentic in the expectations condition. A sense of freedom, rather than being invigorating, might actually make Chinese participants feel at a loss. Without a role to fulfill, their sense of purpose and agency might even be reduced, as helping without any sense of fulfilling one’s duties as one did so might seem relatively meaningless. Similarly, Chinese participants should also be more likely to feel more positive feelings about helping in the expectations than freedom and neutral conditions, and less likely to feel negative emotions; the expectations condition should also be relatively more motivating for intentions to help, thus increasing participants’ ratings of how likely they would be to help.

**Hypothesized effect of condition on Euro-Canadian participants.** For Euro-Canadian participants, the predictions were less clear-cut. A sense of expectations might be expected to induce a sense of coercion among Euro-Canadian participants, and thus reduce their sense of agency compared with the neutral condition when imagining helping others. On the other hand, we saw in the above studies a consistent positive relation between helping others out of obligation and agentic feelings even among Euro-Canadians; therefore a sense of expectations could possibly have a positive effect on agency. Likewise, the effect of a sense of freedom could
go either way. Though in general, a sense of freedom might induce powerful, agentic, purpose-driven goals, especially relative to the expectations condition, the effect of a sense of freedom on agentic feelings about helping others might also be negative. If one is free, in a Western context, then one may want to draw away from one’s relationships, and thus may feel less of a desire to help. I thus did not have strong predictions about the effect of the expectations condition vs. the neutral and freedom conditions on Euro-Canadians.

Method

Participants. A total of 199 participants, 93 Euro-Canadians (22% male, mean age = 22) and 106 Chinese (10% male; mean age = 22), participated in this study. Both sets of participants were recruited around libraries on large university campuses, with the Euro-Canadian participants recruited on the University of British Columbia campus, and the Chinese participants recruited on the East China Normal University campus, a large university in Shanghai, China. Participants received candy in return for their participation. The two cultural groups were not significantly different from each other in age, but the Chinese sample had a smaller proportion of males than the Euro-Canadians (Mann-Whitney U, Z = -2.22, p = 0.030).

Materials. Participants were randomly assigned to either the Expectations, Freedom, or Neutral conditions. On the first page of the survey, participants were presented with 10 “scrambled sentences,” and asked to unscramble the five words into four-word sentences. In the Expectations condition, five of the sentences contained the words “expectations,” “duty,” “ought,” “should,” and “obliged.” In the Freedom condition, five of the sentences contained the words “free,” “choice,” “desire,” “liberty,” and “variety.” In the Neutral condition, none of the 10 sentences contained such words. These sentences were translated into equivalent Chinese sentences by two bilingual translators (see Appendix F for all sentences).
Participants then read four helping scenarios, a subset of the helping scenarios in Study 3 (see Appendix F). As in Study 3, participants were asked to imagine a particular friend, to write down that friend’s initials, and imagine that friend being the subject of help in each scenario. For each scenario, participants were asked how Likely they would be to help, how much they would feel Agentic motivations to help in that situation, and their Positive and Negative emotions. The single item asking participants how Likely they were to help was combined across the four situations to form a four-item Likely scale, with low but adequate reliability in both cultural groups, $\alpha = .62$ for the Euro-Canadian group and $\alpha = .61$ for the Chinese group. As in Study 1, Agentic motivations were measured with three items (wanted to help, feel it was personally important to help, and feel like you personally chose to help). These three items were combined across the four scenarios to create a 12-item measure of Agency, which had good reliability of $\alpha = .87$ in both cultural groups. Emotion words were the same as Study 2 with the exception of the substitution of “self-respect” for the more extreme “proud.” Positive emotions were measured with three items asking to what extent participants would feel happy, self-respect, and close feelings; negative emotions were measured with the three items unhappy, ashamed, and frustrated. The 12-item Positive emotions scale had good reliability in both cultural groups, $\alpha = .87$ among Euro-Canadians and $\alpha = .89$ among Chinese, while the 12-item Negative emotions scale showed adequate reliability, $\alpha = .67$ among Euro-Canadians and $\alpha = .90$ among Chinese.

Finally, participants were asked for information about the closeness of their relationship with the friend they had imagined helping, and basic demographic information.

Results

Data analysis procedure: a caveat. For each of the four dependent variables (Likely, Agentic motivations, Positive emotions, and Negative emotions), I carried out planned within-culture ANOVAs comparing first the Expectations condition to the Freedom condition, and then
the Expectations condition to the Neutral condition, within each cultural group separately. However, it should be noted that in all cases, an overall ANOVA did not find cultural differences in the way the primes affected the dependent variables. As will be seen below, there were no effects of condition on the Euro-Canadian group, while there were trends of an effect of condition on the Chinese group. Because ANOVAs are generally underpowered in detecting spreading interactions such as these, and because I wished to maximize the chances of seeing any effect of condition within the two cultures, the cultural groups were analyzed separately despite the lack of an overall interaction with culture. Nevertheless, the resulting findings must be interpreted with caution, as we cannot say with statistical certainty that the effects of the primes were different in the two cultures.

**Sense of Agency.** According to our previous findings, I would expect that Chinese participants should feel a greater sense of agency when primed with expectations, compared to each of the other conditions, while Euro-Canadians would not.

To examine this question, I carried out planned separate analyses by culture. These analyses revealed an interesting, though weak, pattern of cultural differences, illustrated in Figure 5.1. Among Chinese participants, an ANOVA predicting agency from gender and the Expectations vs. Freedom condition showed that Chinese participants in the Expectations condition reported more agentic motivation than those in the Freedom condition, \( F(1, 67) = 3.91, p = .05 \). An identical ANOVA comparing the Expectations to the Neutral condition found a similar trend, in that the Chinese participants in the Expectations condition reported more agentic motivation than those in the Control condition, \( F(1, 69) = 3.14, p = .08 \).

The Euro-Canadian participants, however, decidedly showed neither of these effects. An ANOVA predicting agency from gender and the Expectations vs. Freedom condition showed no
effect of condition, $p = .58$. Similarly, a comparison of the Expectations to the Neutral condition showed no differences, $p = 1.00$.

Figure 5.1: Study 4, Marginal means of Agentic motivations

![Figure 5.1](image.png)

**Likelihood of helping.** According to our above findings, I would expect that Chinese participants should feel more motivated to help by a sense of expectations than by a sense of freedom or neutral. Euro-Canadians, however, might not be more motivated to help by a sense of expectations.

As with Agency, analyses also revealed a pattern of trends consistent with our hypotheses, illustrated in Figure 5.2. Among Chinese participants, an ANOVA predicting *likelihood to help* from gender and the Expectations vs. Freedom condition showed that Chinese participants in the Expectations condition were slightly more likely to help than those in the Freedom condition, $F(1,67) = 3.50, p = .07$. An identical ANOVA comparing the Expectations to the Neutral
condition found a trend of Chinese participants in the Expectations condition feeling more likely to help than those in the Control condition, $F(1, 69) = 2.88, p = .09$.

The Euro-Canadian participants, however, again did not show either of these effects. An ANOVA predicting likelihood to help from gender and the Expectations vs. Freedom condition showed no effect of condition, $p = .56$. Similarly, a comparison of the Expectations to the Neutral condition showed no differences, $p = .54$.

![Figure 5.2: Study 4, Marginal means of Likelihood of helping](image)

**Positive and Negative emotions.** There were no significant effects of condition on positive or negative emotions in the two cultures.

For positive emotions, among Chinese participants, two ANOVAs predicting positive emotions from gender and from the Expectations condition compared to the other two conditions in turn suggested that Chinese participants in the Expectations condition reported very slightly more positive emotions than those in the Freedom condition, $F(1,66) = 1.99, p = .16$, but no more
than those in the Control condition, $F(1,68) = 0.76, p = .39$. The Euro-Canadian participants decidedly showed neither of these effects, with $p$ values of 0.84 and 0.65 respectively.

For negative emotions, among Chinese participants, two ANOVAs predicting negative emotions from gender and from the Expectations condition compared to the other two conditions in turn showed no difference between the Expectations and Freedom condition, $F(1, 66) = 0.28, p = .60$, and a non-significant trend towards feeling fewer negative emotions than those in the Control condition, $F(1,68) = 2.59, p = .11$. The Euro-Canadian participants did not show any effect of condition, with $p$ values of 0.66 and 0.51 respectively.\(^\text{10}\)

**Alternative explanations.** Alternative explanations for these findings can be considered. Being a between-subjects design, it is possible that in the Chinese group of participants, those who were randomly assigned to the Expectations group happened to have more positive feelings about helping people, or were imagining helping friends who were closer to them than in the other two conditions. Several pieces of evidence suggest that this was not the case. Among the Chinese participants, there were no differences between the conditions on the qualities of the friend that the participants imagined helping, as measured by the Inclusion of Other in Self scale ($p = 0.260$), and items asking what type of friend was imagined (from “best friend” to “acquaintances;” $p = 0.539$), how long they had known their friend ($p = 0.692$), and how long ago they had seen their friend ($p = 0.176$; as indicated by ANOVAs predicting each of these qualities from gender and condition). The lack of differences in other aspects of these three conditions reduce the likelihood that the positive effect of the Expectations condition in the Chinese group was due to those in the Expectations condition imagining closer friends.

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\(^{10}\) In the comparison of the Freedom and Expectations conditions, there was a **main** effect of gender showing that females overall felt more negative emotions than males, $F(1, 58) = 4.50, p = .038$. As this is based on a sample of 15 male participants vs. 47 female participants this effect may not be reliable.
Among the Euro-Canadian participants, the null findings are also not likely to be due to differences in types of friends imagined. Relationships to friends were also similar across conditions as measured by the Inclusion of Other in Self scale (p = 0.339) and what type of friend they were imagining (from “best friend” to “acquaintances;” p = 0.640). There was a trend among participants in the Freedom condition to be imagining older friends, as indicated by answers to “how long they had known their friend,” a F(2, 86) = 2.78, p = .067 (Freedom mean = 7.75; about 6-10 years; as compared to Neutral (M = 6.56; about 4-6 years) and Expectations (M = 6.64)); participants in the Freedom condition (M = 3.03; 1-2 weeks ago) had also seen their friends longer ago, F(2, 86) = 4.56, p = 0.013 than those in the Neutral and Expectations conditions (M = 2.13 and 2.29 respectively). Overall, it is unlikely that differences in relationship to friends caused the lack of effect of condition among the Euro-Canadian participants.

**Summary and Discussion**

Overall, the results of this study suggested that for Chinese participants, a sense of obligation in fact brings to mind a feeling of agency about helping, and greater likelihood of helping. Most important for our hypothesis, within-cultural analyses showed that Chinese participants in the Expectations condition were more likely to report feeling agentic motivations for helping than those in the Freedom condition, and marginally more than those in the Neutral condition. Marginally significant comparisons among the Chinese in how Likely they would be to help showed the same pattern. These analyses provide suggestive evidence that being primed with a sense of having obligations and expectations in fact has a positive effect on Chinese participants’ sense of agency.

The effects found in this study are an important addition to the previous studies in that while each of the previous studies found increased correlations between obligated and agentic motivations among East Asian and Chinese participants relative to Euro-Canadians, the
consistent use of a similarly-measured dependent variable—associations between the two types of motivations—make them vulnerable to alternative explanations. In this study, I use a very different method of measuring cultural differences in the subjective experience of obligation, finding that unconsciously priming a sense of obligation increases agentic motivations for Chinese only.

The conclusions drawn from this study could have been stronger if we had observed stronger effects of the conditions. For example, it is not clear from the Euro-Canadian data whether the conditions were simply not strong enough to have an effect on participants, or whether in fact participants’ mixed reactions to the conditions led to the lack of difference between conditions. Likewise, the marginal significance levels of the effects in the Chinese group left something to be desired, though it is likely that slightly increased sample sizes would have led to higher significance levels. Finally, the fact that only one condition—the Chinese, Expectations condition—was different from other conditions makes this study vulnerable to alternative explanations such as lack of random assignment to conditions; and the lack of an overall significant condition X culture effect means that there is not strong evidence that the conditions had different effects on the different cultures. Therefore, before drawing strong conclusions, it would be preferable to replicate the effects of this study with other samples. It would also be preferable to find a stronger set of conditions that could be verified to have been “noticed” by Euro-Canadians, and yet to have no effect on agentic motivations. For example, computerized subliminal priming of Expectations vs. Freedom words could also have been used, whose effect on latency to recognize similar words could be assessed as a form of manipulation check. Subsequent lack of movement on agentic motivations for Euro-Canadians and movement for Chinese could then be more reliably attributed to cultural differences in associations to expectation vs. freedom concepts.
With these limitations in mind, this study gives us suggestive evidence that Chinese culture encourages an agentic reaction to a sense of obligation, while Western culture does not. In combination with the previous three studies, this study adds to the likelihood of the theory that East Asians are more likely to find a sense of obligation to be agency-supportive than Westerners.
Chapter 6: Discussion

When teaching in a high school in Hunan, China many years ago, I was the lucky recipient of much prosocial behavior. My students seemed particularly eager to go out of their way in helping me, and I felt like I must be a much-beloved teacher indeed by the way they picked up the classroom for me, eagerly completed assignments that I gave them, or helped me carry equipment and papers from the classroom back home. But I was a little hurt by the way many of my students would respond when I thanked them: they said it was only their duty. This rather took the wind out of my sails. If they were only helping me because they had to, I thought, then their kindness was not an indication of my special place in their hearts; instead, helping me was just one more task that they had to do in their day. And yet, from the apparent pride and satisfaction they seemed to take in finding opportunities to help me out, I began to wonder if my negative, coerced-feeling definition of “duty” might not be the same as theirs.

When my students said they helped me out of a sense of duty, were they actually simultaneously feeling a sense of obligation to help me, but also personally wanting to help me? The current studies were undertaken in an effort to find out if my hunch—that my students had a more positive set of feelings associated with prosocial obligations than I had—was an accurate one, and one that extended to East Asians and Westerners other than myself and my high school students. Happily, the conclusion from these studies seems to be clear: yes, associations with obligations are different for members of those two cultures. East Asians, relative to European Canadians, tend to experience a sense of obligation to help others as more congruent with both positive emotions and agentic motivations to help. In other words, it is likely that my friends and students who so eagerly helped me during my time in China were doing it both because they felt that they ought to, and also with a sense of desiring, personally choosing, and feeling happy to
help me. Moreover, it seems likely that my misinterpretation of my students’ motives for helping me as implying that they felt forced to help me might be a common misunderstanding, one that may negatively affect cross-cultural interactions between other people from Western and East Asian cultures.

In Studies 1, 2, and 3, participants who were more influenced by East Asian culture were more likely to feel congruence between a sense of obligation and a sense of agency when remembering a recent helping behavior; when they imagined themselves in a larger set of student-reported helping scenarios; and when they imagined helping a particular friend in a smaller set of experimenter-developed scenarios. From Studies 1 and 2, there is some evidence (stronger in Study 1 than 2) that this cultural difference is partially mediated by individual differences in filial and vertically collectivistic values: East Asians tend to endorse these hierarchical values more than Euro-Canadians, and when these individual differences are taken into account, the difference between the groups is somewhat reduced. On the other hand, there is no evidence at all that the cultural differences are mediated by "relational collectivism," suggesting that the key cultural cause of these East Asian – Western differences is not simply whether or not you feel interconnected with the people around you, but specifically whether or not you have been exposed to beliefs about the value and honor of fulfilling one’s social role. In Study 3, the fact that a typically used “interdependence” prime did not move participants to have higher should-want associations is consistent with this idea. Nevertheless, Study 3 added to the main findings by extending the findings to a new sample of Chinese participants living in Shanghai, finding that Chinese participants also had higher obligation-agency associations than Euro-Canadians. Finally, Study 4 provided some evidence that when primed with a feeling of expectations versus free-choice, Chinese participants exhibit a greater sense of agency in the former condition, while Euro-Canadians were uninfluenced.
Self-Determination Theory: does it need to be “repaired?”

In the Introduction, I suggested that higher agency-obligation associations would raise another cultural challenge to the claim that there is a universal need for autonomy. Do the current findings in fact suggest that autonomy, as defined in SDT, is less “needed” in East Asian than in the West?

Especially with recent clarifications to the theory, SDT may be able to encompass the idea that East Asians feel a sense of agency (i.e. self-endorsement, choice, and willingness) about fulfilling social obligations. In recent publications, SDT theorists have defined "autonomy" as being clearly differentiated from "individualism." In fact, SDT definitions of "autonomy," made in response to criticisms from cultural psychologists, are very similar to the definition of agency used in this thesis: "Autonomy within our framework means volition, the self-endorsement of one’s actions or expressed beliefs. That does not imply individualism, independence, or separateness" (Deci et al., 2001, p. 940). With this definition of autonomy, it appears that the findings pursued in this thesis—that obligations are experienced with more agency among East Asians than Westerners—would not be seen as a challenge to their thesis. In fact, the positive emotional associations that East Asian have with a sense of agency suggests that self-endorsement is just as important in East Asian cultures as it is in Western cultures.

Why, then, is autonomy so persistently misunderstood by cultural psychologists? Unfortunately, this “agency” definition of autonomy is not used consistently in the SDT literature. More often, autonomy has been defined as motivation that is more internal and less externally motivated, as is reflected in the Relative Autonomy Index (RAI) operationalization of autonomy described in the introduction. A contrast made between forces internal and external to the self, and the placing of these forces on a continuum in which these forces pull in opposite
directions (i.e. external reducing internal; and vice versa), make frequent appearances in other SDT literature. For example:

> [C]ontrasts between cases of having internal motivation *versus* being externally pressured are surely familiar to everyone. The issue of whether people stand behind a behavior out of their interests and values, or do it for reasons external to the self, is a matter of significance in every culture (e.g., Johnson, 1993) and represents a basic dimension by which people make sense of their own and others' behavior” (Ryan & Deci, 2000, p. 69, emphasis added)

The studies in this thesis therefore suggest another reason why cultural psychologists have found the concept of a “universal need for autonomy” profoundly unintuitive. These studies show that situations in which a person is motivated *both* by external pressure *and* by internal motivation, and thus by the felt endorsement of one’s own interests and values, are commonly experienced, and even more so within the context of a duty-valuing cultures such as East Asia compared to the West. Social obligations, which are often included under the negative category of external motivations, do not seem to naturally belong there. Instead, they are actually supportive of a feeling of agency, not contrary to it.

The current studies suggest that there is a massive “in-between” form of agentically felt motivation, in which one’s own sense of agency is encouraged by forces that are prima-facie external to oneself, that is not given enough attention in SDT. The SDT method of constructing “relatively autonomous indices,” in which motivations that are related to others’ expectations are lumped in with negative motivations such as fear of punishment and are then contrasted with motivations that involve self-endorsement, simply skips over these “in between” motivations. Worse, this method of measuring “autonomy” cannot accurately measure the motivations of those who genuinely self-endorse the fulfillment of social roles. The current studies suggest that when using RAI-like measurements of autonomy, that even when feeling equivalent amounts of agentic motivation, a duty-motivated individual will receive a lower “autonomy” score than someone who implicitly views external and internal motivations to be pulling in opposite
directions.

The realization that RAIs may be conflating “obligations” with “coercive feelings” can, however, give us a method by which we can bring SDT and cultural theories into harmony. As suggested by Miller (2003), while obligations may not be universally negative, a sense of coercion may be. Researchers who are interested in non-coerced motivations may still be able to develop a universally applicable measure of a sense of self-endorsement (and lack of a feeling of coercion). To the extent that future RAI-like measures do not include language that could be interpreted differently in duty-valuing cultures—such as other’s expectations, or a sense of obligation—then a subsequently calculated RAI would be more likely to universally capture a sense of agency without coercion. Going back to Figure 1.1, this type of measure would look only at the “X-axis” of Agency, leaving the degree to which one felt obligations to others out of the picture entirely. Instead, the main question would be whether one’s behavior was self-endorsed and valued, vs. forced and not self-endorsed.

However, misunderstandings of SDT and autonomy are likely to persist, as the words used seem to obscure the meaning that SDT now attributes to them. The language of “autonomy,” “self-determination,” and “internalization” simply do not seem to apply well to the situations of members of collectivistic cultures. For example, a person whose behavior is “autonomous” is said to have “internalized” his motivations (Ryan & Deci, 2006a). The current studies, which show that obligations are more congruent with a sense of agency for East Asians than they are for Westerners, could be taken to mean that East Asians have “internalized” the obligation to help others. But when one simultaneously feels self-endorsement and external pressure, and acknowledge these to not be in conflict with one another, then this situation is simply not well-expressed by the above words. Rather than having “internalized” the external pressure, both are acknowledged as equal partners in the motivation of one’s behavior. To call this “internalization”
Chapter 6: Discussion

seems to obscure understanding of how those obligations are experienced: as agency-supportive, but still acknowledged as being external to the self. Similarly, the SDT new definition of autonomy as “self-endorsement,” not independence, may only confuse the issue further, especially as a sense of agency may be dependent on the existence of external obligations. It would be preferable to use language that more naturally reflects such a definition than the easily “misunderstood” language currently in use by SDT, which easily slips into individualistically-influenced definitions and operationalizations.

In conclusion, the current studies suggest that the recent steps in SDT to define a universal need for self-endorsement and lack of coercion in one’s behavior, rather than independence from others, are an appropriate response to cultural psychologists’ criticisms. They also suggest that methods of measuring this “sense of self-endorsement” will be more universally applicable if they remove language (such as that referring to obligations) that will be interpreted differently by people who are from more vs. less duty-valuing cultures. Finally, it seems unfortunately likely that due to the dictionary definitions of words such as “autonomy” and “internalization,” SDT will continue to be misinterpreted in ways consistent with individualistic cultural views.

**Implications for theories of motivation**

For those of us trying to develop a better understanding of human motivation, this set of research challenges us to think about the ways that obligations to and expectations of others have positive effects on our sense of self-fulfillment. It is notable that among all the cultural groups studied here, there was generally a high correlation between a sense of “should” and “want.” In their initial development of the RAI scales, similarly high correlations between “introjected” and “identified” motivations were found by SDT researchers (Ryan & Connell, 1989). But
unfortunately, the separate and positive effects of obligations has not received much attention in the subsequent literature.

It is a fact of modern (and indeed evolutionary) life that humans have to develop the ability to live with one another in groups. Our natural state is not to compete alone with other individuals in a Hobbesian world, but instead to live together in cooperative groups. From both a self- and group-beneficial perspective, it would be advantageous to have positive reactions to the prosocial expectations of others. If one senses the expectations of others to act in a prosocial way, and then self-endorses the fulfillment of these expectations and, moreover, feel positively about these expectations, this is likely to have benefits for both the self and the group. The current studies suggest that East Asian culture may have been shaped by the need to encourage such beneficial reactions, especially important for collectivistic cultures where group harmony is vital for individual survival. A cultural undertone of lionizing the virtues of filial piety and adept fulfillment of one’s social roles can embolden cultural participants to pursue these obligations with a sense of satisfaction and self-endorsement, rather than a sense of coercion and resigned sacrifice.

It is evident from these studies, however, that both East Asians and Westerners tend to have surprisingly positive reactions to the expectations of others. This suggests that theories of motivation that ignore the motivating effects of these expectations are missing an enormous amount of real-life motivation that is felt by individuals in their daily lives. The need to fulfill one’s obligations to others may indeed be a true universal, an aspect of the need to belong (Baumeister, Leary, Higgins, & Kruglanski, 2000). Fulfilling one’s duties may indeed be a more important path to belongingness in duty-valuing cultures such as those of East Asia, and thus more motivating and beneficial. Nevertheless, these studies suggest that being motivated by the fulfillment of one’s obligations does not appear to have the negative effects on a sense of volition
that might be expected by a strong individualist stance. Instead, people who were motivated to help by the expectations of others also stated that they were doing it because they wanted to; and the more intensively they felt the one, the more intensively they felt the other. Far from feeling coerced by others’ expectations, we appear to find these expectations to be agency-supportive.

Against linearization. The above analysis suggests that RAI-like measures, which measure motivations on a single continuum from “agentic” to “coerced,” are too bare of a measure to reflect potentially important sources of agentic motivation. Rather than focusing solely on “fear of negative consequences” versus a “sense of agency,” as even a culturally-correct RAI would do, it seems that the motivation to fulfill obligations is an important aspect of human motivation that should be further studied. In particular, it seems important to measure the categories of motivation separately in order to discover to what extent effects of these different motivations are universal, and to better explore the specific effects of a motivation to fulfill obligations. For example, modeled on Meyer et al.’s theory of employee commitment (Meyer & Allen, 1991), the explicit and separate measurement of a sense of coercion, a sense of obligation, and a sense of self-endorsement could be measured separately. These studies suggest that the relationships between these three types of motivations would differ by culture. For example, it seems likely that a sense of coercion would be universally negative.\footnote{However, the tendency of those in East Asian societies to engage in fit-focused secondary control suggests that a sense of coercion might actually have fewer negative consequences. A sense of coercion may be less frequent or less long-lasting in East Asian societies, as individuals adjust their own interests and desires to meet the requirements of the day.} The current studies suggest that a sense of obligation would be more frequently associated with a sense of self-endorsement in East Asian cultures, while a sense of obligation might be more frequently associated with a sense of coercion among Westerners. Finally, while self-endorsement might have positive consequences in all cultures, its importance might be higher in Western cultures,
while in duty-valuing cultures the motivation from obligation might be more vital for enduring positive results.

The SDT linear placement of different types of motivation appears to be disturbingly attractive to researchers. It is interesting, for example, that in a 2004 review, Meyer et al. (2004) explicitly identified their three types of commitment with three types of SDT motivations, and redefined the three types of commitment to be aligned linearly on a continuum of internalization, using definitions used to create the RAI (Ryan & Deci, 2000). In this reconceptualization of their tripartite theory, they identified affective with integrated / identified regulation, normative with introjected regulation, and continuance with external regulation (Meyer et al., 2004, p. 1001). A single continuum with obligations placed midway between coercive and self-endorsed motivations may be attractive in its simplicity, but also not accurately reflect actual processes of motivation. Instead, it seems that it is time for a more holistic approach: an open-minded assessment of the relationships between different types of motivation, which will be more likely to validly capture human motivation, and especially how it might vary cross-culturally.

**What explains group differences? Priming and individual-difference scales as measures of culture**

Increasingly, as well as showing that differences exist between how groups of people from different cultures think, cultural psychology has turned to trying to explain *why* these differences exist. In these studies, I used two of these methods: using individual-difference measures to show the effect of cultural background operating through the explicit values held by individuals, and priming culture to show the effect of different cultural environments on individuals regardless of their cultural background, with varying success.

Individual-difference measures suggested that part of the source of the cultural differences found here lies in individual’s values, which have been influenced by background
culture. In studies 1 and 2, individuals who were higher in hierarchical collectivistic values were more likely to have higher associations between obligations and agentic motivations. East Asian individuals tended on average to endorse hierarchically collectivistic values more than Western individuals, and this partially explained the cultural differences found when comparing the two groups. However, these effects were not very strong. Finding the effect of culture at the level of consciously-reported, individually-held values is a task fraught with methodological difficulties. The effects of culture on one’s psychology are likely to be invisible to the self (Fiske, 2002); moreover, when making their ratings, participants may implicitly compare themselves to what they think is a “normal” level of those values, leading to a likelihood of cultural differences being masked or reversed (e.g. if they compare themselves to an unattainable ideal, or value what they do not have) (Heine et al., 2002; Peng et al., 1997). The statistically marginal (stronger in Study 1 than 2) and partial mediation of the cultural differences by individual-difference measures of hierarchically collectivistic values may be reflective of a stronger effect that has been attenuated by the difficulty of measuring these values through explicit self-reports.

The failure of the “cultural priming” scenarios to result in movement on our measures of interest also leads to interesting questions about what aspects of culture the traditionally used “collectivism” and “individualism” primes can induce. The method of using cultural priming operates on the principle that when put into the same psychological situation, members of all cultures will have the same reaction. For example, after circling plural pronouns (“we,” “our”), Westerners have been found to perform more holistically on tests that generally show East Asians to be more holistic (Cha, 2007; Kühnen & Oyserman, 2002), suggesting that simply thinking about relationships with others induces a more holistic frame of mind in individuals from all cultures. This is supportive evidence that the differences found between East Asian and Western participants on holistic thinking may have its source in parallel differences in the
amount of attention habitually paid to interpersonal relationships. However, it is also obvious that the circling of plural pronouns by Western, monocultural individuals does not induce in those individuals the full array of cultural complexes that exist in any particular collectivistic culture (Fiske, 2002; Miller, 2002). For cultural differences that involve culturally-specific webs of associations, such as the one explored in this dissertation, it becomes increasingly difficult to use priming to experimentally prove that a particular aspect of culture has led to the group differences observed. A general “interdependence prime,” as used in Study 3, is not likely to do it; instead, the prime must be more specific to the exact aspect of culture that one believes is the “key” to cultural differences found.

**Limitations and future directions**

**Other duties.** There are some notable limitations to the current studies that suggest further research. First, the effects studied here may be restricted to the situation of prosocial behavior. It may be that the congruence between obligations and agency is particularly strong for East Asians when helping others, as opposed to other types of obligations that are less likely to be highly valued, such as, perhaps, obligations to do housework or homework. Miller (2003) has suggested that in the case of India, satisfaction may be more likely to accompany the fulfillment of prosocial duties, as opposed to other duties, because behaving in a prosocial way is more likely to be experienced as being virtuous. If some types of duties are more indicative of virtue than others, then a sense of agency may be better supported by performance of those more valued duties. An exploration of agency and obligations in other domains would be useful to examine whether the cultural differences found here extend more generally to all obligations, or only to particularly interpersonally rewarding and value-congruent ones such as prosocial behavior.
**Less overt measurements.** A second limitation to these studies is a methodological one. The cultural differences in congruence between obligations and agency were consistently found when participants self-rated the degree to which they felt these obligations and agentic motivations. This is a particularly conscious type of rating. Social desirability effects are not likely to be high in these studies, as, for example, Studies 1 and 2 were carried out with online surveys that participants filled out anonymously at home, and Study 3 was carried out in large classrooms where it was clear that surveys would be anonymous. However, participants’ lay theories of how likely they would be to feel agentic and obligated at the same time (which may have been influenced by cultural background) may still have influenced their answers, especially if they did not have good insight into their own feelings of obligation and agency. Though it is still interesting if the cultural differences here reflect cultural differences in lay theories about obligation-agency congruence, it would be especially strong evidence of cultural differences if we could bypass the effects of those theories by making the agency-obligation connection less conscious. It would have been particularly helpful if Study 4 had had stronger effects, so that we could show that even when not consciously aware of feeling a sense of duty, East Asians are more likely than Westerners to feel more agency in response to that sense of obligation. As Study 4 showed suggestive results that a stronger manipulation along those lines might show us the expected cultural differences, further research seems recommended.

**Generalization across age.** Another interesting direction for future research could be to what extent these cultural differences are generalizable across age. Could the relatively negative attitudes towards obligation observed in the Euro-Canadians here be due to the fact that they are college age? Adolescence and young adulthood are a period in which autonomy, especially from parents, is particularly emphasized (Arnett, 2003; Smetana, 1988). Adulthood also, however, generally entails more roles involving responsibility towards others (Arnett, 1998). As the Euro-
Canadian participants in our sample grew into adulthood, would they develop more positive attitudes towards obligations, and thus close the cultural gap observed here? If the cultural differences here reflect a temporary emphasis on autonomy for Western adolescents and young adults that then disappears as they take on more adult responsibilities, and if this process (of increased emphasis on autonomy in adolescence and then a reduction in adulthood) does not occur in East Asian cultures, then cultural differences might disappear in adulthood.

Previous studies, however, have found similar developmental trajectories of increased desire for autonomy among adolescents of many collectivistic cultures (e.g. Arnett, 2003; Fuligni, 1998; Yau & Smetana, 2003). Moreover, despite cross-culturally similar theories about adulthood involving independence, young adults from collectivistic cultures are more likely than those from individualistic cultures to define adulthood as involving greater norm compliance, the adoption of roles of responsibility, and becoming capable of supporting a family (Arnett, 2003). These studies suggest that a) increased desire for autonomy may be a universal feature of adolescent development, but that b) though adulthood universally involves increasing responsibility for others, this aspect of adulthood may be even more emphasized in collectivistic cultures. Research previously reported in the Introduction on adults in the workplace, in which the relative importance of normative commitment was greater in non-Western than Western work contexts, also supports the theory that cultural differences in attitudes towards obligations may persist in adulthood (Meyer et al., 2002). Finally, if different attitudes towards obligations are generally encouraged by modern East Asian and Western cultures, then we might expect cultural differences to even increase with age as people become more strongly enculturated or
accepting of their cultural norms (e.g. Miller, 1984). It would be interesting to examine the developmental patterns of the current findings.

**Effect of relationship with helpee.** Another question that I was not able to fully explore in these studies was the effect of different relationships with the helpees. Surprisingly, what evidence was available (in Study 2) suggested that relationship type might have a larger effect on should-want correlations for Euro-Canadians than it does on East Asian Canadians. Somewhat counterintuitively, it may be when helping strangers that Westerners are more likely to experience obligation like a “virtue ethicist:” moved simultaneously by a sense of duty and wanting to help, and not finding it inauthentic to feel both of these at the same time. Having a relatively negative connotation for acting out of obligation, it may be uncomfortable for Westerners to feel motivated by obligation when thinking about close others such as friends and family. Conversely, East Asians may be more likely to self-endorse a sense of obligation to help, regardless of whom they are helping—provided, of course, that they feel an obligation to help in the first place.

Importantly, higher should-want correlations do not necessarily imply higher levels of helping. In East Asia, characterized as a “low social mobility” society (Yuki et al., 2007), interacting with those with whom one does not have a preexisting relationship may be singularly nonmotivating. Obligations to help may be relatively low, as one’s duties in a particular social situation depend largely on one’s specific relationship to others; if one has no specific relationship, then one has few duties as well. High should-want correlations may thus in fact lead to less helping in situations where there is no clear duty to help, as has been suggested by studies showing a negative relationship between collectivism and helping of strangers (Conway, Ryder, 2012).

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12 Though this arguably applies more to the development of children to adults, where greater enculturation can be expected as small children simply become more aware of social norms, it may also apply to the changes that occur as relatively-rebellious adolescents grow into less-rebellious adults.
Tweed, & Sokol, 2001; Kemmelmeier, Jambor, & Letner, 2006). The implications of higher should-want correlations for the actual levels of helping behavior given to ingroup and outgroup members in East Asia vs. the West would be an interesting issue to explore.

**General conclusions**

In these studies, I have shown that rather than simply “going along” with fulfilling social obligations, East Asians tend to have a greater sense of agency while doing their duty. Rather than viewing collectivistic societies as a land of relentless social pressure (e.g. Diener & Suh, 1999), where an individual is constantly buffeted by forces felt to be alien to the self, these studies suggest that East Asians are more likely to find fulfilling social obligations to be an invigorating and valid method of expressing their own personal values. These studies also suggest that a sense of agency is experienced as positively in East Asia as it is in the West.

In fact, the findings here are somewhat ironic: the ideal of self-endorsing one’s duties, which is promoted by both Confucian and post-Enlightenment Western thinking but particularly desirable in the West, appears to be a greater feature of the East Asian experience of obligations. Despite the emphasis on being moved by duty and not pleasure, Kant’s ideal moral being does not mechanically follow rules: instead, we are supposed to be active choosers and rational creators of the rules we follow. If we were all perfect Kantians, then a sense of duty would be accompanied by a sense of personally choosing this duty. And yet this happy congruence appears to occur more among people who are also happy about accepting their place in hierarchies, and who have been more influenced by Confucian attitudes towards parents. It may be that an emphasis on autonomy, rather than making us more likely to feel autonomy, makes us more sensitive towards the potential for coercion and wary of our duties. By accepting a lack of autonomy and allowing ourselves to be directed by the expectations of others, we may in a sense end up being more Kantian: more likely to feel a congruence between our own sense of agency
and our sense of obligation. Virtue ethics—not a deontological demand to follow autonomous rational rules—may be the true path towards self-endorsed duties.

Part of the problem with the Kantian attempt is that for any person living with others, it may be a practical impossibility to avoid all “external” definitions of one’s roles and obligations. One might feel that any externally-provided roles are inauthentic restrictions on the self, but unfortunately this will not free one from those roles. Confucian scholar Henry Rosemont puts it well:

Remember for Confucius, many of our obligations are not, cannot be, freely chosen. But he would insist, I believe, that we can only become truly free when we want to fulfil our obligations, when we want to help others (be benefactors), and enjoy being helped by others (as beneficiaries). (Rosemont, 2006, p. 15)

Or, as put more strongly by F. H. Bradley, the maverick English philosopher, in his essay “My Station and its Duties:”

…man is a social being; he is real only because he is social, and can realize himself only because it is as social that he realizes himself. The mere individual is a delusion of theory; and the attempt to realize it in practice is the starvation and mutilation of human nature, with total sterility or the production of monstrosities (Bradley, 1876/1951, p. 111).

Though I hope that the lower should-want associations of our Euro-Canadian participants will not be interpreted as evidence of mutilated monstrosities, it does suggest that as social beings, we will necessarily experience some obligations from sources that are not solely the inventions of our own minds. It may be that rather than attempting to remove the taint of “externality” from those duties, a balanced acceptance of external expectations as being important to the fulfillment of our own selves will be more likely to lead to a better, more self-endorsed life.

It may be that Western psychology research has neglected to emphasize the joyous aspects of doing what one ought to do due to our own “cultural blinders” about what is important for healthy functioning (Markus & Kitayama, 1993). In looking for evidence that in East Asia, duties can lead to a sense of volition, I also found that duties are experienced surprisingly positively in the West as well. By examining hypotheses that arise from a different cultural
worldview, we may also have learned more about Western culture: that obligations are not necessarily the negative type of motivation that we might theoretically assume. Goethe’s ideal, that of “liking to do what we have to do,” may exist more commonly in East Asia than it does in the West; but it appears to be a universally possible goal.


Appendices

Appendix A: Studies 1 and 2, scale items

1) Measures of Hierarchical Collectivism:

a) Vertical Collectivism
   1. I would sacrifice an activity that I enjoy very much if my family did not approve of it.
   2. I would do what would please my family, even if I detested that activity.
   3. Before taking a major trip, I consult with most members of my family and many friends.
   4. I usually sacrifice my self-interest for the benefit of my group.
   5. Children should be taught to place duty before pleasure.
   6. I hate to disagree with others in my group.
   7. We should keep our aging parents with us at home.
   8. Children should feel honoured if their parents receive a distinguished award.

b) Family Obligations Scale

How OFTEN do you believe you SHOULD engage in the following activities?
   1. Spend time with your grandparents, cousins, aunts, and uncles.
   2. Spend time at home with your family.
   3. Run errands that the family needs done.
   4. Help your brothers or sisters with homework.
   5. Spend holidays with your family.
   6. Help out around the house.
   7. Spend time with your family on weekends.
   8. Help take care of your brothers and sisters.
   9. Eat meals with your family.
   11. Do things together with your brothers and sisters.

How important do you think the following values are?
   12. Treat your parents with great respect.
   13. Follow your parents' advice about choosing friends.
   14. Do well for the sake of your family.
   15. Follow your parents' advice about choosing a job or major in college.
   16. Treat your grandparents with great respect.
   17. Respect your older brothers and sisters.
   18. Make sacrifices for your family.

(cont’d next page)
b) Family Obligations Scale (cont’d)

**How important do you think it is to engage in the following behaviors?**
19. Help your parents financially in the future
20. Live at home with your parents until you are married
21. Help take care of your brothers and sisters in the future
22. Spend time with your parents even after you no longer live with them
23. Live or go to college near your parents
24. Have your parents live with you when you get older

2) Measures of Relational Collectivism:

a) Relational-Interdependent Self-Concept scale (RISC)
1. My close relationships are an important reflection of who I am.
2. When I feel very close to someone, it often feels to me like that person is an important part of who I am.
3. I usually feel a strong sense of pride when someone close to me has an important accomplishment.
4. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.
5. When I think of myself, I often think of my close friends or family also.
6. If a person hurts someone close to me, I feel personally hurt as well.
7. In general, my close relationships are an important part of my self-image
8. Overall, my close relationships have very little to do with how I feel about myself.
9. My close relationships are unimportant to my sense of what kind of person I am.
10. My sense of pride comes from knowing who I have as close friends.
11. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.

b) Independent-Interdependent Self-Concept Scale (SCS) (Study 1 only)

Independent subscale (reverse scored):
1. I enjoy being unique and different from others in many respects.
2. I feel comfortable using someone’s first name soon after I meet them, even when they are much older than I am.
3. I’d rather say “No” directly than risk being misunderstood.
4. Having a lively imagination is important to me.
5. I prefer to be direct and forthright when dealing with people I’ve just met.
6. I am comfortable with being singled out for praise or rewards.
7. Speaking up during a class (or a meeting) is not a problem for me.
8. I act the same way no matter who I am with.
9. I value being in good health above everything.
10. Being able to take care of myself is a primary concern for me.
11. My personal identity, independent of others, is very important to me.
12. I act the same way at home that I do at school.

(cont’d next page)
b) Independent-Interdependent Self-Concept Scale (SCS) (cont’d)

Interdependent subscale:
1. I will sacrifice my self-interest for the benefit of the group I am in.
2. I respect people who are modest about themselves.
3. Even when I strongly disagree with group members, I avoid an argument.
4. I have respect for the authority figures with whom I interact.
5. I should take into consideration my parent’s advice when making education/career plans.
6. If my brother or sister fails, I feel responsible.
7. I often have the feeling that my relationships with others are more important than my own accomplishments.
8. I would offer my seat in a bus to my professor (or my boss).
9. My happiness depends on the happiness of those around me.
10. I will stay in a group if they need me, even when I am not happy with the group.
11. It is important to me to respect decisions made by the group.
12. It is important for me to maintain harmony within my group.

3) 10-item Dialectical Self-Concept Scale (DSS-10)

1. I often change the way I am, depending on who I am with.
2. (R) I have a definite set of beliefs, which guide my behavior at all times.
3. (R) I have a strong sense of who I am and don’t change my views when others disagree with me.
4. I often find that my beliefs and attitudes will change under different contexts.
5. I find that my values and beliefs will change depending on who I am with.
6. My world is full of contradictions that cannot be resolved.
7. I am constantly changing and am different from one time to the next.
8. (R) I usually behave according to my principles.
9. I prefer to compromise than to hold on to a set of beliefs.
10. I sometimes find that I am a different person by the evening than I was in the morning.
Appendix B: Study 1, Engaging, Disengaging, and Socially Neutral emotions

In Study 1, the positive and negative emotions were further defined by whether or not they were socially engaging (i.e. emotions that would make you feel closer to others), socially disengaging (emotions that would make you feel separated from others), or socially neutral, as defined by previous research (Kitayama et al., 2006). For each of these emotions, listed in Table B.1, participants answered to what degree they felt each emotion at the time of helping, using a 6-point labeled likert scale ranging from “not at all” to “extremely.” To examine differences between these types of emotions, I constructed separate scales for the engaging, disengaging, and neutral emotions for each valence: Positive-Engaging (4 emotions), Positive-Disengaging (4 emotions), Positive-General (5 emotions), and Negative-Engaging (2 emotions), Negative-Disengaging (3 emotions), and Negative-General (4 emotions). (see Table B.2 for reliabilities)

Table B.1: Study 1, List of emotions by category

<table>
<thead>
<tr>
<th>Engaging</th>
<th>Disengaging</th>
<th>Socially Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>Guilty</td>
<td>Calm</td>
</tr>
<tr>
<td>Respect (for someone else)</td>
<td>Ashamed</td>
<td>Elated</td>
</tr>
<tr>
<td>Friendly feelings</td>
<td>Superior</td>
<td>Happy</td>
</tr>
<tr>
<td>Appreciated (new)</td>
<td>Respected (new)</td>
<td>Relaxed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Competent (new)</td>
</tr>
</tbody>
</table>
Table B.2: Study 1, Average reliabilities for emotion subscales across events

<table>
<thead>
<tr>
<th></th>
<th>All Positive</th>
<th>All Negative</th>
<th>Engaging Positive</th>
<th>Engaging Negative</th>
<th>Disengaging Positive</th>
<th>Disengaging Negative</th>
<th>Socially Neutral Positive</th>
<th>Socially Neutral Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euros</td>
<td>.87</td>
<td>.85</td>
<td>.78</td>
<td>.56</td>
<td>.76</td>
<td>.80</td>
<td>.71</td>
<td>.63</td>
</tr>
<tr>
<td>EAs-ENG</td>
<td>.88</td>
<td>.84</td>
<td>.74</td>
<td>.62</td>
<td>.77</td>
<td>.83</td>
<td>.73</td>
<td>.56</td>
</tr>
<tr>
<td>EA-EA</td>
<td>.93</td>
<td>.82</td>
<td>.86</td>
<td>.62</td>
<td>.89</td>
<td>.73</td>
<td>.76</td>
<td>.59</td>
</tr>
</tbody>
</table>

To explore any cultural differences in how the emotion subscales related to Obligations, I examined the association of Obligations with separate subscales for the engaging, disengaging, and socially neutral emotions for each valence: Positive-Engaging (3 emotions), Positive-Disengaging (3 emotions), Positive-General (4 emotions), and Negative-Engaging (2 emotions), Negative-Disengaging (3 emotions), and Negative-General (4 emotions).

Table B.3 compares the coefficients found for the cultural differences in the overall Positive and Negative associations with Obligations with those found for the specific subscales. As can be seen, the results are fairly consistent across the types of emotions, with cultural differences always significant for all types of Positive emotions, and not significant for Negative emotions. Suggestively, the direction of the regression coefficient changes for negative emotions; however, these coefficients are so far from significant that it is difficult to interpret these changes.
Table B.3: Study 1, Culture and Obligations-Emotions associations with emotional subscales

<table>
<thead>
<tr>
<th></th>
<th>Euro vs. EA-ENG</th>
<th>Euro vs. EA-EA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive, ALL</strong></td>
<td>β(_{13}) = 0.53, p = 0.002</td>
<td>β(_{14}) = 0.47, p = 0.006</td>
</tr>
<tr>
<td>Negative, ALL</td>
<td>β(_{13}) = 0.21, p = 0.484</td>
<td>β(_{14}) = 0.22, p = 0.557</td>
</tr>
<tr>
<td>Positive, Engaging</td>
<td>β(_{13}) = 0.44, p = 0.003</td>
<td>β(_{14}) = 0.47, p = 0.005</td>
</tr>
<tr>
<td>Negative, Engaging</td>
<td>β(_{13}) = -0.07, p = 0.765</td>
<td>β(_{14}) = -0.51, p = 0.112</td>
</tr>
<tr>
<td>Positive, Disengaging</td>
<td>β(_{13}) = 0.46, p = 0.002</td>
<td>β(_{14}) = 0.42, p = 0.007</td>
</tr>
<tr>
<td>Negative, Disengaging</td>
<td>β(_{13}) = -0.12, p = 0.524</td>
<td>β(_{14}) = -0.26, p = 0.314</td>
</tr>
<tr>
<td>Positive, Socially Neutral</td>
<td>β(_{13}) = 0.30, p = 0.070</td>
<td>β(_{14}) = 0.54, p = 0.002</td>
</tr>
<tr>
<td>Negative, Socially Neutral</td>
<td>β(_{13}) = 0.22, p = 0.459</td>
<td>β(_{14}) = 0.44, p = 0.165</td>
</tr>
</tbody>
</table>
Appendix C: Study 1, Vertical Collectivism as mediator of cultural differences in Obligated-Agentic associations.

As depicted in Figure C.1, the mediation model first predicts that both East Asian groups would be higher than the Euro-Canadian group in Vertical Collectivism scores. A multiple regression equation predicting Vertical Collectivism from Age, Gender, and the two culture dummy codes supported this prediction. While neither gender nor age were related to Vertical Collectivism, the Euro-Canadian group was lower on Vertical Collectivism than both the acculturated East Asian Canadian group, $B = 0.648$, $\beta = 0.397$, $t(123) = 3.65$, $p < .001$, and the unacculturated East Asian group, $B = 0.592$, $\beta = 0.299$, $t(123) = 2.839$, $p = .005$.

The second step required testing whether Vertical Collectivism was a significant independent positive predictor of the Obligated-Agentic motivations relationship, when added into the HLM equation with culture, gender, and age. To test this, Vertical Collectivism (centered) was added as a Level 2 predictor of the Level 1 intercept and slopes of the above HLM model. As expected, it was a significant moderator of the Obligated-Agentic motivations relationship, $\beta_{15} = 0.11$, $t(122) = 2.26$, $p = .025$, such that those higher in Vertical Collectivism had a higher relationship between Obligated and Agentic motivations for helping. Although reduced in magnitude, both cultural codes remained significant predictors of the Obligated-Agentic motivations relationship, with both acculturated East Asians ($\beta_{13} = 0.28$, $t(122) = 2.64$, $p = .010$), and unacculturated East Asians ($\beta_{14} = 0.47$, $t(122) = 4.67$, $p < .001$) having higher relationships between Obligated and Agentic motivations. Therefore, evidence was found for Vertical Collectivism as a partial mediator of the cultural differences in the degree to which Obligated and Agentic motivations to help are positively associated.
Figure C.1: Study 1, Mediation model for Vertical Collectivism only

*** = p < .001; ** = p < .01; * = p < .05

Level 2

EA-ENG: a = 0.65***
EA-EA: a = 0.59***

Euro-Canadian vs. East Asian Canadian (2 groups)

Vertical Collectivism

EA-ENG c = 0.36**
(c' = 0.28*)

EA-EA c = 0.55***
(c' = 0.47***)

Level 1

b = .11*

Obligated-Agentic Motivations Relationship
### Appendix D: Study 2 scenarios

<table>
<thead>
<tr>
<th>#</th>
<th>Culture Source</th>
<th>Target</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Euro</td>
<td>older relative</td>
<td>My father needed help with calculations.</td>
</tr>
<tr>
<td>2</td>
<td>East Asian</td>
<td>older relative</td>
<td>I went grocery shopping with my mom and helped her carry the bags.</td>
</tr>
<tr>
<td>3</td>
<td>Euro</td>
<td>older relative</td>
<td>My mom’s parents are going to be over soon and so she needed quite a few things done around the house like cleaning, sorting out the boxes in our garage etc. I spent my day helping my mother out.</td>
</tr>
<tr>
<td>4</td>
<td>East Asian</td>
<td>older relative</td>
<td>My mom asked me to drop a book off for her friend when I returned home from school.</td>
</tr>
<tr>
<td>5</td>
<td>Euro</td>
<td>older relative</td>
<td>I helped my grandma carry her luggage to her new home.</td>
</tr>
<tr>
<td>6</td>
<td>East Asian</td>
<td>older relative</td>
<td>Helped my father, organize and type some hymns for church service.</td>
</tr>
<tr>
<td>7</td>
<td>Euro</td>
<td>younger relative</td>
<td>I drove my younger sister to school in the morning.</td>
</tr>
<tr>
<td>8</td>
<td>East Asian</td>
<td>younger relative</td>
<td>I helped my brother with his science homework, which he was having troubles with.</td>
</tr>
<tr>
<td>9</td>
<td>Euro</td>
<td>friend</td>
<td>My friend wanted some suggestions from me about how she could get back with her boyfriend.</td>
</tr>
<tr>
<td>10</td>
<td>East Asian</td>
<td>friend</td>
<td>My friend came over to my place and I cooked for her.</td>
</tr>
<tr>
<td>11</td>
<td>Euro</td>
<td>friend</td>
<td>I helped my friend study for a midterm, pointing out the important things, giving tips for how to write the exam, etc.</td>
</tr>
<tr>
<td>12</td>
<td>East Asian</td>
<td>friend</td>
<td>I helped my friend find a room, and hand in her assignment.</td>
</tr>
<tr>
<td>13</td>
<td>Euro</td>
<td>friend</td>
<td>My friends needed a ride home, so I offered to drive them because they were on the way.</td>
</tr>
<tr>
<td>14</td>
<td>East Asian</td>
<td>friend</td>
<td>Helped my friend to find some articles she couldn’t find.</td>
</tr>
<tr>
<td>15</td>
<td>Euro</td>
<td>friend</td>
<td>I showed my friend how to install the x-vid divx codec on their computer so they can play back .avi movie files.</td>
</tr>
<tr>
<td>16</td>
<td>East Asian</td>
<td>friend</td>
<td>My friend asked me to watch over the cake she was baking. So I stayed at her kitchen and checked the cake constantly.</td>
</tr>
<tr>
<td>17</td>
<td>Euro</td>
<td>classmate</td>
<td>The girl who sits beside me in my psychology class missed something that our professor said and she asked to look at my notes.</td>
</tr>
<tr>
<td>18</td>
<td>East Asian</td>
<td>classmate</td>
<td>I let my classmate borrow my Math notes.</td>
</tr>
<tr>
<td>19</td>
<td>Euro</td>
<td>classmate</td>
<td>I edited my classmate’s abstract.</td>
</tr>
<tr>
<td>20</td>
<td>East Asian</td>
<td>classmate</td>
<td>I completed a homework assignment with my classmate; helped her with a couple of questions.</td>
</tr>
</tbody>
</table>
Appendix E: Study 3, Sumerian Warrior prime and helping scenarios

Sumerian Warrior primes:

Independent:

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

About 10 years later, Sargon I was enlisting warriors for a new war. Sostoras was obligated to send a detachment of soldiers to aid Sargon I. He had to decide who to put in command of the detachment, which would be a high honor. After thinking about it for a long time, Sostoras eventually decided on Tiglath who was a talented general. This appointment had several advantages. Sostoras was able to make the excellent general indebted to him. This would solidify Sostoras's hold on his own territory. In addition, the very fact of having a general such as Tiglath as his personal representative would greatly increase Sostoras's prestige. Finally, sending his best general would be likely to make Sargon I grateful. Consequently, there was the possibility of getting rewarded by Sargon I.

Interdependent:

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

About 10 years later, Sargon I was conscripting warriors for a new war. Sostoras was obligated to send a detachment of soldiers to aid Sargon I. He had to decide who to put in command of the detachment. After thinking about it for a long time, Sostoras eventually decided on Tiglath who was a member of his family. This appointment had several advantages. Sostoras was able to show his loyalty to his family. He was also able to cement their loyalty to him. In addition, having Tiglath as the commander increased the power and prestige of the family. Finally, if Tiglath performed well, Sargon I would be indebted to the family.

Helping scenarios:

1. Your friend needed to go to an hour-long information session, and asked you to accompany them. The information session would be of no use to you, they just wanted your company.
2. Just as you walk out the door to catch the bus for school, you get a call from a worried friend; she’s at school right now but she forgets if she locked the front door of her house. She asks if you could check it for her. Her house is 15 minutes away from yours, and if you go to check her door you’ll be late for class.
3. Your friend is in need of poster-board for his project, but he has no time to go to the store to buy any because it’s due the next day and he needs to work on other parts of the project. He asks if you could pick some up for him. You will have to take the bus to the store and bring the poster-board to him.
4. You’re shopping with a friend, who has found a pair of jeans that they really want, but don’t have enough money for. They ask if they can borrow $10.00 from you.

5. Tomorrow you were planning on working on an assignment that is due the next day. But you’ve just received a phone call from your friend. Tomorrow, your friend’s cousin is coming to visit your friend on campus, but your friend has realized that he/she has an important meeting to go to just when the cousin is arriving. Your friend asks if you could meet the cousin at the bus stop and show him around campus for an hour or two until your friend’s meeting is over.

6. You’re tired from a full day of work and glad that you have no homework to do for tomorrow. You decide to watch some T.V but then your friend calls and asks if you can proofread their essay that’s due the next day.
Appendix F: Study 4, Priming sentences and helping scenarios

<table>
<thead>
<tr>
<th>English version</th>
<th>Chinese version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations condition:</td>
<td>中文版本：</td>
</tr>
<tr>
<td>The bosses have high expectations</td>
<td>老板 有 高 期望 “Bosses have high expectations.”</td>
</tr>
<tr>
<td>It’s her special duty</td>
<td>这是 她 的 职责 “This is her duty”</td>
</tr>
<tr>
<td>He ought to sleep</td>
<td>他 应该 去睡觉 “He ought to sleep.”</td>
</tr>
<tr>
<td>She should call home</td>
<td>她 该 打电话 回家 “She should call home.”</td>
</tr>
<tr>
<td>He is much obliged</td>
<td>他 是 有 义务的 “He is obligated”</td>
</tr>
<tr>
<td>Freedom condition:</td>
<td>中文版本：</td>
</tr>
<tr>
<td>She can run free</td>
<td>她 能 自由的 奔跑 “She can run free”</td>
</tr>
<tr>
<td>That’s an excellent choice</td>
<td>那 是 极好的 选择 “That’s an excellent choice”</td>
</tr>
<tr>
<td>I desire big things</td>
<td>他 渴望 接受 挑战 “He desires to take on challenges”</td>
</tr>
<tr>
<td>She likes her liberty</td>
<td>小鸟得到 自由了 “The little bird has gained freedom”</td>
</tr>
<tr>
<td>He watches variety shows</td>
<td>超市 蔬菜 多种多样 的 “The vegetables in the supermarket are varied”</td>
</tr>
<tr>
<td>Neutral condition:</td>
<td>中文版本：</td>
</tr>
<tr>
<td>She was always worried</td>
<td>他 总是 喜欢 担心 “He always likes to worry”</td>
</tr>
<tr>
<td>Replace the old shoes</td>
<td>买 一 双 新 拖鞋 “Buy a new pair of slippers”</td>
</tr>
<tr>
<td>He saw the train</td>
<td>他 看到 一 辆 火车 “He saw a train”</td>
</tr>
<tr>
<td>The sky is blue</td>
<td>今 天 天气 十分 晴朗 “Today’s weather is very fine”</td>
</tr>
<tr>
<td>He finished it yesterday</td>
<td>昨 天 完成 他 论文 “He finished the paper yesterday”</td>
</tr>
<tr>
<td>Have a good holiday</td>
<td>别 再 犹豫 了 “Don’t hesitate”</td>
</tr>
<tr>
<td>Do it once more</td>
<td>他 喜欢 喝 果汁 “He likes to drink juice”</td>
</tr>
<tr>
<td>I mailed it over</td>
<td>她 有 漂亮的 头发 “She has pretty hair”</td>
</tr>
<tr>
<td>I was somewhat prepared</td>
<td>我 爱 上课 睡觉 “I like to sleep in class”</td>
</tr>
<tr>
<td>The cow mooed twice</td>
<td>图书馆 是 安静的 地方 “The library is a quiet place”</td>
</tr>
</tbody>
</table>

Helping scenarios:

1. Your friend needed to go to an hour-long information session, and asked you to accompany them. The information session would be of no use to you, they just wanted your company.
2. Just as you walk out the door to catch the bus for school, you get a call from a worried friend; she’s at school right now but she forgets if she locked the front door of her house. She asks if you could check it for her. Her house is 15 minutes away from yours, and if you go to check her door you’ll be late for class.
3. Your friend is in need of poster-board for his project, but he has no time to go to the store to buy any because it’s due the next day and he needs to work on other parts of the project. He asks if you could pick some up for him. You will have to take the bus to the store and bring the poster-board to him.
4. You’re tired from a full day of work and glad that you have no homework to do for tomorrow. You decide to watch some TV but then your friend calls and asks if you can proofread their essay that’s due the next day.