

ABSTRACT

Title of Dissertation: A CROSS-CULTURAL STUDY OF THE EFFECT OF EMPATHY ON THE MORAL JUDGMENT OF DISTRIBUTIVE JUSTICE PRINCIPLES: NEED VERSUS EQUITY

Bing Han, Doctor of Philosophy, 2008

Dissertation Directed By: Professor Deborah A. Cai,
Department of Communication

This dissertation research examined how cultures differ in the use of the distributive justice principles of need and equity. Empathy was proposed as a possible mechanism to explain cultural differences in the conflict between the ethics of care and justice as reflected in the use of the need and equity principles.

Four experiments were conducted to investigate the role of empathy in three distinct distribution situations across two cultural groups, Chinese nationals and U.S. Americans. In all four studies, participants were asked to assume the role of a high-status person and make a distribution decision in a questionnaire. The first and second studies examined how empathy affected the equity principle in a bonus distribution situation in a company; the third study explored how empathy influenced the need principle in an assistance-fund distribution situation in a charity organization; and the fourth study investigated how empathy affected the choice between merit and need in a scholarship distribution

situation in a university. Data were collected in both China and the U.S. for each of the four studies (total $N = 1,022$).

Results indicated a significant moderating effect of culture such that empathy had different effects on the principles of equity and need in the two cultural groups. Empathy narrowed the money gap between low- and high-competence employees for Chinese, but maintained the gap for U.S. Americans; it also equalized the amount of money given to low- and high-need applicants for Chinese, but preserved the difference for U.S. Americans. Interpretations and implications of the results are provided, and the methodological and theoretical significance of the research along with future directions are discussed.

A CROSS-CULTURAL STUDY OF THE EFFECT OF EMPATHY ON THE
MORAL JUDGMENT OF DISTRIBUTIVE JUSTICE PRINCIPLES:
NEED VERSUS EQUITY

By

Bing Han

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2008

Advisory Committee:
Professor Deborah A. Cai, Chair
Professor Edward L. Fink
Professor Robert N. Gaines
Professor Michele Gelfand
Dr. Leah Waks

© Copyright by
Bing Han
2008

Dedication

This dissertation is dedicated to my parents.

Acknowledgements

Before I started dissertating, I heard it is a lonely ordeal. It turned to be an ordeal but I was not lonely. I was blessed with support, encouragement, and good wishes throughout the process from family members, professors, and friends. Without their help and care, this dissertation would not have been possible. I am very grateful for their kindness and hope to express my deep appreciation in various ways in the days to come.

First, I would like to thank my husband, Dong Liu, for his constant support and care. Dong and I have celebrated our 10th wedding anniversary in the past summer. Both of us have come a long way since I first came to the States six years ago. He understood my desire to grow intellectually and he came with me to help fulfill that dream. During the dissertating time, I kept motivating myself. I went to numerous workshops on how to finish dissertations. But none of the methods was as motivating as the sense of guilt over what I have put my husband through: He was an active listener whenever I needed to talk about my ideas and arguments; he was my driver, computer technician, and cook; and he was always there encouraging me when I felt stuck. Without him, my dissertating time would have been a truly lonely one. I feel deeply indebted.

Second, I want to thank my advisor, Dr. Deborah A. Cai, for being a great mentor during my graduate years. When I first applied for graduate study in communication, I did not know exactly the kind of research I was expected to do. Then I read one of Deb's publications when I was still in China and realized that I had similar interests but just did not know how to go about investigating these ideas. When I later changed my area to intercultural communication and asked Deb to be my advisor, she kindly agreed. It was a long journey from not knowing what communication research is to being able to

independently conduct research in this field. This progress would not have been possible without Deb's guidance and support along the way. I worked with Deb on almost all the projects I conducted in my graduate years. She was patient and encouraging in helping me become an independent researcher. I still remember the excitement we shared when I collected and analyzed my first set of data and found significant results. Deb is a great person to discuss ideas with. She is very open to exploratory ideas. Her encouragement allowed me to explore my real interests in the proposal stage. Moreover, Deb is very generous and caring. I remember spending all my Thanksgiving nights with other international students at Deb's house. She made us feel at home in this foreign land. I am deeply grateful for having Deb as my advisor.

Third, I would like to express my deep gratitude to Dr. Edward, L. Fink, a great mentor in many ways. Ed knows how to strike a balance between being demanding and being caring and is able to bring out the best in his students. Ed has the rare ability to inspire. I learned from him how to be a great scholar and more importantly, how to be a better person. He was always available to discuss with me questions about work and life in general. Ed has great passion and love for what he teaches. When I had questions, he persisted in explaining and demonstrating until I got it. When the road of learning got bumpy, Ed's great sense of humor eased the rough journey. I was very lucky to have worked with him closely on a project. Without his encouragement, prodding, and assistance, I could not have understood the difficult process of publishing. What I have learned from the project also helped me greatly in writing my dissertation. I can not express my gratitude enough to Ed, a great scholar and friend.

I thank my committee members: Drs. Robert N. Gaines, Leah Waks, Monique Turner, and Michele Gelfand. Professor Gaines was my temporary advisor when I first came to Maryland. When I asked his opinion about changing my area of study, he encouraged me to pursue my interest and recommended Deb as my advisor. He agreed to stay on my committee and has since provided many useful suggestions from his unique perspective. Leah graciously agreed to be a committee member when I urgently needed one. Her gestures of kindness and support from time to time warmed my heart and helped me through graduate school. Monique Turner was on my comprehensive exam and proposal committee. I was lucky to also have the opportunity to be her teaching assistant once. Her enthusiasm for teaching and research is contagious. She was in charge of the participant pool in the department and she made it a priority that those of us who were dissertating got enough participants. I am grateful for her support. Michele Gelfand graciously agreed to be in my committee when I desperately tried to find an outside member. She is an exemplary scholar. Her challenging questions and her expertise in the cross-cultural area helped me clarify my ideas in the proposal stage. I thank other professors who have helped me in some way. I was lucky to work for Dale Hample as a teaching assistant. He is a great supervisor. His support and encouragement made me focus on finishing my dissertation. I took four methods courses from Gregory Hancock who has the rare ability to make difficult materials simple and easy to learn. I also want to thank Drs. Meina Liu, Torsten Reimer, and Shawn Parry-Giles for their words of kindness and support.

My thanks also go to family and friends in China who have helped me in various ways. In particular, my parents provided emotional support whenever I needed it. When I

felt stuck and anxious, a call to them would calm me down. They also provided concrete support such as helping with my data collection in China. My friends, Hua Yu and Mei Dong, and my cousin, Ying Gu, recruited many students to participate in my dissertation research. I am very grateful for all their help, without which this dissertation would not have been possible.

I would also like to thank my friends in the U.S. who supported me throughout my graduate years. Qi Wang was always a reliable source when I had questions. Xiaoying Xie was very generous and would go out of her way to help. Shuo Yao provided support whenever she could. My thanks also go to Sabine Chai, Sanja Sipek, David Payne, Yi Luo, Hua Jiang, Hongmei Shen, Ai Zhang, Ying Wei, Lan Ni, Regina Chen, Ioana Cionea, Sejal R. Patel, Ahnlee Jang, and Susan Allen for their kind words and good wishes. Lillie Sullivan, Diana White, Mary Bell, Mayra Vazquez, I thank you for your generous help.

Please forgive me if I have forgotten to mention anyone. My experience in Maryland has been truly blessed with these relationships. I am very grateful that I have had such great professors and wonderful friends in my life in a unique period of my life and I look forward to more shared joy and happiness together.

Table of Contents

Dedication.....	ii
Acknowledgements.....	iii
Table of Contents.....	vii
List of Tables.....	x
List of Figures.....	xii
Chapter 1: Introduction.....	1
Justice.....	4
Distributive Justice.....	5
The Caring Versus Justice Dilemma.....	10
Cultural Differences in Moral Judgment: Kantian Versus Confucian Morality..	13
Need Versus Equity.....	16
Empathy.....	16
Empathic Arousal.....	18
Factors Affecting Empathy.....	20
Empathy's Limitations.....	22
Empathy and Caring.....	24
Overview of Studies.....	27
Chapter 2: Study 1 The Distribution Situation in a Company.....	30
Hypotheses.....	30
Method.....	30
Participants.....	30
Procedure.....	31
Stimulus Materials.....	32
Questionnaire Design.....	33
Data Transformation and Presentation.....	36
Results.....	36
Perception of Manipulations.....	36
Predicting Distribution of Bonus.....	40
Discussion.....	43
Chapter 3: Study 2 The Distribution Situation in a Company.....	49
Hypotheses.....	49
Method.....	50
Participants.....	50
Procedure.....	50
Stimulus Materials.....	51
Questionnaire Design.....	53
Data Transformation and Presentation.....	58
Results.....	59
Perception of Manipulations.....	59
Dependent Variables: Monetary Reward.....	69
Predicting Distribution of Bonus.....	69
Discussion.....	78
Chapter 4: Study 3 The Distribution Situation in a Charity Organization.....	81
Hypotheses.....	81

Method	83
Participants.....	83
Procedure	83
Stimulus Materials	84
Questionnaire Design.....	86
Data Transformation and Presentation.....	92
Results.....	92
Perception of Manipulations	92
Dependent Variables: Monetary Reward.....	102
Predicting Distribution of Assistance Money.....	102
Discussion	111
Chapter 5: Study 4 The Distribution Situation in a University.....	113
Hypotheses.....	113
Method	114
Participants.....	114
Procedure	114
Stimulus Materials	115
Questionnaire Design.....	117
Data Transformation and Presentation.....	123
Results.....	124
Perception of Manipulations	124
Dependent Variables: Difference Score in Monetary Reward	129
Predicting Distribution of Scholarship Money	131
Discussion	133
Chapter 6: Overall Discussion	137
Summary of the Research	137
Summary and Interpretation of Results	139
Equity.....	139
Need	144
Equity and Need.....	146
Limitations and Future Directions	147
Theoretical and Methodological Significance of the Research.....	153
Methodological Contributions	153
Theoretical Contributions	154
Footnotes.....	163
Appendix A Employee Evaluation Package in Study 1.....	167
Appendix B Personal Belief in a Just World Scale.....	172
Appendix C Measure of Trait Empathy.....	173
Appendix D Employee Evaluation Package in Study 2.....	176
Appendix E Application Package for Assistance Money in Study 3.....	181
Appendix F Application Package for Scholarship in Study 4	186
Appendix G Chinese Version of Employee Evaluation Package in Study 2.....	194
Appendix H Chinese Version of Application Package for Assistance Money in Study 3	199
Appendix I Chinese Version of Application Package for Scholarship in Study 4 ...	204
Appendix J SPSS Output in Study 1	212

Appendix K SPSS Output for the Overall ANCOVA in Study 2.....	213
Appendix L SPSS Output for the First ANCOVA in Study 2.....	214
Appendix M SPSS Output for the Second ANCOVA in Study 2	215
Appendix N SPSS Output for the Third ANCOVA in Study 2.....	216
Appendix O SPSS Output for the First Regression Model in Study 3	217
Appendix P SPSS Output for the Second Regression Model in Study 3.....	218
Appendix Q SPSS Output for the ANCOVA in Study 4.....	219
References.....	220

List of Tables

Table 1.	<i>Means and Standard Deviations for Believability by Culture and Levels of Competence in Study 1 (N = 179)</i>	38
Table 2.	<i>Means and Standard Deviations for Realism by Culture and Levels of Competence in Study 1 (N = 176)</i>	39
Table 3.	<i>Means and Standard Deviations for Amount of Bonus by Competence, Empathy, and Culture in Study 1 (N = 179)</i>	46
Table 4.	<i>Results of the Statistical Tests for Believability and Realism Between the High-Competence Condition and Each of the Three Low-Competence Conditions for U.S. and Chinese Participants in Study 2.</i>	61
Table 5.	<i>Means and Standard Deviations for Believability by Culture and Levels of Competence in Study 2 (N = 244)</i>	63
Table 6.	<i>Means and Standard Deviations for Realism by Culture and Levels of Competence in Study 2 (N = 243)</i>	64
Table 7.	<i>Means and Standard Deviations for Amount of Bonus by Competence, Empathy, and Culture in Study 2 (N = 246)</i>	77
Table 8.	<i>Results of the Statistical Tests for Believability and Realism Between the Two Levels of the Magnitude of Need and of the Urgency of Need for U.S. and Chinese Participants in Study 3.</i>	94
Table 9.	<i>Means and Standard Deviations for Believability by Culture and Levels of Need in Study 3 (N = 334)</i>	95
Table 10.	<i>Means and Standard Deviations for Realism by Culture and Levels of Need in Study 3 (N = 332)</i>	96
Table 11.	<i>Means and Standard Deviations for Amount of Money by Need, Empathy, and Culture in the No-Explanation Situation in Study 3 (N = 184)</i>	109

Table 12. <i>Means and Standard Deviations for Amount of Money by Need, Empathy, and Culture in the No-Responsibility Situation in Study 3 (N = 149)</i>	110
Table 13. <i>Means and Standard Deviations for Difference Score in Monetary Reward by Empathy and Culture in Study 4 (N = 248)</i>	135

List of Figures

<i>Figure 1.</i> Scree plot for the principal components extracted from the 35 trait empathy items in study 1.	41
<i>Figure 2.</i> Amount of bonus by empathy and culture in study 1.	44
<i>Figure 3.</i> Amount of bonus by competence (no reason) and culture in study 1.	45
<i>Figure 4.</i> Scree plot for the principal components extracted from the 35 trait empathy items in study 2.	68
<i>Figure 5.</i> Amount of bonus by empathy and competence (negative reason) in study 2.	73
<i>Figure 6.</i> Amount of bonus by empathy, competence (negative reason), and culture in study 2.	74
<i>Figure 7.</i> Amount of bonus by empathy, competence (positive reason), and culture in study 2.	75
<i>Figure 8.</i> Amount of bonus by competence (4 levels), empathy, and culture in study 2.	76
<i>Figure 9.</i> Scree plot for the principal components extracted from the 35 trait empathy items in study 3.	103
<i>Figure 10.</i> Amount of money by empathy, need and culture in study 3.	107
<i>Figure 11.</i> Amount of money by empathy and culture in study 3.	108
<i>Figure 12.</i> Scree plot for the principal components extracted from the 35 trait empathy items in study 4.	130
<i>Figure 13.</i> Difference score in monetary reward by empathy and culture in study 4.	134

Chapter 1

Introduction

In behavioral economics, growing evidence has contradicted hypotheses derived from the assumption that all human behaviors are exclusively motivated by material self-interest (Fehr & Fischbacher, 2003, 2004). Evidence has suggested that people also are motivated strongly by justice norms such as equity and reciprocity principles. Moreover, research on human cooperation has shown that other-regarding motives, including altruism, caring, and trust, can evolve from human cooperation and are powerful forces that influence how individuals coordinate with others (e.g., Axelrod, 1984; Fehr & Fischbacher, 2003, 2004; Gintis, Bowles, Boyd, & Fehr, 2003).

Justice and other-regarding concerns have begun to attract attention from researchers studying negotiation and conflict management (e.g., Albin, 2001; Leung & Tong, 2004; Tyler & Blader, 2004). The motivation for and influence of justice and other-regarding concerns in conflicts are not very well understood and are further complicated by research that shows these concerns differ across cultures. Cultural variations have been found across types of justice, including distributive justice, procedural justice, and retributive justice (e.g., Hamilton & Sanders, 1992; Leung, 1997; Leung & Bond, 1982, 1984; Leung & Stephan, 2001; Na & Loftus, 1998; Yamagishi, 1988). Cultural differences also have been found in research on caring versus justice dilemmas (e.g., Miller, 1994; Miller & Bersoff, 1992; Miller, Bersoff, & Harwood, 1990; Ohbuchi, Fukushima, & Tedeschi, 1999).

The principles of caring and justice are important human motives. Caring versus justice dilemmas occur when the principles advocated by the ethics of care come into

conflict with the principles endorsed by the ethics of justice. The ethics of justice, emphasizing impartiality and universality, advocates that individuals should be judged by their merits or contributions. On the other hand, the ethics of care, emphasizing particularity, cultivates individuals' ability to care for others, especially those who are close. Therefore, in a conflict between care and justice, care may go to those who are not the most deserving as assessed by the ethics of justice.

Caring versus justice dilemmas can be found in many different situations. For example, in a distribution situation, resources can be divided based on one of three principles, equity, need, and equality (Adams, 1965; Deutsch, 1975; Homans, 1950, 1961). Unlike equality, the principles of equity and need require that a greater amount of resources be given to those who make a greater contribution or have a greater need. However, if enough attention is directed toward those who make a lesser contribution or have a lesser need, the ethics of care may lead to more resources being distributed to them than is justified by the ethics of justice. Moreover, when a distribution situation involves comparing those with merit and those with need, the ethics of care may be more congruent with the need rather than the equity principle. In this case, the beneficiary's needs rather than contributions are the criterion for reward allocation, in contrast to the focus on the beneficiary's contributions. Therefore, the ethics of care may result in more resources being distributed to those with need, who may be perceived as less deserving than those with merit according to the ethics of justice. In the current study, the conflict between the ethics of care and justice is examined in these distribution situations.

The decision made between caring and justice principles has been found to differ both by gender (Gilligan, 1982; Gilligan, Lyons, & Hanmer, 1989; Gilligan, Ward, &

Taylor, 1988) and culture (Miller, 1994; Miller & Bersoff, 1992; Miller, Bersoff, & Harwood, 1990; Miller & Luthar, 1989; Simpson, 1974). Miller and her colleagues found that greater priority was given to interpersonal and caring relative to justice obligations in India, whereas the morality of justice was more fundamental to the U.S. moral code. The morality of care and interpersonal responsibilities was also found to be more important than the morality of justice in other Asian cultures (Dien, 1982; Ma, 1997; Ohbuchi, Fukushima, & Tedeschi, 1999). The choice between care and justice has also been found to differ across cultures (for reviews, see Leung 1988, 1997). However, no mechanisms have been proposed to account for these cultural differences in the conflict between the ethics of care and the ethics of justice.

Why do Asians regard the ethics of care as more important than the ethics of justice, as compared to people in the U.S.? This question indicates the lack of mechanisms that can explain the preference of the ethics of care over the ethics of justice in some Asian cultures. Empathy may be able to explain these cultural differences in the conflict between care and justice because empathy has been found to facilitate caring at the cost of principles of fairness (Batson, Klein, Highberger, & Shaw, 1995) and people in some Asian cultures have been found to have greater empathic reactions than people in some Western cultures (Enz, Zoll, & Xu, 2006; Kobayashi & Trommsdorff, 1993; Trommsdorff, 1995). Although gender differences in empathy have been widely found (Adams, Jones, Schvaneveldt, & Jenson, 1982; Bryant, 1982; Davis, 1996; Enz, Zoll, & Xu, 2006; Hoffman, 2000; Lennon & Eisenberg, 1987; McDevitt, Lennon, & Kopriva, 1991; Singer, Seymour, O'Doherty, Stephan, Dolan, & Frith, 2006), only a few studies have looked at cultural differences in empathy (Enz, Zoll, & Xu, 2006; Kobayashi &

Trommsdorff, 1993; Trommsdorff, 1995). However, these studies on cultural differences in empathy all found that people in some Asian cultures such as Japan and China had more empathy than people in some Western cultures such as Germany, Britain, and Portugal. The high level of empathy may have made it more likely for people in the Asian cultures to choose the ethics of caring over the ethics of justice. Empathy has been found to facilitate prosocial behaviors such as helping (e.g., Batson, 1987; Batson, Duncan, Ackerman, Buckley, & Birch, 1981, Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Coke, Batson, & McDavis, 1978; Eisenberg & Miller, 1987; Hoffman, 1976; Krebs, 1975) and also to inspire actions that violate principles of justice (Batson, Klein, Highberger, & Shaw, 1995; Hoffman, 1976; Singer, 1995).

This dissertation examines empathy as a possible explanation for cultural differences in the conflict between care and justice as reflected in the use of the need and equity distributive principles. The research question addressed in this research is the following: How does empathy influence the use of the need and equity principles, and how does culture affect this process?

The first chapter of this dissertation provides a literature review that examines existing research on distributive justice principles, the caring versus justice dilemma as reflected in the need versus equity principles, and empathy and its relationship to caring. The first chapter ends with an overview of the four studies included in this dissertation. The next four chapters cover the hypotheses, method, results, and discussion for each of the four studies. Finally, an overall discussion of the theoretical and practical implications of this research is provided in the last chapter.

Justice

Concern for fairness and justice plays an important role in conflict and its resolution in all societies. However, what is a fair standard and outcome is often disputed. Parties in conflict often perceive themselves as being fair and the other side as unfair. Different standards of fairness and justice are often selected by conflicting parties to serve their own interests (e.g., Messick, Bloom, Boldizar, & Samuelson, 1985). Negotiation researchers have documented the pervasiveness of self-serving biases in negotiation. Negotiators' egocentric perceptions of fairness and justice have been found to be related to settlement delays or impasses (Babcock, Loewenstein, & Issacharoff, 1997; Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Loewenstein, Issacharoff, Camerer, & Babcock, 1993; Thompson & Loewenstein, 1992), the length of strikes (Babcock, Wang, & Loewenstein, 1996), the intensity of conflict (Kramer, Newton, & Pommerenke, 1993), and reduced problem-solving and feelings of frustration (de Dreu, Nauta, & van de Vliert, 1995).

Subjective and self-serving perceptions of fairness and justice have been found to differ across cultures. In conflict situations, disputants' self-serving biases of fairness and justice were more prevalent in individualistic cultures, such as the United States, but were attenuated in collectivistic cultures, such as Japan (Gelfand et al., 2002). Cultural variations also have been found in notions of justice, including distributive justice, procedural justice, and retributive justice (e.g., Hamilton & Sanders, 1992; Leung, 1997; Leung & Bond, 1982, 1984; Leung & Stephan, 2001; Na & Loftus, 1998; Yamagishi, 1988). The present research examines cultural differences in the use of the distributive justice principles of need and equity.

Distributive Justice

Distributive justice is concerned with the fair and just allocation of resources such as power, wealth, goods, and services in society. Related to distributive justice is relative deprivation, which is a result of judging one's situation against the situations of those who are more advantaged (Stouffer, Suchman, DeVinney, Starr, Williams, 1949). Relative deprivation was first used to explain the findings that more educated soldiers with better opportunities were less satisfied with their status and jobs than were less educated soldiers (Stouffer et al., 1949). The hypothesized explanation was that the more educated soldiers compared their situations with other more successful peers and therefore were less satisfied with their status and jobs than were the less educated soldiers, who compared their situations with other less successful peers (Stouffer et al., 1949). The effect of relative deprivation on job dissatisfaction was further supported in laboratory experiments (Gebhard, 1949; Merton & Kitt, 1950; Spector, 1956; Thibaut, 1950). The choice of referent affects how people feel when they make comparisons (Tyler, Boeckmann, Smith, & Huo, 1997). Adams (1965) pointed out that feelings of injustice mediated the effects of relative deprivation on expressions of dissatisfaction. In other words, high expectations or comparisons with the better-off were more likely to trigger relative deprivation and a greater sense of injustice than were low expectations or comparisons with the worse-off (Adams, 1965; Tyler, Boeckmann, Smith, & Huo, 1997). The comparative aspect of the judgment was essential for the development of relative deprivation and felt injustice (Adams, 1965).

Implicit in such comparisons is a sense of one's deservedness relative to a reference group. Therefore, relative deprivation is closely related to distributive justice, the sense of fair and just distribution of costs and rewards (Adams, 1965). Distributive justice theory

was originally based on quasi-economic terms (Homans, 1950, 1961); according to Homans (1961), distributive justice was achieved when the profits obtained by each party in an exchange relationship were proportional to each party's investments. The profits were defined as the rewards received in an exchange minus the costs incurred (Homans, 1961). Therefore, for a dyad of persons A and B, Homans (1961) claimed that distributive justice is realized when $(A's \text{ rewards} - A's \text{ costs}) / A's \text{ investments}$ is equal to $(B's \text{ rewards} - B's \text{ costs}) / B's \text{ investments}$. In the case of a third party distributing rewards to two or more parties, distributive justice occurs when the third party maintains a fair ratio of profits and investments among all parties (Homans, 1961). The difficulties of maintaining distributive justice in either the dyad or the third-party situations were that person A's perception of his or her own rewards and costs may not be identical to person B's perception of A's situation, and the parties may not agree as to what their investments were and what weight each investment should get (Adams, 1965).

Adams (1965) developed a theory of inequity specifying the causes and consequences of inequity in exchange relationships. Based on relative deprivation and distributive justice, Adams' (1965) theory of inequity focused on two features: inputs and outcomes. Inputs were defined similarly to Homans' (1961) investments. Inputs were what people perceived as their contributions to an exchange. In an employer-employee exchange, these contributions may be employees' education, intelligence, experience, skill, seniority, age, social status, efforts, and sometimes even personal attractiveness and health (Adams, 1965). Outcomes were what people received as a result of an exchange. In an employer-employee exchange, the outcomes may include salary, rewards intrinsic to the job, job status, and job benefits (Adams, 1965). Adams (1965) postulated that

inequity exists whenever one party perceives that the ratio of one's own outcomes to inputs is not equal to the ratio of another party's outcomes to inputs. Based on Festinger's (1957) cognitive dissonance theory, Adams (1965) proposed that the perception of inequity would cause a person to feel psychological tension in proportion to the magnitude of inequity, and this tension would motivate the person to reduce or eliminate it. Adams (1965) claimed that the consequences of inequity thus centered on how to reduce inequity and restore balance among the four elements in the equity formula: a person's own outcomes and inputs and another party's outcomes and inputs. Adams (1965) further explained that inequity may be reduced when a person altered any of the four elements or changed his or her cognitions about any of them.

Based on the theory of inequity (Adams, 1965), the concept of equity was developed to explain judgments about whether outcomes are just or not. According to the equity principle, benefits should be distributed in proportion to the individuals' contribution. The equity principle was first used to predict workers' reactions to their wages in organizational settings. It later developed into a broad social justice theory that covers many aspects of social interaction.

Deutsch (1975) provided another two distributive justice principles: equality and need. The principle of equality posits that resources such as wealth, goods, and services be equally distributed without considering the different contributions of individuals. The principle of equality is based on the assumption that each person has the same inherent value or worth in some larger philosophical sense (Hoffman, 2000). Therefore, everyone should receive the same amount of rewards. The need principle posits that the distribution of rewards and resources be based on individual needs rather than individual merits. The

need principle is a type of “communitarian justice” that follows the Marxist maxim “to each according to his needs,” regardless of productivity (Hoffman, 2000, p. 228). The determination of the type and magnitude of need may be as difficult as the determination of contributions in the equity principle. Need may be based on poverty, disadvantage, or loss due to past injustice. Among the three principles, equity is the only principle that requires that individuals’ outcomes depend on their contributions in the form of productivity, competence, effort, and so on. Subsequent research on distributive justice has focused on how people choose among the three distributive justice principles: equity, equality, and need.

Deutsch (1975) proposed that interpersonal relationships influenced the choice among the three distributive justice principles. He provided a typology of relationships varying along four dimensions: cooperative versus competitive, equal versus unequal power, task versus socioemotional, and formal versus informal (see also Barrett-Howard & Tyler, 1986). Individuals also were found to be influenced in their choice of distributive justice principles by other factors such as the values they hold (Rasinski, 1987) and the gender of the allocation recipient (Messé, Hymes, & MacCoun, 1986). Moreover, some studies suggested that people made trade-offs between the three principles of distributive justice and that principles of distributive justice were also affected by situational factors (Tyler, Boeckmann, Smith, & Huo, 1997).

The present research focuses on the use of the principles of equity and need. The use of the need principle benefits the person in need regardless of his or her contributions, whereas the use of the equity principle regards such contributions as essential in distributive situations. If prosocial behavior is defined as an act performed with the goal

of benefiting others rather than oneself (Aronson, Wilson, & Akert, 2004), the use of the need principle in distribution seems to be more prosocial than the use of the equity principle. The act of empathizing is hypothesized to influence the use of the equity and need principles. Cultural differences in the use of the need and equity principles are explained based on cultural differences in empathizing.

The Caring Versus Justice Dilemma

Kohlberg (1963, 1969, 1981) proposed a stage theory of moral judgment. He interviewed children and adults to see how they responded to moral dilemmas. The following is a typical dilemma called "Heinz steals the drug":

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$200 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1,000, which is half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said: "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and broke into the man's store to steal the drug for his wife. Should the husband have done that?

(Kohlberg, 1963, p. 19)

Based on respondents' reasoning behind these moral dilemmas, Kohlberg (1963, 1969, 1981) classified the various responses into three levels: preconventional morality,

conventional morality, and postconventional morality. Each level includes two stages for a total of six stages. At stage one of the preconventional morality, children see morality as something external to them, and they assume they must obey authority in order to avoid punishment. At stage two, children see morality as relative and they assume they can act freely to pursue their own interests without considering other members of society. At stages three and four, young people begin to think of themselves as members of conventional society. At stage three, they focus on fulfilling obligations and roles in close relationships. At stage four, young people shift the focus from interpersonal relationships to maintaining the existing social order by obeying the laws. People at stages five and six care about universal principles that make for a just society. At stage five, the social contract and individual rights are emphasized. At stage six, commitment to justice creates the obligation to disobey unjust laws and thus civil disobedience is more likely to be endorsed at this stage than at stage five (Kohlberg, 1963, 1969, 1981). In the drug dilemma described above, people at stage five may judge Heinz's stealing to be morally wrong because the druggist's individual rights should be respected, whereas people at stage six may endorse Heinz's behavior as an obligation to disobey unjust laws.

Kohlberg's (1981) stage theory of moral development culminated in a focus on impartiality and justice, emphasizing universal principles of human rights, equality, and justice. Kohlberg's (1981) theory is not without critics. Gilligan and her colleagues (Gilligan, 1982; Gilligan, Lyons, & Hanmer, 1989; Gilligan, Ward, & Taylor, 1988) proposed two distinct systems of thought and feeling in moral reasoning, one based on abstract justice principles and one based on interpersonal obligations. Justice principles, these researchers argued, are universalistic and rational, whereas interpersonal

obligations are particularistic and affect based. For women, Gilligan (1982) argued that moral judgment is determined more by interpersonal relationships and the ethics of care rather than by abstract principles and rights. Thus, women's morality is more contextualized and tied to concrete relationships and situations (Gilligan, 1982). The morality of care, proposed by Gilligan (1982) to describe women's moral judgment, emphasizes responsiveness and interdependence in contrast to the morality of justice, the highest stage in Kohlberg's (1981) stage model. Johnston (1988) found that males and females have knowledge about both the morality of care and of justice. However, the morality of care is preferred among women, whereas the morality of justice is preferred among men. Johnston (1988) also found that boys used the morality of care much less often than girls used the morality of justice, suggesting that girls may be more flexible in their moral orientations.

Simpson (1974) pointed out that Kohlberg's stages may be culturally biased: The stages of moral development and their culmination in justice are based on the Western philosophical tradition and may not apply to the Eastern philosophies. Miller (1994) argued that both Kohlberg's model of moral development and Gilligan's morality of caring pay insufficient attention to the role of culture in moral development. Miller proposed that two different cultural conceptions of self and human nature led to two different conceptions of morality: The individually oriented moralities among U.S. Americans versus the duty-based interpersonal moralities among Hindu Indians. The modern Western concept of the autonomous individual with freedom of choice and human rights and liberty is the basis for the individually oriented interpersonal moralities in the U.S. (Miller, 1994). The Hindu Indian concept of the context-based self with duty

and role at its core is the basis for the duty-based interpersonal moralities among Hindu Indians (Miller, 1994).

Miller and her colleagues (e.g., Miller, 1994; Miller & Bersoff, 1992; Miller, Bersoff, & Harwood, 1990; Miller & Luthar, 1989) tested and found that interpersonal responsibilities were broadly defined and socially enforceable in duty-based rather than in individually oriented interpersonal moralities, in which interpersonal responsibilities were regarded as subject to personal decisions. They pointed out that greater priority was given to interpersonal responsibilities relative to justice obligations in duty-based rather than in individually oriented interpersonal moral codes. Miller (1994) argued that the U.S. moral code reflects the central notion of Western liberalism that individual autonomy is more fundamental and more natural than social obligations.

The duty-based interpersonal moral code was also found in other Asian cultures. Morality in traditional Chinese thought centers around the concept of benevolence (Dien, 1982). Ma (1997) found that the moral judgment of Chinese is affective and is highly responsive to the suffering of others. Ohbuchi, Fukushima, and Tedeschi's (1999) research on Japanese moral reasoning also showed that Japanese regarded a justice goal as less important and a relationship goal as more important than did Americans.

Cultural Differences in Moral Judgment: Kantian Versus Confucian Morality

Cultural differences observed in moral judgment may have their roots in the different moral philosophical traditions between the West and the East. In Kantian ethics, moral judgment must be based on reason, and reason alone can help determine what duty requires (Kant, 1785/1990). Duty, in Kant's view, is "the necessity to do an action from respect for law," and is independent of any consequences from so acting (Kant,

1785/1990, p. 16). Kant emphasized that moral judgment should not be subject to “propensions of feeling” and “melting compassion.” Kant believed that compassion was “beautiful” but nevertheless had no “moral worth.”

Kant’s stern stance on refuting the role of emotions in moral judgment was not shared by many moral sentimentalists such as David Hume and Adam Smith. Smith (1759/1976) argued that the feeling of sympathy instead of reason was at the heart of moral judgment. This moral sentimentalist tradition has been revived recently by philosophers and social scientists studying ethics and moral judgment (e.g., Nichols, 2004; Solomon, 2004). Nichols (2004) argued that emotions played a critical role in both the psychological and cultural underpinnings of basic moral judgment.

The Confucian moral philosophy is more congruent with moral sentimentalism than with moral rationalism represented by Kant (1785/1990) and Rawls (1971). Confucian moral tradition also placed much emphasis on the role of emotions in moral judgment. Mencius (320 BCE/1970) said:

No man is devoid of a heart sensitive to the suffering of others.... Suppose a man were, all of a sudden, to see a young child on the verge of falling into a well. He would certainly be moved to compassion, not because he wanted to get in the good graces of the parents, nor because he wished to win the praise of his fellow villagers or friends, nor yet because he disliked the cry of the child. From this it can be seen that whoever is devoid of the heart of compassion is not human, whoever is devoid of the heart of shame is not human.... The heart of compassion is the germ of benevolence; the heart of shame, of dutifulness.... (pp. 82-83)

Compared to the Kantian moral tradition with its focus on impartial justice, Confucian moral thinking centers on the notion of benevolence. Rather than focusing on the principles of moral conduct, Confucianism emphasizes socially determined roles and proper activities to fulfill them (Wang, 2003). Wang (2003) pointed out that the problem with Kant's view compared with Confucian's view is its detachment; Kant's ethics requires a moral person to act according to moral principles justified by rationality alone, irrespective of his or her emotions, desires, or inclinations. However, a person's attitudes, intentions, emotions, and situational factors are ignored in this detachment, which may be important factors that contribute to a moral situation (Wang, 2003). Wang (2003) indicated that an explanation for this detachment in Kantian ethics may be due to the discounting of feelings in his moral theorizing. According to Kant (1785/1990), human feelings should be subject to a law of duty. However, the Confucian moral tradition gives moral significance to personal relationships and affection between humans (Mencius, 320 BCE/1970). According to Confucius, the natural affection that one feels for his or her kin can be extended to all human beings (Wang, 2003).

The differences in the moral traditions of the West and the East may have accounted for the observed differences in moral judgment (e.g., Miller, 1994; Ohbuchi, Fukushima, & Tedeschi, 1999) between people in the U.S. and some Asian countries. Cultural differences can be expected, therefore, in the conflict between the ethics of care and the ethics of justice. People in some Asian countries influenced by Confucianism may be greatly affected by the caring mentality whereas people socialized in the Kantian moral tradition may be more guided by abstract principles of impartiality and justice in their moral reasoning.

Need Versus Equity

The caring versus justice dilemma reflected in distributive justice is the conflict between two distributive principles, need and equity. The need distributive principle suggests that resources and benefits be distributed in a way that takes into consideration individual needs rather than contributions, which is in line with the caring ethic rather than the justice ethic. An impartial equitable distribution demands that rewards or benefits be distributed based on contributions and investments regardless of one's needs. As there are cultural differences in the choice between the caring and justice ethics, evidence also exists for cultural differences in the choice of equity versus need principles in distributive situations (for review, see Leung, 1988, 1997). One of the purposes of the current research is to examine whether empathy explains the cultural differences in the use of the need and equity principles. The following section reviews empathy as the proposed mechanism.

Empathy

Research on primates has shown that emotional attachment was a decisive factor in the development of rhesus monkeys (Harlow, 1971, 1979, 1986). The ability to empathize with other people has also been found to be critical in the emotional development of humans (e.g., Sacks, 1995). One characteristic of autistic children is their inability to empathize with other people. People with Asperger's syndrome, a type of autism, have to be taught to break down and memorize behaviors in order to take the perspective of others, a process that is extremely difficult for them. Yet for people with normal empathizing abilities, these behaviors are so easy and even unconscious that they take them for granted (Sacks, 1995).

Empathy is defined as “the ability to share in another’s emotions, thoughts, or feelings” (Agnes, 2001, p. 466). The act of empathizing is putting oneself in another person’s place and experiencing the cognitive and affective states of the other person. The cognitive aspect of empathy refers to the capacity to represent others’ thoughts, intentions, and desires, whereas the affective aspect of empathy refers to the ability to share the feelings and emotions of others (Agnes, 2001). The cognitive aspect of empathy is often referred to as *mentalizing* (Keysers, Wicker, Gazzola, Anton, Fogassi, & Gallese, 2004; Singer & Fehr, 2005). The term mentalizing will be used to differentiate cognitive empathy from the ability to take the affective perspective of another and experience the feelings of others, which is referred to as *empathizing*. The current research focuses on empathizing.

The neural basis for empathizing has been studied in the fields of neuroscience, psychology, and economics (e.g., Frith & Frith, 2003; Preston & de Waal, 2002). The neural processes of empathizing are currently attracting attention within the social neurosciences. Researchers have recently found that common neural reactions were activated both when observers saw disgusted faces and when they smelled disgusting odors themselves (Wicker et al., 2003), and both when observers saw someone else being touched in a video and when they were touched themselves (Keysers et al., 2004). Another study on pain has revealed that different brain areas were activated when participants were empathizing with the pain of their loved partners versus when they were experiencing pain themselves (Singer, Seymour, O’Doherty, Kaube, Dolan, & Frith, 2004). Responses in pain-related brain areas could also be elicited by empathizing with

the pain of strangers (Jackson, Meltzoff, & Decety, in press; Morrison, Lloyd, di Pellegrino, & Roberts, 2004).

The existence of the neural basis for empathizing indicates the importance of these functions for humans. The acts of empathizing, with their roots in the brain, can be so easily performed that they are often taken for granted. Only when people witness how difficult life can be without the normal functioning of these mechanisms do they realize how deeply these functions have influenced their social lives. The following section reviews the different ways that empathy can be aroused.

Empathic Arousal

Instead of defining empathy as the matching of feelings, in which one feels what the other feels, Hoffman (2000) defined empathy in terms of processes underlying the matching. Empathy requires “the involvement of psychological processes that make a person have feelings that are more congruent with another’s situation than with his own situation” (Hoffman, 2000, p. 30). Hoffman (1978) proposed five psychological processes as underlying the matching of emotions: mimicry, classical conditioning, direct association, mediated association, and role-taking. Among the five modes of empathy arousal, the first three are primitive and involuntary, whereas the last two are more advanced and are accomplished through human language and cognitive development (Hoffman, 1978, 2000). In the current dissertation research, mediated association and role-taking are used to elicit empathy and they are described here.

Mediated association is an advanced empathy-arousing mode. In this mode, a person’s emotional state is communicated through language. The use of language enables empathizing to occur even when the other person is not present. For example, messages

about a victim's feelings or simply his or her situation can arouse empathy in observers (Hoffman, 2000). This mode broadens the scope of empathizing because it enables people to empathize with almost anyone in different times and places when the person's situation is conveyed through language.

Role-taking is another advanced empathy-arousing mode. It involves imagining oneself in another's place. The shift from imagining oneself in another's situation to experiencing the other's feelings was speculated by philosophers like David Hume (1711/1957) and Adam Smith (1759/1976). These philosophers believed that empathy was universal and involuntary and emphasized that by imagination, having mental images of another's situation, a person could experience the same feelings as the other person. Hoffman (2000) distinguished two types of role-taking: self-focused and other-focused. Self-focused role-taking is imagining how one would feel in the same situation when observing others, whereas other-focused role-taking focuses directly on the observed and involves imagining how that person feels (Hoffman, 2000). Other-focused role-taking can be facilitated by knowing personal information about the other and general knowledge of how people feel in specific situations (Hoffman, 2000). Self-focused role-taking was found to produce more intense empathetic feelings than other-focused role-taking (Batson, Early, & Salvarani, 1997; Mead, 1934, Stotland, 1969). The reason for the difference in empathetic intensity may be that self-focused role-taking activates a person's internal need system (Hoffman, 2000). According to Hoffman (2000), imagining oneself in the other's place may arouse memories of similar events in one's past experiences that trigger emotional responses similar to the other person's emotions.

This dissertation uses the two advanced modes of empathy, verbal association and self-focused role-taking. Both a description of others' situations and an instruction to do self-focused role-taking are used in the research to manipulate empathy.

Factors Affecting Empathy

Individual differences. The ability to empathize differs across individuals (Singer et al., 2004). One of the chief components generally recognized in the diagnosis of the Narcissistic Personality Disorder (NPD) is the lack of empathy (Watson, Grisham, Trotter, & Biderman, 1984). Normal narcissism is necessary for individuals to develop a healthy self-esteem, confidence, and a general sense of well-being. But pathological narcissism is self-centered and lacking in empathy (Watson et al., 1984). Thus, individuals with narcissistic personalities are expected to be less empathetic than individuals without narcissism. A study of the personality factors underlying ethical behaviors among medical students and physicians revealed that empathy was positively related to emotional intelligence, extraversion, open-mindedness, and compliance with others, and negatively related to aloofness (Munro, Bore, & Powis, 2005). Individual differences in empathy can stem from different individual capabilities, learning history, and past experiences (Enz, Zoll, & Xu, 2006). Therefore, in the current research, individual differences in trait empathy are statistically controlled in the four studies by using trait empathy as a covariate.

Gender differences. Enz, Zoll, and Xu's (2006) study found that in both China and Europe, females reported greater empathy than males. The gender difference in empathy has been widely confirmed in empathy research across different age groups (Adams, Jones, Schvaneveldt, & Jenson, 1982; Bryant, 1982; Davis, 1996; Enz, Zoll, & Xu, 2006;

Hoffman, 2000; Lennon & Eisenberg, 1987; McDevitt, Lennon, & Kopriva, 1991). In a study investigating if the level of empathic response would be influenced by whether the target person is liked or disliked by the observer, researchers also found a significant gender effect (Singer, Seymour, O'Doherty, Stephan, Dolan, & Frith, 2006). In that study, male and female participants were involved in a prisoner's dilemma game in which two confederates played fairly or unfairly. Later, when participants observed the fair player receiving electrical shock, the pain-related brain areas glowed, as measured by fMRI, showing empathy-related activation, for both sexes. However, when the unfair player was receiving pain, the empathy-related brain activities in male participants were significantly reduced, accompanied by the activation of reward-related brain areas. For females, their reward-related brain areas did not glow as they observed the unfair player receiving pain, whereas their empathy-related brain areas still glowed. This result seems to indicate that males are more likely than females to be avengers.

In the current research, gender differences in empathy also are statistically controlled in the four studies by using it as a predictor.

Contextual differences. Relationship between the observer and the target of empathy may be a contextual factor affecting the level of empathy. Singer et al. (2006) demonstrated that when the target of empathy was liked and experienced pain, both male and female participants showed empathy-related brain responses; when the target was disliked and received pain, both males and females' empathy levels significantly dropped, and male participants even revealed reward-related brain activity. This result indicates that if the relationship between an observer and a target-person is close, the observer will demonstrate higher levels of empathy toward the target-person than if the relationship is

not close. The relationship between the distributor and the recipient is not a factor considered in the current research. The possible relationships of this variable with other variables in the current research are discussed in the overall discussion of this research.

Cultural differences. Only a few studies have investigated cultural differences in empathy. Kobayashi and Trommsdorff (1993; see also Trommsdorff, 1995) investigated differences in empathy between two cultural groups of girls, German and Japanese. They found empathetic differences in the quantity and quality of emotional responses towards the distress of others. Specifically, Japanese girls showed a significantly higher level of distress toward another person's plight than did German girls. Enz, Zoll, and Xu (2006) investigated cultural differences in empathy among people in China, Portugal, Germany and Britain. They validated an empathy questionnaire and found comparable factor structures for two dimensions of empathy: affective empathy and cognitive empathy. These researchers found that among the four cultures, Chinese participants showed the highest affective empathy scores. These cultural differences were further explored in the current research.

Empathy's Limitations

Empathy can be biased because empathic arousal is to some degree based on the relationship between the observer and the observed (Hoffman, 1984, 1987, 2000). Empathy's biases may weaken empathy's role as a motivational basis for prosocial behaviors (Hoffman, 2000).

Empathy is vulnerable to two types of bias, familiarity bias and here-and-now bias (Hoffman, 2000). Familiarity bias refers to individuals being more likely to empathize with those they are familiar with, such as their family members, close friends, ethnic or

racial group members, than those they are not familiar with (Hoffman, 2000). Hoffman (2000) pointed out three types of familiarity bias: in-group bias, friendship bias, and similarity bias. Here-and-now bias suggests that people are more likely to empathize with those who are present in the immediate situation than with those who are absent (Hoffman, 2000).

In-group empathic bias arises when individuals show more empathy for people of the same ethnic or racial group than for out-group members (Hoffman, 2000). Klein (1971) investigated in-group empathy bias in a study on children of different races. In the study, black and white girls were shown slides depicting girls of both racial groups in happy, sad, and fearful situations. Participants showed more empathy toward those in their same racial group, supporting the in-group empathic bias hypothesis. Research in transgression guilt (Katz, Glass, & Cohen, 1973; Meindl & Lerner, 1984) showed that criminals felt less guilt over committing the same crime against an out-group victim than an in-group victim. Similarly, in war propaganda, people of other national, racial or ethnic groups have often been depicted as demons and subhuman to eliminate empathy and justify killing.

The friendship bias is also a type of familiarity bias, because friends are more familiar than acquaintances due to frequent interaction and communication with them. Costin and Jones (1992) found a friendship empathic bias among 4- to 5-year-old children. Participants in the study watched children in some kind of difficulty in puppet scenarios. They verbalized more empathic distress toward and were more likely to help a child depicted as a friend than a child depicted as an acquaintance.

Similarity bias is another type of familiarity bias. The old saying goes that birds of a feather flock together, indicating that people who are similar in character or interest will often choose to spend time together, and their increased interaction will lead to their increased familiarity. People who are similar also are more likely to become friends and form in-groups. Researchers (Houston, 1990; Krebs, 1975) found the similarity empathic bias related to personality similarity among college students. In Krebs' (1975) study, students who believed that the other student with whom they had been paired had a similar personality had more empathic distress when the other was about to experience pain. Houston (1990) found that students with a self-reported shyness personality problem experienced more empathic distress when reading a purported transcript of an interview with another student who described his problems with shyness.

Empathy is aroused easily in immediate situations because situational and personal cues are at their peak when a victim is present (Hoffman, 2000). An observer is vulnerable to a here-and-now empathic bias when a needy person's life experiences are communicated to the observer and thus brought to the present more readily than those of other needy people. Studies on empathy's here-and-now bias have shown that when a person was informed of the personal experiences of one in need, his or her empathy for this particular person could operate against the interests of the other people in need (Batson, Klein, Highberger, & Shaw, 1995), or to the disadvantage of the group as a whole (Batson, et al., 1995).

In the current study, the investigation of the effects of empathy is restricted to relationships that are relatively low on closeness.

Empathy and Caring

The ability to empathize may inhibit selfish motives and render people more cooperative and activate other-regarding behaviors (Eisenberg & Miller, 1987; Singer & Fehr, 2005). The relationship between empathy and prosocial behavior has been investigated for several decades (e.g., Eisenberg & Miller, 1987; Krebs, 1975). Empathy has been found to increase altruism (e.g., Coke, Batson, & McDavis, 1978). The empathy-altruism hypothesis claims that the prosocial motivation aroused by empathy has the ultimate goal of increasing the welfare of the person in need (e.g., Batson, 1987; Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Hoffman, 1976). Evidence has been accumulating for this hypothesis. The major challenge for researchers of this hypothesis is to demonstrate that when an observer's empathy level is high, the action taken by the observer has the ultimate goal of benefiting the other person for whom empathy is felt rather than for feeling good about oneself. Initial evidence found that when empathy is high, helping remains high even when empathetically aroused individuals can easily excuse themselves from helping (Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Fultz, Batson, Fortenbach, McCarthy, & Varney, 1986; Toi & Batson, 1982).

Batson, Dyck et al. (1988) conducted five studies testing two egoistic alternatives: The empathy-specific reward hypothesis, in which empathetically aroused individuals help to get social and personal rewards such as honor, pride, or enhanced mood; and the empathy-specific punishment hypothesis, in which empathetically aroused individuals help to avoid punishments. Their studies showed that the two egoistic alternatives were not supported. Specifically, high-empathy individuals still felt good if the victim's need was relieved, even if they were not the cause and thus were not rewarded with mood

improvement. High-empathy individuals' helping behavior did not decrease when they were provided with justifications for not helping and thus were not afraid of being punished.

Empathizing, taking the affective perspective of the other, therefore, is associated with prosocial behaviors such as helping others without expecting anything in return. In this sense, empathizing benefits those who may otherwise be perceived as not deserving the rewards from a strict sense of justice. For example, in an equity-dominant situation (where equity is the most salient distributive principle), such as in a bonus-distribution situation in a company, the person who makes the least contribution will be perceived as not deserving rewards and therefore not be rewarded or will receive the fewest rewards based on a strict equity principle. However, when empathy is aroused, the person who makes the least contribution may not be judged so strictly and therefore may receive more rewards than when empathy is not aroused. In the same light, in a need-dominant situation (where need is the most salient distributive principle), such as in an assistance-fund distribution in a charity organization, the person whose need is the lowest will be perceived as not deserving help and therefore may not be helped or may receive the least help. However, when empathy is aroused, the person who has the lowest need may not be judged so strictly and therefore may receive greater assistance than when empathy is not aroused. Empathizing also may benefit those who experience negative emotions compared with those who experience positive emotions. For example, in a mixed-principle situation (where both equity and need are salient distributive principles), such as in a need- and merit-based scholarship distribution in a university, the student with need may experience more negative emotions, such as helplessness, when compared

with the student with merit. Therefore, when empathy is aroused, the student with need may receive more rewards than the student with merit.

Based on the above rationale, in this research empathy is expected to influence the use of the need and equity principles in three distinct distribution situations and the effect of empathy is expected to be greater for Chinese than for U.S. Americans.

Overview of Studies

This dissertation focuses on empathy and its relationship to two distributive justice principles: need and equity. Hypothesis testing addresses three relationships: (1) how empathy influences the use of the equity principle when equity is the most salient distributive justice principle in a situation; (2) how empathy influences the use of the need principle when need is the most salient distributive justice principle in a situation; and (3) how empathy influences the choice between the need and equity principles when both principles are salient in a situation. Four studies are conducted to examine the role of empathy in three different distributive situations across two cultural groups, Chinese and U.S. Americans. The first and second studies investigate how empathy influences the distribution of a bonus in a company, where equity is the most salient distributive justice principle. The third study investigates how empathy affects the distribution of charity in a charity organization, where need is the most salient distributive justice principle. The fourth study investigates how empathy influences the distribution of scholarship money in a university, where the scholarship program accepted both merit-based and need-based applications; both equity and need are salient distributive justice principles in this situation. Hypotheses for each study are presented before the method section of each study.

The first and second studies investigate the influence of empathy on the distributive justice principle of equity in a bonus distribution situation in a company. Based on the equity principle, employees who are more competent should receive larger bonuses than employees who are less competent. It is hypothesized in Studies 1 and 2 that empathy affects the distribution decision based on competence such that the difference in the size of bonus distributed between high- and low-competence persons is greater when empathy is low than when empathy is high. In other words, empathy decreases the gap between high- and low-competence employees in terms of the amount of bonus distributed. Moreover, this interaction between empathy and competence is expected to be greater for Chinese than for U.S. Americans.

The third study examines the influence of empathy on the distributive justice principle of need in a charity distribution situation. Based on the need principle, people in greater need should receive a greater amount of money than people in less need. It is expected in Study 3 that empathy affects the distribution decision based on need such that the difference in the amounts of money distributed between high- and low-need persons is greater when empathy is low than when it is high. Empathy decreases the gap between high- and low-need persons in terms of the amount of money distributed. Moreover, this interaction between empathy and need is expected to be greater for Chinese than for U.S. Americans.

The fourth study investigates the effect of empathy on the choice between the equity and need principles in a scholarship distribution situation in a university. It is expected in Study 4 that the need principle is more likely to be chosen than the equity principle when empathy is aroused than when it is not. In other words, when empathy is aroused, more

money is expected to be distributed to applicants who apply based on need than on merit. Moreover, this effect of empathy is expected to be greater for Chinese than for U.S. Americans.

Chapter 2

Study 1: The Distribution Situation in a Company

Hypotheses

In the first study, the distribution of monetary reward was examined based on three independent variables: the competence of the receiver (high vs. low competence), the level of empathy with the receiver (high vs. low empathy), and culture (Chinese vs. U.S. Americans). The following hypotheses are organized based on the effects of competence (H1), the role of empathy (H2 and H3), and the role of culture (H4 and the RQ).

H1: For both cultures, a larger bonus is distributed to people with greater competence than to people with less competence.

H2: For both cultures, a larger bonus is distributed to people with whom the distributor empathizes than to people with whom the distributor does not empathize.

H3: Empathy interacts with competence such that a larger bonus is distributed to low-competence people with whom the distributor empathizes than with whom the distributor does not empathize, whereas empathy does not increase the size of bonus distributed to high-competence people.

H4: The effect of empathy on the relationship between competence and the size of bonus distributed is greater for Chinese than for U.S. Americans.

RQ: Does culture interact with other variables to influence the size of bonus distributed?

Method

Participants

Participants ($N = 179$) were recruited from China and the U.S. The U.S. participants

were 95 undergraduates from communication classes at a large public East Coast university. Eighty-four percent of the U.S. participants were female (80 females and 15 males). The average age of the U.S. participants was 19.67 years ($Mdn = 20.00$, $SD = 1.54$), and the ages ranged from 18 to 29 years. Fifty-seven percent of the U.S. participants were Caucasian, 17% were African American, 15% were Asian, 6% were Hispanic, and 5% were not in any of the listed categories (rounding is used).

The Chinese participants were 84 undergraduates from a university in a southwestern city of China. One participant did not indicate his or her sex and race, and two participants did not indicate their age. Of the 83 participants who indicated sex and race, seventy-six percent of the Chinese participants were female (63 females and 20 males). The average age of the participants was 21.23 years ($Mdn = 21.00$, $SD = 1.31$), and the ages ranged from 18 to 24 years. All participants from China identified their ethnic background as Chinese (as opposed to Korean or other possible ethnicities in China).

Procedure

U.S. participants received a small amount of extra course credit for participating in the study. Participants came to an assigned location, which was not their regular classroom, to read and sign the study's consent form and complete the questionnaire. An alternative class assignment or participation in other studies was offered as an option for students who did not want to participate in this study.

The Chinese participants did the study as a voluntary class activity. They read and signed the consent form and completed the questionnaire during regular class time supervised by their instructors. For both Chinese and U.S. participants, no student declined to participate in the study, and questionnaires and consent forms were collected

separately. The questionnaire took approximately 30 minutes to complete.

Stimulus Materials

Two year-end evaluation packages (see Appendix A) were created to generate two levels of competence (high vs. low). The evaluation package included three forms: the Employee Performance Review Form, the Employee Training Requirement Form, and the Request for Leave of Absence Without Pay Form. The three forms were revised from real evaluation forms found on a university's Web site. The employee was represented by an ID number in the three forms to exclude the influence of a name. In the Employee Performance Review Form, the employee appeared to have been evaluated by his or her direct supervisor on ten aspects of work using a three-level rating scale: outstanding, meets expectations, and below expectations. The definitions of *meets expectations* for each of the ten work aspects were given and an overall rating for the employee was also provided by the direct supervisor in the Performance Review Form. Two versions of the Employee Performance Review Form were created to manipulate two levels of competence (high vs. low). For all aspects of work including the overall rating, the category of *outstanding* was checked for the high-competence employee and the category of *below expectations* was checked for the low-competence employee. The other two forms, the Employee Training Requirement Form and the Request for Leave of Absence Form, were included in the evaluation package to make it more believable and realistic for participants because a real year-end evaluation package may not just include one form. The two forms were exactly the same across the two levels of high and low competence. In the Employee Training Requirement Form, the employee indicated that he or she had participated in all the required training, and also his or her additional voluntary training

hours had equaled or exceeded twenty hours. In the Request for Leave of Absence Form, the employee indicated that he or she did not require leave without pay during this year. Signatures required for the last two forms were made exactly the same for both versions of the evaluation package and the employee's signature was made as unidentifiable as possible to reduce the influence of a name.

Questionnaire Design

Two versions of the questionnaire were created, one in which participants were asked to empathize with the employee (high-empathy condition) and the other in which participants were instructed to focus only on the information in the employee's evaluation package (low-empathy condition). For Chinese participants, the questionnaire and evaluation package were translated into Chinese by the dissertation researcher, who is a native Chinese speaker, and back-translated by another native Chinese speaker. The two translators discussed any incongruities in the pre- and post-translated English versions and constructed a final Chinese version of the evaluation package and questionnaire.

The evaluation package was prepared as a separate document from the questionnaire. In both cultures, each participant was randomly assigned to read one of the two versions of the questionnaire, the high-empathy and the low-empathy conditions, and one of the two versions of the evaluation package, one describing a high-competence employee and one describing a low-competence employee. This arrangement created four experimental conditions: 2 (empathy) \times 2 (competence).

For each condition, participants were first asked to imagine themselves as the president of a company who would be distributing year-end bonuses to employees. The company was described as a very competitive one, whose success was attributed to a

reward system that linked year-end bonuses to performance. This description was used to make the equity principle salient for the bonus distribution situation. Participants were asked to read one of the two versions of the evaluation package and form an overall impression of the employee, who was described as the same sex with the participant. They were then instructed to briefly write down their impressions of the employee and of the organization to further put them in the imagined situation. Next, two items measured the believability and realism of the situation (“How believable is the situation?” and “How realistic is the situation?”) and three items measured the perception of competence (“How competent is the employee?,” “How qualified is the employee?,” and “What is the level of the employee’s ability?”).

Participants then read an instruction for how to distribute the bonuses. The instruction was one of two versions that were used to manipulate the high-empathy and low-empathy conditions. The instructions were revised from the work of Stotland, Sherman, and Shaver (1971) and Fink (1975).

High-Empathy Instruction:

According to research conducted by the Human Resource Department, the best way to evaluate an employee is to really understand the employee’s feelings. Before you decide what bonus you would give to this employee, please imagine how *you yourself* would feel if you were in the employee’s position. Picture to yourself just how *you* would feel in his or her shoes (You are to keep clearly in mind that you are to react as if it *were you* who are in the package and are being evaluated).

Concentrate on the way *you* would feel in that situation. In your mind’s eye, you are to visualize how it would feel to *you* to be the employee in his or her position.

Low-Empathy Instruction:

According to research conducted by the Human Resource Department, the best way to evaluate an employee is to focus on the information in the evaluation package.

Before you decide what bonus you would give to this employee, please decide based on exactly what's in the package. You are to notice anything that is included in the package, whatever it is.

After reading the instructions, participants indicated the amount of bonus they would give to the employee as the president of the company by responding to the question: "If the year-end bonus for a moderately competent employee in your organization is \$1000, what bonus would you give to the employee whose evaluation package you have just read?" This question served as the dependent variable for the study. Next, two questions checked the manipulation of empathy ("How much have you focused on the information in the package in your decision?" and "How much have you focused on the feelings of the employee in your decision?"). Finally, participants responded to the Personal Belief in a Just World Scale (see Appendix B) and the Measure of Empathy as a personality trait (see Appendix C), which includes five dimensions: perspective taking, fantasy, empathic concern, personal distress, and emotional contagion.

For all questions other than the estimate of the bonus, participants used magnitude scales, in which 100 represented a moderate amount of the variable that they were rating (Hamblin, 1974; Lodge, 1981; Shinn, 1974; see also Torgerson, 1958, for fractionation methods). For the measure of bonus, participants were asked to indicate the amount of bonus they would give to the employee using \$1,000 as the yardstick for a moderately competent employee.¹ Participants could use any non-negative number, with higher

numbers representing greater amounts of bonus that was being distributed. At the end of the questionnaire, participants provided information about their sex, age, racial or ethnic background, nationality, native language, major, year in school, and marital status.

Data Transformation and Presentation

To meet statistical assumptions required for analyses within the general linear model, all the items were transformed by a power transformation (see Bauer & Fink, 1983; Kruskal, 1968). When a measure had one or more outliers, these values were trimmed by being recoded to a fixed upper value before further analysis. The transformed variables are used in all the analyses that follow.² The means and standard deviations reported in the text are descriptive statistics, whereas the figures present estimated marginal means. All statistical tests are two tailed unless stated otherwise.

Results

Perception of Manipulations

Believability and realism. Both American (believable: $M = 128.99$, $SD = 157.71$, realistic: $M = 120.06$, $SD = 152.64$) and Chinese participants (believable: $M = 98.92$, $SD = 106.74$, realistic: $M = 86.58$, $SD = 80.77$) perceived the situations as moderately believable and realistic (100 was used in the scale to indicate moderate believability and realism).³ No significant difference was found in the perceptions of believability, $F(1, 175) = 2.84$, $p < .09$, $\eta^2 = .02$, and realism, $F(1, 172) = 2.71$, $p < .10$, $\eta^2 = .02$, between U.S. and Chinese participants. For U.S. participants, no significant differences were found in the perceptions of believability, $F(1, 93) = .01$, $p < .93$, $\eta^2 = .01$, and realism, $F(1, 93) = .01$, $p < .99$, $\eta^2 = .01$, across the two levels of competence. For Chinese participants, no significant difference was found in the perception of realism between

high and low competence, $F(1, 79) = 2.53, p < .12, \eta^2 = .03$. However, the high-competence condition ($M = 4.60, SD = 1.64$) was perceived as more believable than the low-competence condition ($M = 3.54, SD = 2.18$) for Chinese participants, $F(1, 82) = 6.21, p < .02, \eta^2 = .07$.

The means and standard deviations for believability and realism by culture and competence levels are displayed in Tables 1 and 2, respectively.

Competence. A principal-components analysis was performed on the three-item competence scale. Only one component had an eigenvalue greater than 1. This component accounted for 92% of the total variance. The loadings of the three items on this extracted principal component were .95, .97, and .96, respectively. The reliability coefficient (Cronbach's α) of the summed competence items was .96. This principal component score was used in the subsequent analyses.⁴ The manipulation check for competence showed that the high-competence employee (U.S.: $M = .65, SD = .51$; China: $M = .94, SD = .60$) was perceived as significantly more competent than the low-competence employee (U.S.: $M = -.91, SD = .54$; China: $M = -.61, SD = .80$) for Americans and Chinese, respectively (U.S.: $F[1, 91] = 203.75, p < .001, \eta^2 = .69$; China: $F[1, 82] = 98.57, p < .001, \eta^2 = .55$). Therefore, the manipulation of competence was successful in both cultural groups.

Empathy. Two questions served to check the empathy manipulation, measuring how much participants had focused on the information in the package and how much they had focused on the feelings of the employee in their distribution decision. To assess the extent to which participants focused on the employee's feelings versus information in the package, a difference score was created by subtracting the reported information-focused

Table 1

Means and Standard Deviations for Believability by Culture and Levels of Competence in Study 1 (N = 179)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	4.54	1.58	4.60 ^a	1.64	4.57	1.60
Low Competence	4.57	2.20	3.54 ^a	2.18	4.08	2.24
Overall	4.56	1.91	4.04	2.00		

^aThe two means were significantly different from each other at $p \leq .05$ level, indicating that the high-competence condition was perceived as more believable than the low-competence condition for Chinese participants.

Table 2

Means and Standard Deviations for Realism by Culture and Levels of Competence in Study 1 (N = 176)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	4.43	1.96	4.29	1.66	4.37	1.82
Low Competence	4.43	1.85	3.64	1.97	4.05	1.94
Overall	4.43	1.89	3.94	1.85		

score (transformed) from the reported feelings-focused score (transformed). The high-empathy participants should have a higher score on this measure than the low-empathy participants. U.S. participants reported a higher score on this difference measure in the high-empathy condition ($M = -1.05$, $SD = 1.59$) than in the low-empathy condition ($M = -1.97$, $SD = 2.03$), $F(1, 91) = 6.26$, $p < .007$ (one tailed), partial $\eta^2 = .06$. However, no significant difference was found for Chinese participants between high-empathy ($M = .30$, $SD = 1.25$) and low-empathy ($M = .12$, $SD = 1.74$) conditions. Therefore, the manipulation of empathy was successful for Americans but not for Chinese. The reason may be that Chinese reported a high empathy level in the low-empathy condition, even higher than the empathy score in the high-empathy condition for Americans.

Trait empathy. A principal-components analysis was performed on the 35 items of trait empathy. More than one component with an eigenvalue greater than 1 was extracted (see Figure 1). The first principal component accounted for 24% of the total variance. The reliability coefficient (Cronbach's α) of the summed thirty-five items was .90. This principal-component score, created by combining the 35 items based on their loadings, was used in the subsequent analyses.

Predicting Distribution of Bonus

To assess the hypotheses and research question, an analysis of covariance (ANCOVA) was conducted, with competence (low vs. high), empathy (low vs. high), culture (China vs. U.S.), and sex (male vs. female), as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable. Sex was entered as an independent variable to control for any effects it may have, by itself or in

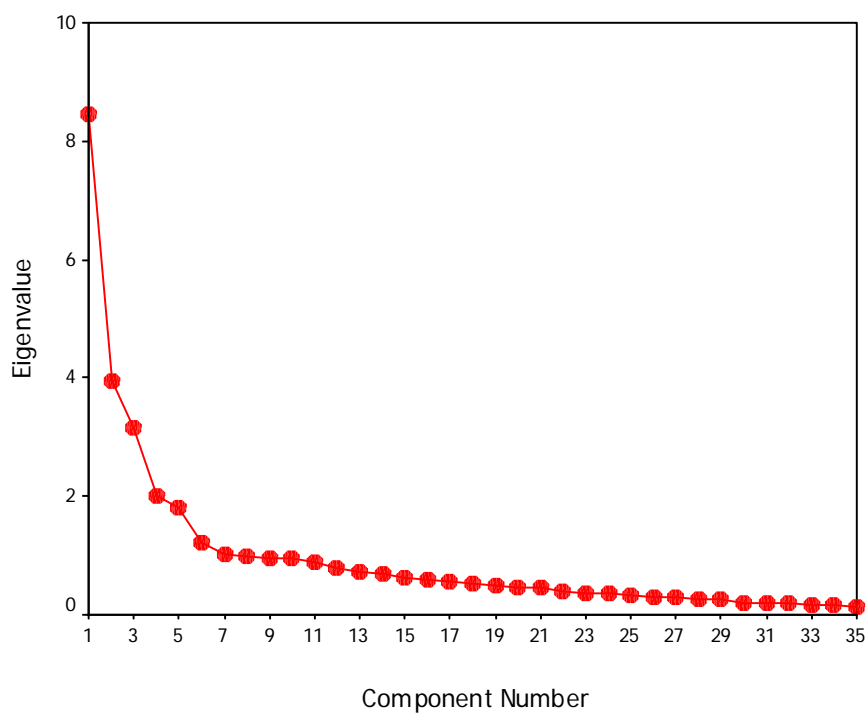


Figure 1. Scree plot for the principal components extracted from the 35 trait empathy items in study 1.

interactions with other independent variables, on the size of the bonus. Trait empathy was entered as a covariate to control for the main effect it may have on the dependent variable. The ANCOVA was statistically significant, $F(16, 156) = 15.69, p < .001, R^2 = .62$, adjusted $R^2 = .58$. The ANCOVA is referred to in the hypothesis tests that follow (see Appendix J).

Competence. Hypothesis 1 stated that for both cultures, a larger bonus is distributed to people with greater competence than persons with less competence. Results showed a significant effect for competence, $F(1, 156) = 119.25, p < .001$ (one tailed), partial $\eta^2 = .43$, with high-competence employees ($M = 15.07, SD = 3.99$) receiving larger bonuses than low-competence employees ($M = 6.56, SD = 4.58$). Therefore, Hypothesis 1 was supported.

Empathy. Hypothesis 2 predicted that for both cultures, a larger bonus is distributed to people with whom the distributor empathizes than people with whom the distributor does not empathize. Results showed a significant effect for empathy, $F(1, 156) = 4.16, p < .02$ (one tailed), partial $\eta^2 = .03$, with employees empathized by the distributor ($M = 11.30, SD = 5.46$) receiving larger bonuses than employees not empathized with by the distributor ($M = 10.13, SD = 6.54$). Therefore, Hypothesis 2 was supported.

Empathy and competence. Hypothesis 3 predicted that empathy interacts with competence such that a larger bonus is distributed to low-competence people with whom the distributor empathizes than with whom the distributor does not empathize, whereas empathy does not increase the size of bonus distributed to high-competence people. The ANCOVA showed no significant interaction between empathy and competence, $F(1, 156) = .92, p < .34$, partial $\eta^2 = .01$. Therefore, Hypothesis 3 was not supported.

Empathy, competence, and culture. Hypothesis 4 predicted a three-way interaction between empathy, competence, and culture such that the effect of empathy on the relationship between competence and the size of bonus is greater for Chinese than for U.S. Americans. Results showed no significant three-way interaction between competence, empathy, and culture, $F(1, 156) = .07, p < .79$, partial $\eta^2 = .01$. Therefore, the fourth hypothesis was not supported.

The research question asked about the effect that culture, interacting with other variables, has on the size of bonus distributed. The ANCOVA resulted in a significant interaction between culture and empathy, $F(1, 156) = 5.94, p < .02$, partial $\eta^2 = .04$. When empathy was aroused, the size of bonus distributed by Chinese ($M = 11.74, SD = 4.91$) and U.S. Americans ($M = 10.84, SD = 6.00$) was similar. When empathy was low, culture affected the size of bonus such that Chinese ($M = 11.86, SD = 6.11$) distributed larger bonuses than U.S. Americans ($M = 8.80, SD = 6.61$), $F(1, 90) = 5.14, p < .03, \eta^2 = .05$ (see Figure 2). Culture also interacted with competence, $F(1, 156) = 11.56, p < .001$, partial $\eta^2 = .07$. When competence was high, the size of bonus distributed by Chinese ($M = 15.16, SD = 4.50$) and Americans ($M = 15.00, SD = 3.55$) was not significantly different. When competence was low, Chinese ($M = 8.73, SD = 4.41$) gave larger bonuses than Americans ($M = 4.57, SD = 3.79$), $F(1, 90) = 23.75, p < .001, \eta^2 = .21$ (see Figure 3).

Table 3 displays the means and standard deviations for the amount of bonus by competence, empathy, and culture.

Discussion

The first study examined how empathy influenced the use of the equity principle in a bonus distribution situation. Competence and empathy were found to affect the

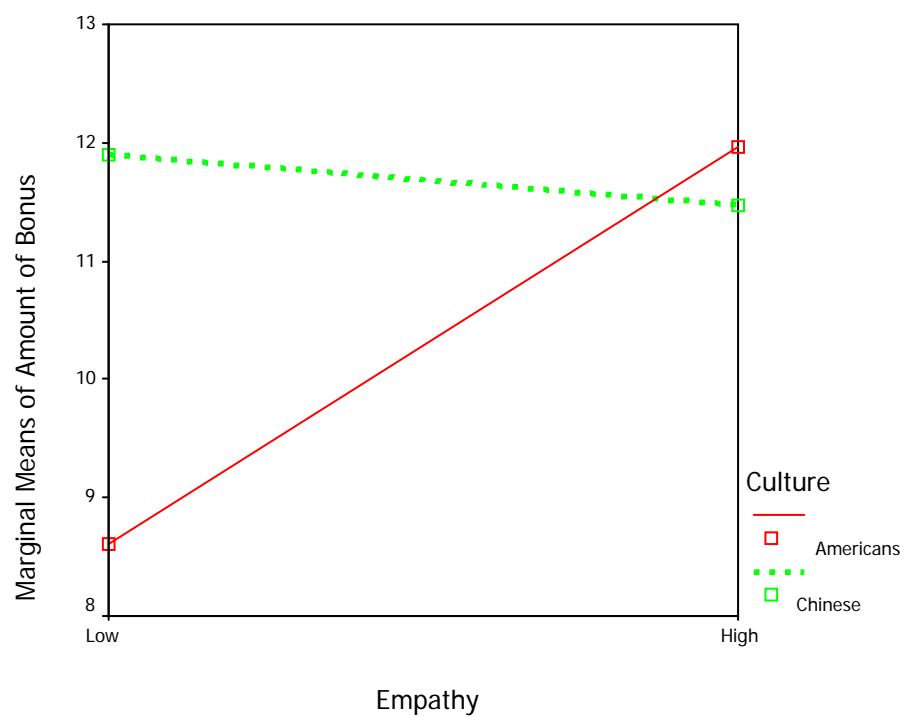


Figure 2. Amount of bonus by empathy and culture in Study 1.

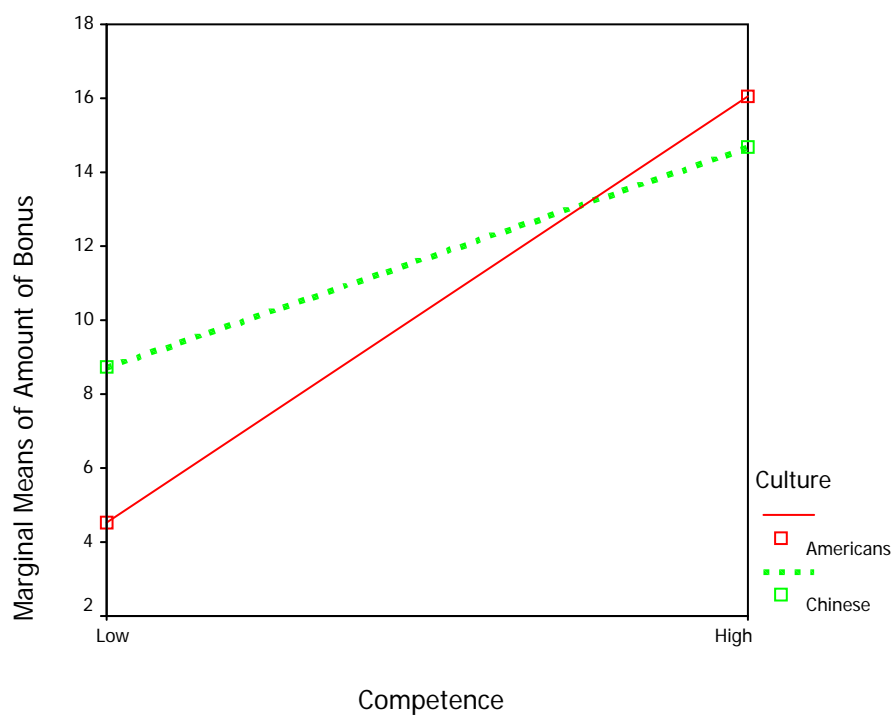


Figure 3. Amount of bonus by competence (when low competence was not accompanied by an explanation) and culture in Study 1.

Table 3

Means and Standard Deviations for Amount of Bonus by Competence, Empathy, and Culture in Study 1 (N = 179)

	US				China			
	Low Empathy		High Empathy		Low Empathy		High Empathy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	14.12	3.96	16.07	2.70	15.44	4.47	14.91	4.62
Low Competence	3.49	3.83	5.84	3.39	8.61	5.61	8.85	3.06

distribution of bonus in a company: High-competence employees received larger bonuses than low-competence employees; employees who were empathized with received larger bonuses than employees who were not empathized with by the distributor. However, the hypothesized two-way interaction between empathy and competence and three-way interaction between empathy, competence, and culture were not significant. As opposed to Hypothesis 3, empathy did not increase the amount of bonus assigned to the low-competence employees.

In reviewing participants' subjective responses concerning their impressions of the employee they were evaluating and explanations of their distribution decisions, a recurrent question participants raised was why the employee in the low-competence condition did poorly on the job. The employee's low-competence was reported in the performance review form as a matter of fact without any explanation, which may have explained why empathy did not increase the amount of bonus distributed to the low-competence employee. Therefore, in the second study that follows, the low-competence condition is further manipulated into a low-competence condition either with a positive explanation or a negative explanation to examine whether the two-way or three-way interactions hypothesized will be found.

In this first study, participants read the evaluation package first and were later asked to evaluate the employee by either focusing on the information in the package or on the feelings of the employee. This arrangement may have weakened the empathy manipulation as participants already had an impression of the employee and may have formed a judgment of the employee before reading the instruction of the empathy manipulation. Therefore, in Study 2, after reading the empathy manipulation instruction,

participants are asked again to review the evaluation package according to the instruction they had just read. Moreover, in the first study, the high- and low-empathy manipulation instructions were not of the same length. The instruction to focus on the information was shorter than the instruction to focus on the feelings of the employee. The unequal lengths of the instructions can be an alternative explanation for any differences found due to the manipulation of empathy. Therefore, in Study 2, the two instructions are equal in length.

Last but not least, the distribution of bonus was measured with only one item in which participants were asked: “If the year-end bonus for a moderately competent employee in your organization is \$1000, what bonus would you give to the employee whose evaluation package you have just read?” Because this item served as the only dependent variable in Study 1, there was no way to assess the reliability of the dependent measure. Therefore, in Study 2, more than one question is asked to assess the amount of bonus participants are willing to give to the employee so that the reliability of the dependent measures may be assessed.

Chapter 3

Study 2: The Distribution Situation in a Company

Hypotheses

In the second study, the distribution of monetary reward was examined based on three independent variables: the competence of the receiver (high-competence condition vs. each of the three low-competence conditions) and level of empathy with the receiver (high vs. low empathy), across two cultural groups, Chinese and U.S. Americans. The hypotheses in Study 2 were the same as in Study 1 except that three pairs of comparison were made between the high-competence condition and each of the three low-competence conditions, resulting in three ANCOVAs. The overall ANCOVA was also conducted with competence being a four-level variable. The following hypotheses are based on the effects of competence (H1), the role of empathy (H2 and H3), and the role of culture (H4 and the RQ).

H1: For both cultures, a larger bonus is distributed to people with greater competence than people with less competence (without explanation, with negative explanation, or with positive explanation).

H2: For both cultures, a larger bonus is distributed to people with whom the distributor empathizes than people with whom the distributor does not empathize.

H3: Empathy interacts with competence such that a larger bonus is distributed to low-competence people (without explanation, with negative explanation, or with positive explanation) with whom the distributor empathizes than with whom the distributor does not empathize, whereas empathy does not increase the size of bonus distributed to high-competence people.

H4: The effect of empathy on the relationship between competence (without explanation, with negative explanation, or with positive explanation) and the size of bonus distributed is greater for Chinese than for U.S. Americans.

RQ: Does culture interact with other variables to influence the size of bonus distributed?

Method

Participants

Participants ($N = 246$) were recruited from both China and the U.S. The U.S. participants were 144 undergraduates from communication classes at a large public east coast university. One U.S. participant did not indicate his or her sex; two participants did not indicate their age. Of the 143 participants who indicated sex, sixty-one percent of the U.S. participants were female (87 females and 56 males). The average age of the U.S. participants was 19.33 years ($Mdn = 19.00$, $SD = 1.21$), and the ages ranged from 18 to 25 years. Sixty-four percent of the participants were Caucasian, 15% were African American, 15% were Asian, 1% were Hispanic, and 4% were not in any of the listed categories (the total is not equal to 100% due to rounding).

The Chinese participants were 102 undergraduates from two universities in a northeastern city of China. One participant did not indicate his or her age. Fifty-five percent of the Chinese participants were female (56 females and 46 males). The average age of the participants was 24.09 years ($Mdn = 24.00$, $SD = 1.57$), and the ages ranged from 20 to 30 years. All participants from China identified their ethnic background as Chinese (as opposed to Korean or other possible ethnicities in China).

Procedure

U.S. participants received a small amount of extra course credit for participating in the study. Participants came to an assigned location, which was not their regular classroom, to read and sign the study's consent form and complete the questionnaire. An alternative class assignment or participation in other studies was offered as an option for students who did not want to participate in this study.

About two-thirds of the Chinese participants did the study as a voluntary class activity. They read and signed the study's consent form and completed the questionnaire during regular class time supervised by their instructor. The other participants, who voluntarily participated in the study, were asked to complete the consent form and questionnaire out of class and return them to their instructor. They were asked not to discuss the materials with each other. For both Chinese and U.S. participants, no student declined to participate in the study, and questionnaires and consent forms were collected separately. The questionnaire took approximately 60 minutes to complete.

Stimulus Materials

The year-end evaluation package used in Study 1 was revised for Study 2 (see Appendix D) to generate four levels of competence (high competence, low competence with no explanation, low competence with positive explanation, and low competence with negative explanation). As in the first study, the evaluation package included three forms: the Employee Performance Review Form, the Employee Training Requirement Form, and the Request for Leave of Absence Without Pay Form. The employee was represented by the same ID number used in Study 1 to exclude the influence of a name. The dates used in Study 2 were exactly one year later than those in Study 1. They were included to make the evaluation package more believable and realistic for participants. In

the Employee Performance Review Form, the employee appeared to have been evaluated by his or her direct supervisor on ten aspects of work using a three-level rating scale: outstanding, meets expectations, and below expectations. The definitions of *meets expectations* for each of the ten work aspects were given and an overall rating for the employee was also provided. Four versions of the Employee Performance Review Form were created to manipulate four levels of competence. For all aspects of work including the overall rating, the category of *outstanding* was checked for the high-competence condition and the category of *below expectations* was checked for the three low-competence conditions. Unlike the first study, the Performance Review Form in the second study added a section for additional comments by the direct supervisor. The comment section was left blank for two of the four conditions: high competence and low competence without explanation. For the condition of low competence with positive explanation, the comment section included the sentence: “The employee has, in general, a positive attitude toward work. His/her poor performance was mainly due to lack of training and skills.” For the condition of low competence with negative explanation, the sentence read: “The employee has, in general, a negative attitude toward work. His/her poor performance was mainly due to lack of motivation and effort.”

The other two forms, the Employee Training Requirement Form and the Request for Leave of Absence Form, were included in the evaluation package to make it more believable and realistic for participants. The two forms were exactly the same across the four levels of competence. In the Employee Training Requirement Form, the employee indicated that he or she has participated in all the required training. Unlike Study 1, the question about whether the employee’s additional voluntary training hours have equaled

or exceeded twenty hours was deleted in Study 2 to reduce unclear extraneous information. As in Study 1, the employee indicated that he or she did not require leave without pay during this year in the Request for Leave of Absence Form. Signatures required for the last two forms were made exactly the same for the four versions of the evaluation package and the employee's signature was made as unidentifiable as possible to reduce the influence of a name.

Questionnaire Design

As in Study 1, two versions of the questionnaire were created, one in which participants were asked to empathize with the employee (high-empathy condition) and the other in which participants were instructed to focus only on the information in the employee's evaluation package (low-empathy condition). For Chinese participants, the questionnaire and evaluation package were translated into Chinese by the dissertation researcher, who is a native Chinese speaker, and back-translated by another native Chinese speaker. The two translators discussed any incongruities in the pre- and post-translated English versions and constructed a final Chinese version of the evaluation package and questionnaire.

The evaluation package was prepared as a separate document from the questionnaire. In both cultures, each participant was randomly assigned to read one of the two versions of the questionnaire (high-empathy vs. low-empathy conditions) and one of the four versions of the evaluation package: high competence, low competence without explanation, low competence with positive explanation, and low competence with negative explanation. This arrangement created eight different experimental conditions: 2 (empathy) \times 4 (competence).

For each condition, participants first were asked to imagine themselves as the president of a company who would be distributing year-end bonuses to employees. The company was described as very competitive, whose success was attributed to a reward system that links year-end bonuses to performance. This description was used to make the equity principle salient in the bonus distribution situation in a competitive company environment. Participants were asked to read one of the four versions of the evaluation package and form an overall impression of the employee who was described as the same sex with the participant. They were then instructed to briefly write down their impressions of the employee and of the organization to further help them imagine the situation.

Next, two items measured the believability and realism of the imagined situation (“How believable is the situation?” and “How realistic is the situation?”). Four items served as a check on the effectiveness of the competence manipulation (“How competent is the employee?,” “How well has the employee done his or her job?,” “How qualified is the employee for his or her job?,” and “What is the level of the employee’s ability?”). Two attributional questions were used to check the manipulation of positive and negative explanation under low-competence conditions. These questions measured whether participants attributed the employee’s poor performance to internal reasons (“To what extent do you think the employee’s performance can be attributed to him or her personally?”) or external reasons (“To what extent do you think the employee’s performance can be attributed to his or her environment?”).

Participants then read an instruction for how to distribute the bonuses. The instruction was one of two versions that were used to manipulate the high-empathy and

low-empathy conditions. Unlike Study 1, the two instructions were made relatively the same in length in Study 2. The instructions were revised from the work of Stotland, Sherman, and Shaver (1971) and Fink (1975).

High-Empathy Instruction:

According to research conducted by the Human Resources Department, the best way to evaluate an employee is to really understand the employee's *feelings*. Before you decide what bonus you would give to this employee, please imagine how you yourself would *feel* if you were in the employee's position. Picture to yourself just how you would feel in his or her shoes (You are to keep clearly in mind that you are to react as if it were you who are in the package and are being evaluated).

Concentrate on the way you would feel in that situation. In your mind's eye, you are to visualize how it would feel to you to be the employee in his or her position. Now, reread the instruction once again.

Low-Empathy Instruction:

According to research conducted by the Human Resources Department, the best way to evaluate an employee is to be as *objective* as possible and focus only on the *information* in the evaluation package. Before you decide what bonus you would give to this employee, please decide based on exactly what's in the package. You are to notice any information in the three forms: the Employee Performance Review Form, the Employee Training Requirement Form, and the Request for Leave of Absence Without Pay Form (You are to keep clearly in mind that you are to base your judgment *solely* on the *information* in the package). You are to notice anything

that is included in the package, whatever it is. Now, reread the instruction once again.

After reading the instructions, participants were asked to reread the evaluation package based on the instruction they had just read. Unlike Study 1, four questions concerning monetary reward were asked in the second study. Participants indicated the amount of bonus they would give to the employee as the president of the company by responding to the question:

If the year-end bonus for a *moderately competent* employee (i.e., an employee whose performance meets expectations in all the categories in the Employee Performance Review Form) in your company is \$1000, what bonus would you give to the employee whose evaluation package you have just read? [You can give the employee zero or you can give him/her as much as you want. Remember more money given to this employee means less money to be allocated to other employees. Generally, your company gives \$1000 to a *moderately competent* employee.]

The second question was exactly the same as above except that the one-thousand-dollar reward was changed to \$5,000. Thus, participants had a different number indicating a moderate amount in bonus distribution in the second question. The third question asked participants what amount of bonus they would give to the employee if they had an infinite amount of money to distribute. In this question, no number was given indicating a moderate amount. The fourth monetary-reward question referred to salary increase or pay raise:

If the yearly salary increase/pay raise for a *moderately competent* employee (i.e., an employee whose performance meets expectations in all the categories in the

Employee Performance Review Form) in your company is 5% of the employee's salary, what salary increase would you give to the employee whose evaluation package you have just read? [You can give the employee 0% or you can give him/her as much as you want. Remember higher raise given to this employee means lower raise given to other employees. Generally, your company gives 5% raise to a *moderately competent* employee.]

The four questions provided a reliability check for the measure of monetary distribution. To be consistent with Study 1, the first question served as the dependent variable for Study 2. To check the manipulation of empathy, besides the two questions used in Study 1, eight more questions were used: Two questions asked for participants' experience with the employee's feelings ("How much did you understand what the employee felt in making the decisions?" and "How much did you feel what the employee felt in making the decisions?"); six questions asked participants how accurate six statements were in describing themselves in making the distribution situation ("My judgment of the employee was based only and exclusively on the information in the evaluation package," "I got involved with the employee's feelings," "I imagined how I would feel if I were in the employee's position," "I formed an impression of the employee relying solely on the information in the package," "I put myself in the employee's shoes and felt his or her feelings," and "I tried to be as objective as possible."). Unlike in the first study, participants were asked to indicate (based on a list of emotion adjectives) how much they had experienced and how much they understood the emotion that the employee had experienced in the process of reviewing the evaluation package and making the distribution decision. These self-reports provided a further test

of the effectiveness of the empathy manipulation. Included among the adjectives were eight distress adjectives (*alarmed, grieved, troubled, distressed, upset, disturbed, worried, and perturbed*), four sadness adjectives (*low-spirited, feeling low, heavyhearted, and sad*), and six empathy adjectives (*sympathetic, soft-hearted, warm, compassionate, tender, and moved*) used in previous research to measure empathy (see Batson, 1987, 1991; Batson et al., 1989; Batson et al., 1988; Fultz, Schaller, & Cialdini, 1988). Finally, participants responded to the Personal Belief in a Just World Scale (see Appendix B) and the Measure of Trait Empathy (see Appendix C), which includes five dimensions: perspective taking, fantasy, empathic concern, personal distress, and emotional contagion.

For all questions other than the four estimates of monetary reward (three questions about the bonus and one question about salary), participants used magnitude scales, in which 100 represented a moderate amount of the variable that they were rating (Hamblin, 1974; Lodge, 1981; Shinn, 1974; see also Torgerson, 1958, for fractionation methods). For the three measures of bonus, participants were asked to give either \$1,000 or \$5,000 to a moderately competent employee, or they were told they had an infinite amount of bonus to distribute without given a moderate amount (see Footnote 1). For the measure of salary increase, participants were asked to give 5% salary increase to a moderately competent employee. For all the magnitude scales and the four estimates of monetary reward, participants could use any non-negative number, with higher numbers representing greater amounts of the variable that was being assessed. At the end of the questionnaire, participants provided information about their sex, age, racial or ethnic background, nationality, native language, major, year in school, and marital status.

Data Transformation and Presentation

To meet statistical assumptions required for analyses within the general linear model, all the items were transformed by a power transformation (see Bauer & Fink, 1983; Kruskal, 1968). When a measure had one or more outliers, these values were trimmed by being recoded to a fixed upper value before further analysis. The transformed variables are used in all the analyses that follow.⁵ The means and standard deviations reported in the text are descriptive statistics, whereas the figures present estimated marginal means. All statistical tests are two tailed unless stated otherwise.

Results

Perception of Manipulations

Believability and realism. Both American (believable: $M = 147.84$, $SD = 177.36$; realistic: $M = 132.94$, $SD = 165.98$) and Chinese participants (believable: $M = 91.38$, $SD = 156.74$; realistic: $M = 101.62$, $SD = 201.91$) perceived the situations as moderately believable and realistic (100 was used in the scale to indicate moderate believability and realism).⁶ U.S. participants perceived the situations as significantly more believable, $F(1, 236) = 25.61$, $p < .001$, $\eta^2 = .10$, and more realistic, $F(1, 235) = 17.96$, $p < .001$, $\eta^2 = .07$, than Chinese participants. For U.S. participants, no significant differences were found in the perceptions of believability and realism between the high-competence condition and each of the three low-competence conditions. For Chinese participants, the high-competence condition was perceived as more believable and realistic than the low-competence with negative explanation condition; the high-competence condition was also perceived as more believable than the low-competence without explanation condition.

Table 4 reports the results of the statistical tests for believability and realism between

the high-competence condition and each of the three low-competence conditions for U.S. and Chinese participants, respectively. The means and standard deviations for believability and realism by culture and competence levels are displayed in Table 5 and 6, respectively.

Competence. A principal-components analysis was performed on the four-item competence scale. Only one principal component had an eigenvalue greater than 1. This component accounted for 86% of the total variance. The loadings of the four items on the extracted component were .93, .95, .95, and .89, respectively. The reliability coefficient (Cronbach's α) of the sum of the competence items was .95. This principal component score was used in the subsequent analyses. The manipulation checks for competence were performed between the high-competence and each of the three low-competence conditions. Results showed that high-competence employees (U.S.: $M = 1.39$, $SD = .67$; China: $M = 1.15$, $SD = .71$) were perceived as more competent than low-competence employees without explanation (U.S.: $M = -.61$, $SD = .46$; China: $M = -.27$, $SD = .91$), low-competence employees with negative explanation (U.S.: $M = -.65$, $SD = .46$; China: $M = -.46$, $SD = .44$), and low-competence employees with positive explanation (U.S.: $M = -.41$, $SD = .46$; China: $M = -.29$, $SD = .82$) for both Americans and Chinese. Therefore, the manipulation of competence was successful in both cultural groups.

Explanation. Two questions served to check the effectiveness of the manipulation of positive and negative explanation in low-competence conditions. To assess the extent to which participants made internal attributions under the negative-explanation condition and external attributions under the positive-explanation condition, a difference score was created by subtracting the reported external-attribution score (transformed) from the

Table 4

Results of the Statistical Tests for Believability and Realism Between the High-Competence Condition and Each of the Three Low-Competence Conditions for U.S. and Chinese Participants in Study 2

	U.S.	China	
	High Competence vs. Low Competence Without Explanation	$F(1, 70) = .11, p < .74, \eta^2 = .01$	$F(1, 52) = 7.39, p < .01, \eta^2 = .12^a$
Believability	High Competence vs. Low Competence With Negative Explanation	$F(1, 70) = .33, p < .57, \eta^2 = .01$	$F(1, 48) = 5.92, p < .02, \eta^2 = .11^b$
	High Competence vs. Low Competence With Positive Explanation	$F(1, 70) = 1.03, p < .31, \eta^2 = .01$	$F(1, 50) = 2.67, p < .11, \eta^2 = .05$
	High Competence vs. Low Competence Without Explanation	$F(1, 70) = .01, p < .91, \eta^2 = .01$	$F(1, 53) = 1.86, p < .18, \eta^2 = .03$
Realism	High Competence vs. Low Competence With Negative Explanation	$F(1, 70) = .70, p < .41, \eta^2 = .01$	$F(1, 48) = 6.18, p < .02, \eta^2 = .11^b$
	High Competence vs. Low Competence With Positive Explanation	$F(1, 69) = .18, p < .67, \eta^2 = .01$	$F(1, 51) = 1.99, p < .16, \eta^2 = .04$

^aThe statistical test here was significant, indicating that the high-competence condition was perceived as more believable than the low-competence without explanation condition for Chinese participants.

^bThe statistical tests here were significant, indicating that the high-competence condition was perceived as more believable and realistic than the low-competence with negative explanation condition for Chinese participants.

Table 5

Means and Standard Deviations for Believability by Culture and Levels of Competence in Study 2 (N = 244)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	4.78	1.50	4.44 ^{a(b)}	1.71	4.63	1.59
Low Competence Without Explanation	4.94	2.52	3.14 ^a	1.82	4.18	2.41
Low Competence With Negative Explanation	4.55	1.79	3.12 ^b	2.13	4.01	2.03
Low Competence With Positive Explanation	5.13	1.46	3.29	3.24	4.39	2.48
Overall	4.85 ^c	1.86	3.54 ^c	2.31		

^aThe two means were significantly different from each other at $p \leq .05$ level, indicating that the high-competence condition was perceived as more believable than the low-competence without explanation condition for Chinese participants.

^bThe two means were significantly different from each other at $p \leq .05$ level, indicating that the high-competence condition was perceived as more believable than the low-competence with negative explanation condition for Chinese participants.

^cThe two means were significantly different from each other at $p \leq .05$ level, indicating that overall U.S. participants perceived the situations as more believable than Chinese participants.

Table 6

Means and Standard Deviations for Realism by Culture and Levels of Competence in Study 2 (N = 243)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	4.64	1.84	4.26 ^a	2.30	4.47	2.05
Low Competence Without Explanation	4.69	2.17	3.37	2.54	4.14	2.40
Low Competence With Negative Explanation	4.26	1.93	2.71 ^a	2.00	3.69	2.08
Low Competence With Positive Explanation	4.82	1.75	3.22	3.04	4.17	2.46
Overall	4.60 ^b	1.92	3.45 ^b	2.53		

^aThe two means were significantly different from each other at $p \leq .05$ level, indicating that the high-competence condition was perceived as more realistic than the low-competence with negative explanation condition for Chinese participants.

^bThe two means were significantly different from each other at $p \leq .05$ level, indicating that overall U.S. participants perceived the situations as more realistic than Chinese participants.

reported internal-attribution score (transformed). The negative-explanation low-competence condition should have a higher score on this measure than does the positive-explanation low-competence condition. The U.S. participants reported a higher score on this difference measure in the negative-explanation low-competence condition ($M = 1.86, SD = 2.59$) than in the positive-explanation low-competence condition ($M = 0.73, SD = 2.23$), $F(1, 70) = 3.94, p < .026$ (one tailed), $\eta^2 = .05$. However, no significant difference was found between the negative-reason low-competence condition ($M = 0.38, SD = 2.97$) and the positive-reason low-competence condition ($M = 1.28, SD = 2.86$) for Chinese participants, $F(1, 43) = 1.07, p < .15$ (one tailed), $\eta^2 = .02$. Therefore, the manipulation of positive and negative explanations was successful for Americans but not for Chinese.

Empathy. The empathy manipulation was checked in four different ways: (1) Ten questions asked the extent to which participants focused on the information in the package and on feelings of the employee; (2) participants reported how much they had experienced each of the eight distress and four sadness feelings; (3) participants reported how much they understood the employee had experienced each of the eight distress and four sadness feelings; and (4) participants indicated the extent to which they had experienced each of the six empathic feelings.

To assess the extent to which participants focused on the employee's feelings versus information in the package, a difference score was created by subtracting the four reported information-focused scores (transformed) from the six reported feelings-focused scores (transformed).⁷ The high-empathy condition should have a higher score on this measure than the low-empathy condition. U.S. participants reported a higher score on this

difference measure in the high-empathy condition ($M = 1.85$, $SD = 11.03$) than in the low-empathy condition ($M = -9.84$, $SD = 13.11$), $F(1, 134) = 33.54$, $p < .001$ (one tailed), partial $\eta^2 = .20$. No significant difference was found between the two conditions (high-empathy: $M = 7.16$, $SD = 9.69$; low-empathy: $M = 5.26$, $SD = 9.04$) for Chinese participants. The reason for the insignificant effect may be that Chinese already reported a high empathy level in the low-empathy condition, even higher than the empathy score in the high-empathy condition for Americans.

A principal-components analysis was performed on the twelve distress and sadness emotions that participants had felt. Two principal components had an eigenvalue greater than 1. The first component had acceptable loadings ($\geq .59$) on all the twelve items and accounted for 59% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) for the sum of the twelve items was .94. No significant difference on this measure was found between high-empathy (China: $M = -.35$, $SD = .83$; U.S.: $M = .21$, $SD = 1.06$) and low-empathy (China: $M = -.20$, $SD = .84$; U.S.: $M = .19$, $SD = 1.07$) conditions for both Chinese and U.S. participants.

A principal-components analysis was performed on the twelve distress and sadness emotions that participants understood the employee had felt. Only one principal component had an eigenvalue greater than 1. This component had acceptable loadings ($\geq .74$) on all the twelve items and accounted for 70% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the sum of the twelve items was .96. U.S. participants reported a higher score on this measure in the high-empathy condition ($M = .21$, $SD = 1.03$) than in the

low-empathy condition ($M = -.09$, $SD = 1.02$), $F(1, 131) = 4.77$, $p < .02$ (one tailed), partial $\eta^2 = .04$. No significant difference was found between the two conditions (high-empathy: $M = -.08$, $SD = .90$; low-empathy: $M = -.09$, $SD = 1.01$) for Chinese participants.

Finally, a principal-components analysis was performed on the six empathic emotions that participants felt. Only one principal component had an eigenvalue greater than 1. This component had acceptable loadings on the six items and accounted for 71% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the sum of the twelve items was .92. U.S. participants reported a higher score on this measure in the high-empathy condition ($M = .21$, $SD = 1.10$) than in the low-empathy condition ($M = -.38$, $SD = .94$), $F(1, 136) = 12.17$, $p < .001$ (one tailed), partial $\eta^2 = .08$. No significant differences were found between the two conditions (high-empathy: $M = .22$, $SD = .95$; low-empathy: $M = .02$, $SD = .84$) for Chinese participants.

For all four manipulation measures on empathy, U.S. participants reported higher score in the high-empathy condition than in the low-empathy condition on three measures, whereas no significant difference was found between the two empathy conditions for the four measures for Chinese participants.

Trait empathy. A principal-components analysis was performed on the 35 items of trait empathy. More than one component with an eigenvalue greater than 1 was extracted (see Figure 4). The first principal component accounted for 23% of the total variance. The reliability coefficient (Cronbach's α) of the summed thirty-five items was .88. This principal component score, created by combining the 35 items based on their loadings,

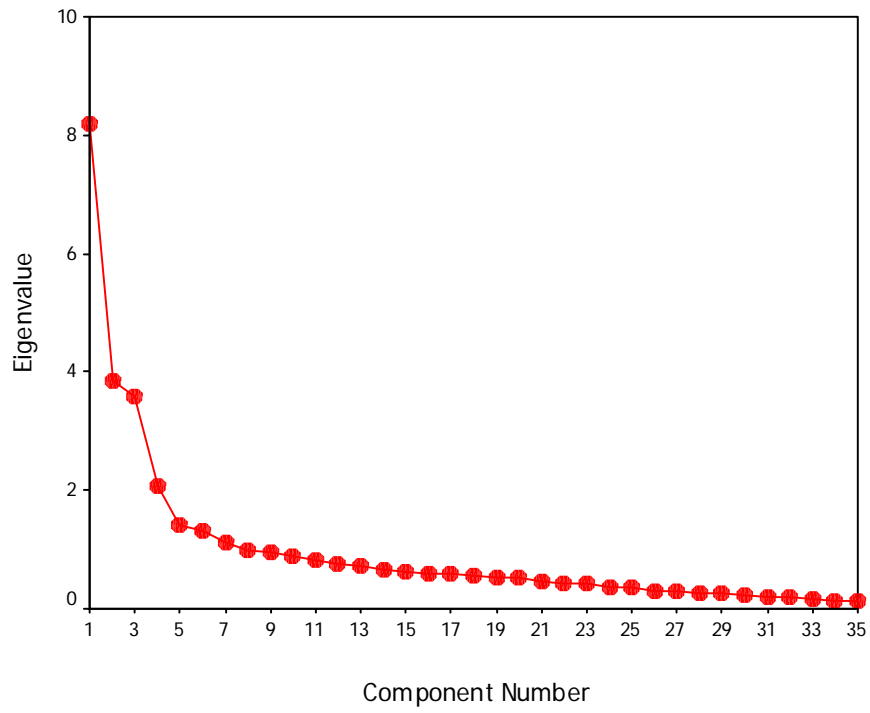


Figure 4. Scree plot for the principal components extracted from the 35 trait empathy items in Study 2.

was used in the subsequent analyses.

Dependent Variables: Monetary Reward

Four questions measured the amounts of bonus and salary increase participants were willing to distribute to the employee under evaluation. To be consistent with Study 1, the first question served as the dependent variable in the analyses. However, unlike Study 1, the other three questions provided a reliability check for the measure of monetary reward. The correlations between the first bonus measure and each of the other three measures (the second bonus measure, the third bonus measure, and the salary increase measure) were .94, .82, and .88, respectively. A principal-components analysis was performed on the four items. Only one component had an eigenvalue greater than 1, accounting for 89% of the total variance. The loadings of the four questions were .97, .97, .91, and .93 respectively. The reliability coefficient (Cronbach's α) of the sum of the four items was .84. The first question was used in further analyses in Study 2.

Predicting Distribution of Bonus

To assess the hypotheses and research question, an overall analysis of covariance (ANCOVA) and three separate ANCOVAs were conducted, with competence (high vs. each of the three low- competence conditions), empathy (high vs. low), culture (China vs. U.S.), and sex (male vs. female), as the independent variables, trait empathy as the covariate, and the first measure of the amount of bonus as the dependent variable. Sex was entered as an independent variable to control for any effects it may have, by itself or in interactions with other independent variables, on the size of the bonus. Trait empathy was entered as a covariate to control for the main effect it may have on the dependent variable. The three ANCOVAs differed in the two levels of competence entered for

analysis. The high-competence condition was compared with the low-competence without-reason condition, the low-competence with negative-reason condition, and the low-competence with positive-reason condition, respectively, in the three ANCOVAs. Therefore, the first ANCOVA was a replication of Study 1. The overall ANCOVA was statistically significant, $F(32, 204) = 16.31, p < .001, R^2 = .72$, adjusted $R^2 = .68$ (see Appendix K). All three ANCOVAs were also statistically significant, $F(16, 105) = 17.85, p < .001, R^2 = .73$, adjusted $R^2 = .69$, for the first ANCOVA; $F(16, 99) = 29.92, p < .001, R^2 = .83$, adjusted $R^2 = .80$, for the second ANCOVA; and $F(16, 104) = 27.46, p < .001, R^2 = .81$, adjusted $R^2 = .78$, for the third ANCOVA. The three ANCOVAs are referred to in the hypothesis tests that follow (see Appendices L, M, and N).

Competence. Hypothesis 1 stated that for both cultures, a larger bonus is distributed to people with greater competence than people with less competence. All three ANCOVAs showed significant effects for competence no matter whether the low competence was unexplained, explained with negative reason, or explained with positive reason: For the first ANCOVA, $F(1, 105) = 239.26, p < .001$ (one tailed), partial $\eta^2 = .70$; larger bonuses were assigned to the high-competence condition ($M = 26.46, SD = 4.59$) than the low-competence without-reason condition ($M = 8.04, SD = 7.85$). Therefore, the significant effect of competence in Study 1 was replicated. For the second ANCOVA, $F(1, 99) = 382.80, p < .001$ (one tailed), partial $\eta^2 = .80$, larger bonuses were assigned to the high-competence condition ($M = 26.46, SD = 4.59$) than the low-competence with negative-reason condition ($M = 6.22, SD = 6.56$). For the third ANCOVA, $F(1, 104) = 350.64, p < .001$ (one tailed), partial $\eta^2 = .77$, larger bonuses were assigned to the high-competence condition ($M = 26.46, SD = 4.59$) than the low-competence with

positive-reason condition ($M = 8.08$, $SD = 5.75$). Therefore, Hypothesis 1 was supported in Study 2.

Empathy. Hypothesis 2 predicted that for both cultures, a larger bonus is distributed to people with whom the distributor empathizes than people with whom the distributor does not empathize. Results in the first ANCOVA showed no significant effect for empathy, $F(1, 105) = 1.40$, $p < .12$ (one tailed), partial $\eta^2 = .01$, and therefore failed to replicate the empathy effect in Study 1. The second ANCOVA showed a significant effect for empathy, $F(1, 99) = 5.69$, $p < .01$ (one tailed), partial $\eta^2 = .05$, with empathized employees ($M = 17.92$, $SD = 10.89$) receiving larger bonuses than employees not empathized with by the distributor ($M = 15.89$, $SD = 12.24$). Results in the third ANCOVA also showed a significant effect for empathy, $F(1, 104) = 3.49$, $p < .032$ (one tailed), partial $\eta^2 = .03$, with empathized employees ($M = 18.26$, $SD = 10.14$) receiving larger bonuses than employees not empathized with by the distributor ($M = 17.01$, $SD = 11.03$). Therefore, Hypothesis 2 was partially supported.

Empathy and competence. Hypothesis 3 predicted that empathy interacts with competence such that a larger bonus is distributed to low-competence people with whom the distributor empathizes than with those with whom the distributor does not empathize, whereas empathy does not increase the size of bonus distributed to high-competence people. The first ANCOVA showed no significant interaction between empathy and competence, $F(1, 105) = .40$, $p < .53$, partial $\eta^2 = .01$, replicating the non-significant result for Hypothesis 3 in Study 1. However, the second ANCOVA resulted in a significant interaction between empathy and competence, $F(1, 99) = 3.16$, $p < .04$ (one tailed), partial $\eta^2 = .03$: When competence was high, empathy did not increase the size of

bonus for high-competence people (high-empathy: $M = 26.29$, $SD = 4.91$; low-empathy: $M = 26.63$, $SD = 4.31$), whereas when competence was low but a negative explanation was given, high empathy ($M = 8.40$, $SD = 7.39$) led to larger bonuses given than did low empathy ($M = 4.03$, $SD = 4.80$, see Figure 5). The third ANCOVA did not result in a significant interaction between culture and empathy, $F(1, 104) = 1.38$, $p < .24$, partial $\eta^2 = .01$. Therefore, Hypothesis 3 was supported only when the low-competence condition was accompanied with a negative explanation.

Empathy, competence, and culture. Hypothesis 4 predicted a three-way interaction between empathy, competence, and culture such that the effect of empathy on the relationship between competence and the size of bonus distributed is greater for Chinese than for U.S. Americans. The first ANCOVA showed no significant three-way interaction between competence, empathy, and culture, $F(1, 105) = 1.29$, $p < .26$, partial $\eta^2 = .01$, thus replicating the results found in Study 1. However, the ANCOVA with the low-competence negative-reason condition showed a statistically significant three-way interaction, $F(1, 99) = 7.66$, $p < .007$, partial $\eta^2 = .07$ (see Figure 6), and the ANCOVA with the low-competence positive-reason condition also showed a significant three-way interaction, $F(1, 104) = 5.37$, $p < .022$, partial $\eta^2 = .05$ (see Figures 7). The interaction between empathy and competence was supported for the Chinese but not for the U.S. sample. Hypothesis 4 was supported only when the low-competence condition was accompanied by an explanation, regardless of whether it was a positive or negative one.

Figure 8 shows the interaction between competence, empathy, and culture with all four levels of competence indicated on the horizontal axis. Table 7 displays the means and standard deviations for the amount of bonus by competence (4 levels), empathy, and

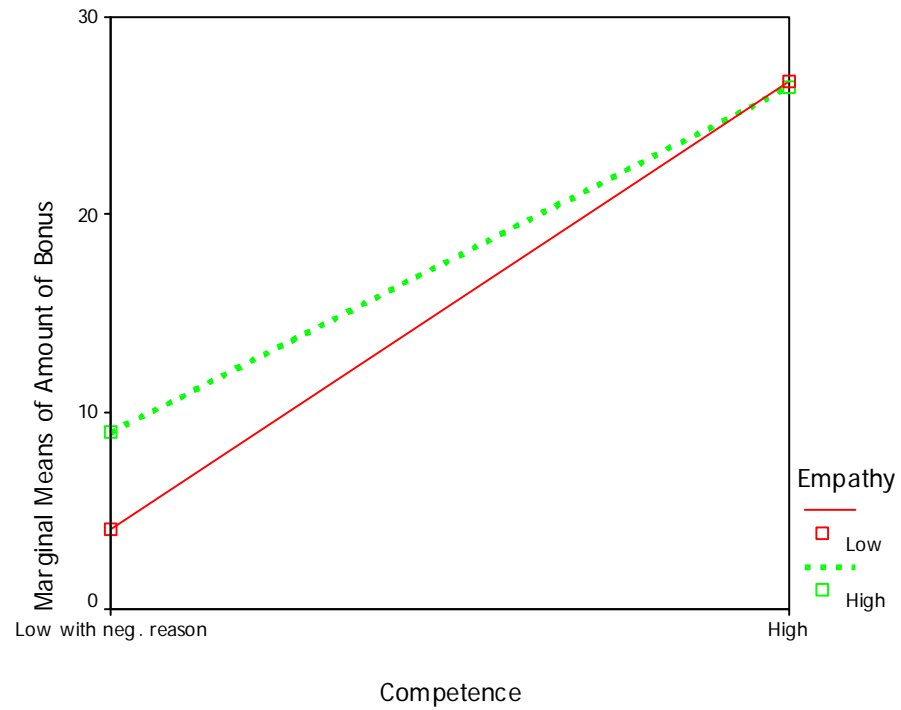


Figure 5. Amount of bonus by empathy and competence (negative reason) in Study 2.

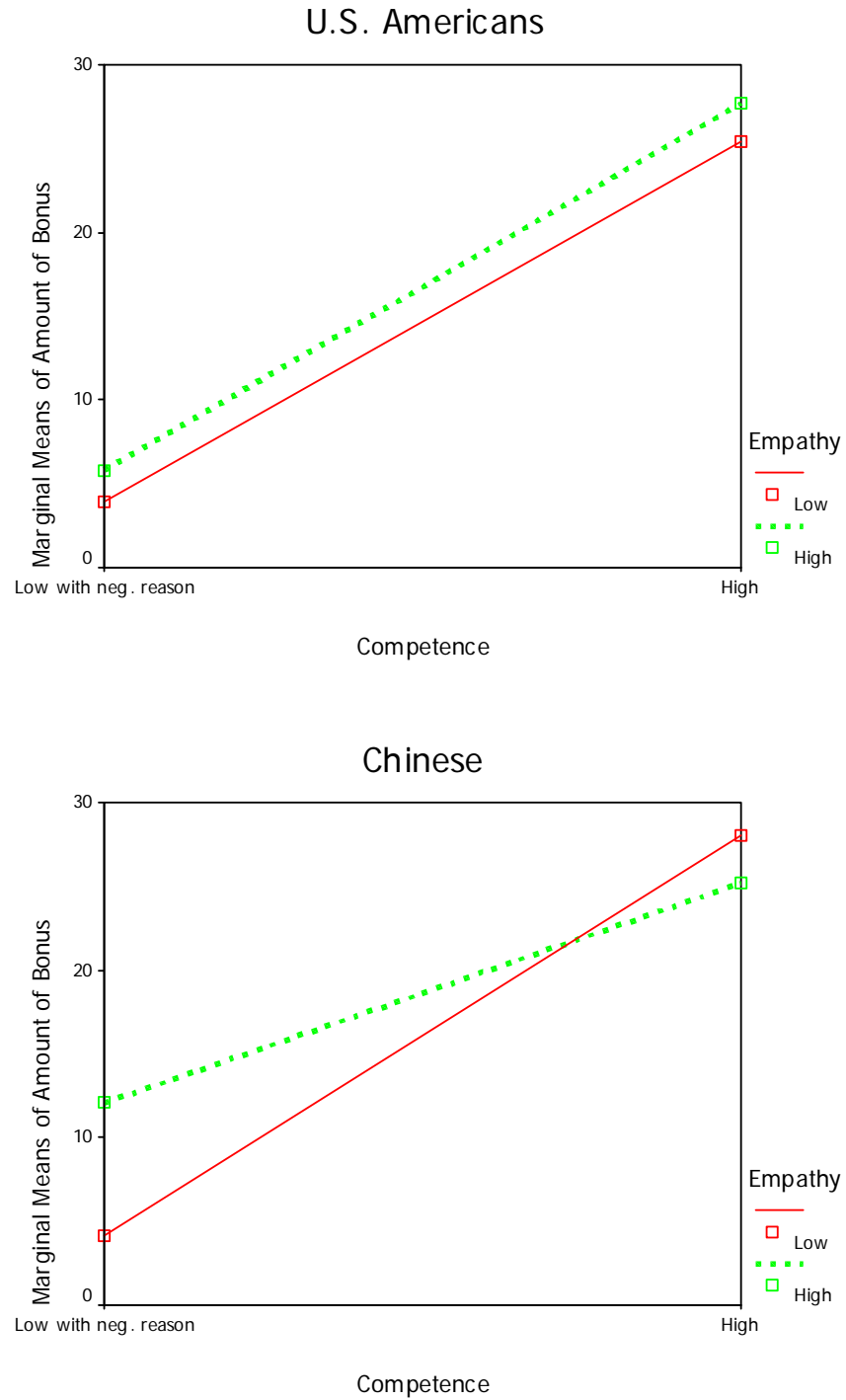


Figure 6. Amount of bonus by empathy, competence (negative reason), and culture in Study 2.

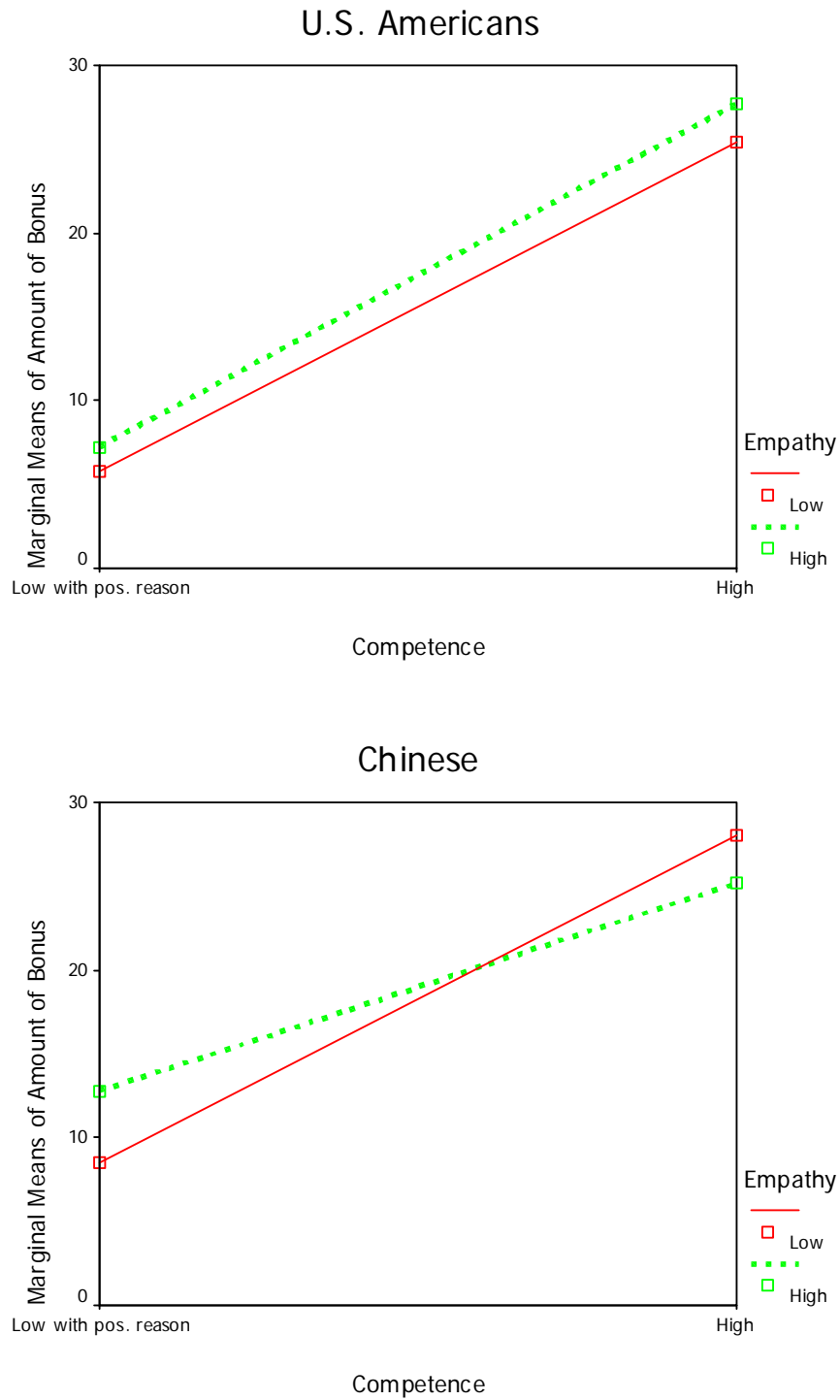


Figure 7. Amount of bonus by empathy, competence (positive reason), and culture in Study 2.

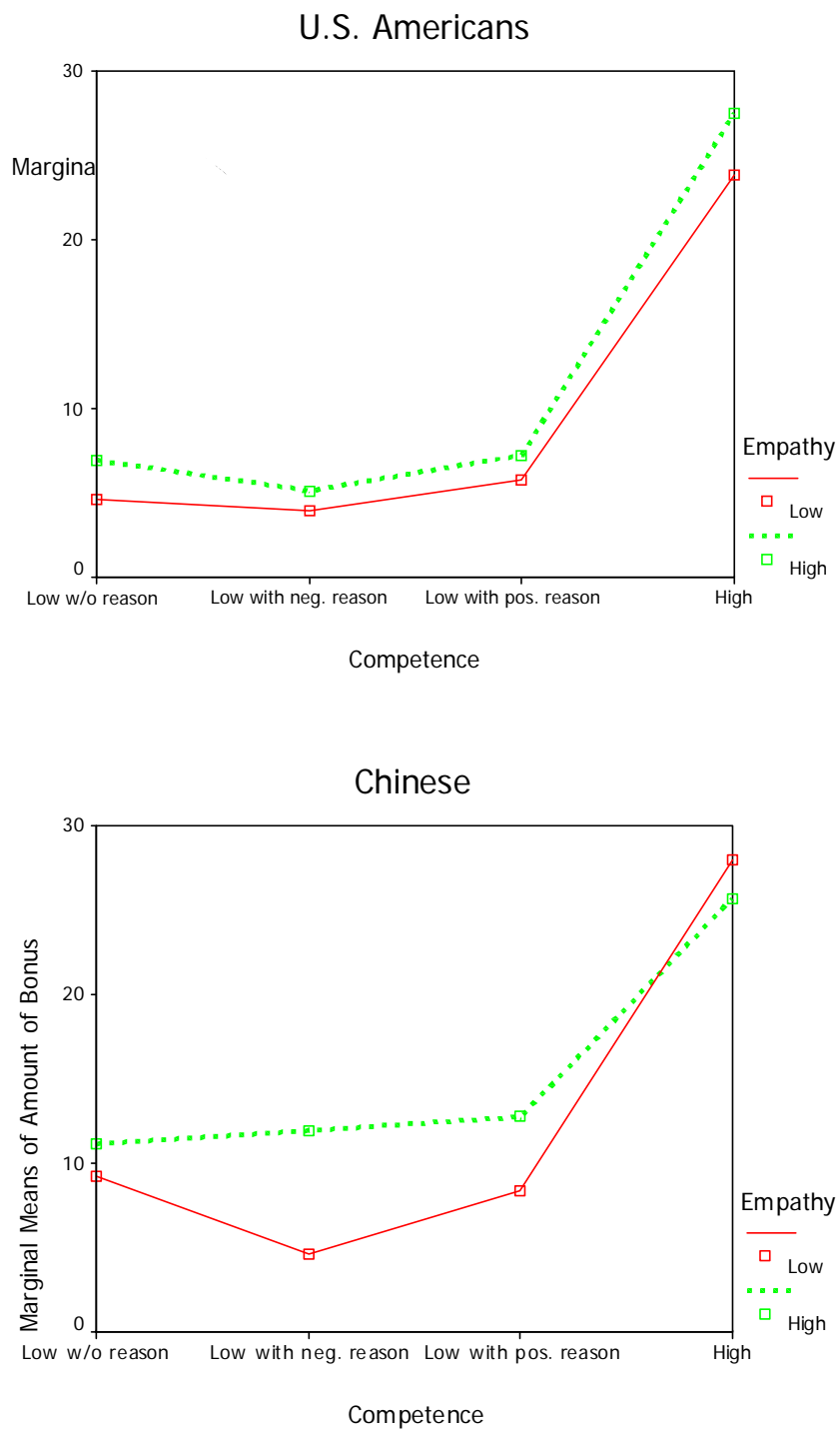


Figure 8. Amount of bonus by competence (4 levels), empathy, and culture in Study 2.

Table 7

Means and Standard Deviations for Amount of Bonus by Competence, Empathy, and Culture in Study 2 (N = 246)

	US				China			
	Low Empathy		High Empathy		Low Empathy		High Empathy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Competence	25.59	4.87	27.24	4.01	27.98	3.14	25.16	5.75
Low Competence with pos. reason	5.59	4.63	7.15	5.78	8.47	5.18	12.82	5.44
Low Competence with neg. reason	3.92	4.88	6.37	6.98	4.21	4.89	11.74	7.09
Low Competence without reason	4.83	6.57	7.37	6.53	9.58	8.78	11.72	8.92

culture.

The research question asked the effect that culture, interacting with other variables, has on the size of bonus distributed. No significant interactions were found between culture and competence or between culture and empathy; therefore, the results for the research question in Study 1 were not replicated. No significant interactions were found between culture and other variables for the second and third ANCOVAs.

Discussion

As in Study 1, Study 2 investigated how empathy affected the use of the equity principle in a bonus distribution situation within a company. Empathy was expected to interact with competence such that a greater difference in the size of bonuses distributed between high- and low-competence people was expected when empathy was low than when empathy was high. This interaction between empathy and competence was also expected to be greater for Chinese than for U.S. Americans. Study 2 assessed its hypotheses using three ANCOVAs with competence, empathy, and culture as independent variables and the amount of bonus assigned to employees as the dependent variable. The high-competence condition was compared with each of the three low-competence conditions (low competence without reason, low competence with negative reason, and low competence with positive reason) in three ANCOVAs. One purpose in Study 2 was to see whether results in Study 1 would be replicated. The first ANCOVA, with high competence and low competence without reason as the two competence levels, replicated Study 1. Moreover, in Study 1, the hypothesized two-way interaction between empathy and competence and the hypothesized three-way interaction between empathy, competence, and culture were not statistically significant. Study 2

examined whether manipulating the low-competence condition into negative- or positive-reason conditions would result in these two-way and three-way interactions being significant.

Most of the results in Study 1 were replicated. As found in Study 1, the effect of competence was significant, whereas the two-way interaction between empathy and competence and the three-way interaction between empathy, competence, and culture were not significant. Results of the research question in Study 1 were not replicated: Culture was not found to interact with empathy and competence. The robust effect of competence found in Study 1 was confirmed in Study 2: A greater bonus was distributed to high-competence employees than employees in the unexplained low-competence condition. Like study 1, the two-way interaction between empathy and competence and the three-way interaction between empathy, competence, and culture were not significant.

However, in the second and third ANCOVAs in Study 2, where the low-competence condition was either explained with a negative reason or with a positive one, most of the hypotheses were supported, including the two-way interaction between empathy and competence and the three-way interaction between empathy, competence, and culture. In the second ANCOVA, when competence was high, empathy did not increase the amount of bonus to high-competence employees, whereas when competence was low but a negative explanation was given, employees who were empathized with received larger bonuses than employees who were not empathized with (see Figure 5). For both the second and third ANCOVAs, the three-way interactions between empathy, competence, and culture were significant: A greater interaction between empathy and competence was found for Chinese than for U.S. Americans such that empathy increased the amount of

bonus given to low-competence employees with either a negative or positive explanation for Chinese but not for U.S. Americans (see Figures 6, 7, and 8). Therefore, it seemed that empathy and culture influenced the use of the equity principle on a company's bonus distribution situation when the low-competence condition was accompanied by an explanation, regardless of whether the explanation was positive or negative.

Finally, competence was found to be a significant predictor in all the ANCOVAs in both Studies 1 and 2, indicating that the use of the equity rule was predominant in the bonus distribution situation. High-competence employees received larger bonuses than low-competence employees regardless of whether an explanation was given or whether the explanation involved a positive or a negative employee attitude.

Chapter 4

Study 3: The Distribution Situation in a Charity Organization

The third study examines the relationship between empathy and need: how empathy affects the distribution of an assistance fund in a charity organization, where need is the most salient distributive justice principle. Based on the need principle, people in greater need should receive more money than people in less need. However, because empathy is more congruent with the ethics of care than the ethics of justice, when empathy is aroused, more money may be distributed to low-need people, who are likely to be perceived as less deserving, based on the ethics of justice, than high-need people. Therefore, it is hypothesized in Study 3 that empathy affects the distribution decision based on need such that the difference in the amount of money distributed between high- and low-need people is greater when empathy is low than when it is high. In other words, empathy decreases the money gap between high- and low-need people in terms of the amount of money distributed. Moreover, this interaction between empathy and need is expected to be greater for Chinese than for U.S. Americans.

Hypotheses

In the third study, the distribution of money was examined based on four independent variables: the magnitude of need (large vs. small), the urgency of need (urgent vs. not urgent), and level of empathy with the receiver (high vs. low empathy), across two cultural groups, Chinese and U.S. Americans. The following hypotheses are organized based on the effects of need (H1), the role of empathy (H2 and H3), and the role of culture (H4 and the RQ).

H1: For both cultures, more money is distributed to people with greater need (large or urgent need) than people with less need (small or not urgent need).

H2: For both cultures, more money is distributed to people with whom the distributor empathizes than people with whom the distributor does not empathize.

H3: Empathy interacts with need such that more money is distributed to people in less need with whom the distributor empathizes than with whom the distributor does not empathize, whereas empathy does not increase the amount of money distributed to people in greater need.

H4: The effect of empathy on the relationship between need and the amount of money distributed is greater for Chinese than for U.S. Americans.

RQ: Does culture interact with other variables to influence the amount of money distributed?

It should be noted that the hypothesized effect of empathy on the need principle in Study 3 is similar to the hypothesized effect of empathy on the equity principle in Studies 1 and 2. In all three studies, more money is expected to be distributed to people in the low-competence condition or in less need who are empathized with rather than not empathized with, whereas empathy does not increase the amount of money to people of high-competence or in greater need. Because the hypothesized effect of empathy on the equity principle in Study 2 was brought out only when an explanation was added to the low-competence situation, the hypotheses in Study 3 are also tested: (1) without an explanation of whether the applicant is responsible for the need, and (2) with an explanation that the applicant is not responsible for the need. The expectation was that if empathy did not increase the amount of money distributed to persons in less need because

the cause of the need was unknown in the without-explanation situation, adding an explanation of the cause of the need may help bring out this effect in the with-explanation situation.

Method

Participants

Participants ($N = 335$) were recruited from both China and the U.S. The U.S. participants were 191 undergraduates from communication classes at a large public U.S. east coast university. Sixty-seven percent of the U.S. participants were female (127 females and 64 males). The average age of the U.S. participants was 20.15 years ($Mdn = 20.00$, $SD = 1.87$), and the ages ranged from 18 to 29 years. Sixty-four percent of the U.S. participants were Caucasian, 14% were African American, 17% were Asian, 4% were Hispanic, and 2% were not in any of the listed categories (the total is not equal to 100% due to rounding).

The Chinese participants were 144 undergraduates from two universities, one in a northeastern city and the other in a southwestern city of China. One participant did not indicate his or her sex. Three participants did not indicate their age. Of the 143 participants who indicated sex, sixty-nine percent of the Chinese participants were female (98 females and 45 males). The average age of the Chinese participants was 21.96 years ($Mdn = 22.00$, $SD = 1.98$), and the ages ranged from 19 to 32 years. All participants from China identified their ethnic background as Chinese (as opposed to Korean or other possible ethnicities in China).

Procedure

U.S. participants received a small amount of extra course credit for participating in

the study. Participants came to an assigned location, which was not their regular classroom, to read and sign the study's consent form and complete the questionnaire. An alternative class assignment or participation in other studies was offered as an option for students who did not want to participate in this study.

The Chinese participants did the study as a voluntary class activity. They read and signed the study's consent form and completed the questionnaire during regular class time supervised by their instructor. For both Chinese and U.S. participants, no student declined to participate in the study, and questionnaires and consent forms were collected separately. The questionnaire took approximately 60 minutes to complete.

Stimulus Materials

Four charity program application packages (see Appendix E) were created describing a person injured in a car accident to generate four types of need defined by the two levels of the magnitude of need (large vs. small) and the two levels of the urgency of need (urgent vs. not urgent). In the condition in which the cause of the need was not explained, the application package included a cover page and the Application for Charity Care Assistance Form (Form 1) in which one of the four types of need was indicated in the Statement of Reasons for Application section. In the condition in which the cause of the need was explained as not due to the applicant, the Accident Data Collection Form (Form 2) was added to the application package to show that the accident in which the applicant was injured was not caused by the applicant. The applicant was represented by an ID number in the forms to exclude the influence of a name.

The cover page introduced the RoadSafety Charity Care Program. RoadSafety was described as a charity organization that provides financial assistance to cover the hospital

bills of those injured in road accidents. The cover page was the same across all conditions. In the Application for Charity Care Assistance Form, the applicant was described as married and employed. The applicant was described as married because in the two manipulated urgent-need scenarios, the applicant was hospitalized waiting for urgent treatment and the application was, therefore, prepared by the applicant's spouse. The applicant was described as employed because unemployment may become another factor influencing participants' judgment of the applicant's need; also, in the non-responsibility condition manipulated in form 2, the applicant was described as driving his or her company's car when the accident occurred. The use of the company's car in the scenario was necessary because Chinese participants may not regard someone who has a private car as in need of financial assistance. The applicant was also described as belonging to a low-income family, having no medical insurance, and having no assistance from anyone or any organization for the payments of hospital bills. These manipulations were necessary because of the need to control for extraneous factors that may influence participants' assistance decisions. The name and telephone number of the applicant's employer were given to make the scenarios realistic and believable for participants. In part 2 of the Application for Charity Care Assistance Form, a statement of reasons for application was provided by applicant or their spouse to manipulate the four types of need: the large and urgent need, the large and not urgent need, the small and urgent need, and the small and not urgent need. In the large and urgent need condition, the statement was written by the spouse of the applicant. The applicant is described as in critical condition due to an injury to the spinal column in a serious car accident one week ago and is in urgent need of a series of operations to avoid lifetime paralysis. In the small and

urgent need condition, the statement was also written by the spouse of the applicant. The applicant is described as in stable condition after a car accident one week ago but needs to undergo immediately a small operation to treat a bone fracture in one leg. In the large and not urgent need condition, the statement was written by the applicant describing a car accident one year ago that resulted in the amputation of his or her left leg just above the knee. The injured person is applying for financial assistance to be fitted with a prosthetic limb. In the small and not urgent need condition, the statement was written by the applicant describing a car accident one year ago that resulted in a long and deep cut on his or her left leg. The injured person is applying for financial assistance to use skin reconstruction to make the scar less perceptible. The four descriptions of need were made relatively the same in length. Part 3 of the Application for Charity Care Assistance Form is a signature section which is used to make the scenarios look believable and realistic. Signatures required of the person making the request if injured were made unidentifiable and exactly the same for the two non-urgent need situations, whereas signatures required of the person making request if not injured party were made unidentifiable and exactly the same for the two urgent need situations in order to reduce the influence of a name.

In the condition in which the cause of need is not due to the applicant, the Accident Data Collection Form (Form 2) was added. In this form, the injured person was described as parking his or her company's car in a safe area on the side of a road when a truck hit it. The truck driver later fled the scene and police confirm later that the truck driver was responsible for the accident.

Questionnaire Design

As in Studies 1 and 2, two versions of the questionnaire were created, one in which

participants were asked to empathize with the applicant (high-empathy condition) and the other in which participants were instructed to focus only on the information in the application package (low-empathy condition). For Chinese participants, the questionnaire and application package were translated into Chinese by the dissertation researcher, who is a native Chinese speaker, and back-translated by another native Chinese speaker. The two translators discussed any incongruities in the pre- and post-translated English versions and constructed a final Chinese version of the application package and questionnaire.

The application package was prepared as a separate document from the questionnaire. In both cultures, each participant was randomly assigned to read one of the two versions of the questionnaire (high-empathy versus low-empathy conditions) and one of the eight versions of the application package categorized by the four types of need (large and urgent, small and urgent, large and not urgent, and small and not urgent) in one of the two situations in which the cause of need is either not explained or is explained as not due to the applicant. This arrangement created sixteen different experimental conditions, 2 (empathy) \times 2 (magnitude of need) \times 2 (urgency of need) \times 2 (responsibility not explained vs. without responsibility).

In the introductory section of the questionnaire, participants in each condition were first asked to imagine themselves as the president of RoadSafety, a charity organization that provides assistance for victims injured in road accidents in their local community. Some statistics were provided to emphasize the seriousness of road accidents in affecting people's lives all over the world and therefore to make salient the importance of road safety to participants. Participants were told that the most important service their

organization provides is the RoadSafety Charity Care Program, which helps applicants pay hospital bills related to road accidents. Participants were then asked to review an application package (prepared as a separate document for them) and form an overall impression of the applicant (the injured party), who was described as the same sex with the participant, before answering further questions in the questionnaire. Participants were instructed to briefly write down their impressions of the applicant and of the organization to further put them in the imagined situation.

Next, two items measured the believability and realism of the imagined situation (“How believable is the situation?” and “How realistic is the situation?”). Six items served as a check on the effectiveness of the manipulation of the magnitude of need (“How much money is the injured party in need of?,” “What is the level of the injured party’s financial difficulty?,” “How great is the financial need of the injured party?,” “How much financial support is the injured party in need of?,” “How much is the injured party in need of money?,” and “What is the level of the injured party’s financial well-being?”). Two questions were used to check the manipulation of the urgency of need (“How urgent is the financial need of the injured party?” and “How pressing is the financial need of the injured party?”). Another three questions were used to check the manipulation of the cause of the need, that is, how responsible the applicant is perceived for the accident (“How responsible was the injured party for the accident?,” “To what extent was the injured party at fault in the accident?,” and “How accountable should the injured party be held for the accident?”).

Participants then read an instruction for how to allocate assistance money to applicants. The instruction was one of two versions used to manipulate the high-empathy

and low-empathy conditions. The two instructions were made relatively the same in length. The instructions were revised from the work of Stotland, Sherman, and Shaver (1971) and Fink (1975).

High-Empathy Instruction:

According to research conducted by charity organizations, the best way to judge and allocate money to people in need is to really understand the injured party's feelings. Before you decide what amount of money you would give to this injured party, please imagine how you yourself would feel if you were in this person's position. Picture to yourself just how you would feel in his or her shoes (You are to keep clearly in mind that you are to react as if it were you who are in the package and are being evaluated). Concentrate on the way you would feel in that situation. In your mind's eye, you are to visualize how it would feel to you to be the injured party in his or her position. Now, reread the instruction once again.

Low-Empathy Instruction:

According to research conducted by charity organizations, the best way to judge and allocate money to people in need is to be as objective as possible and focus only on the information in the application package. Before you decide what amount of money you would give to this injured party, please decide based on exactly what's in the package. You are to notice any information in the included forms: the Application For Charity Care Assistance Form, and other relevant forms included in the package (You are to keep clearly in mind that you are to base your judgment solely on the information in the package). You are to notice anything that is included in the package, whatever it is. Now, reread the instruction once again.

After reading the instruction, participants were asked to reread the application package based on the instructions they had just read. Next, two questions concerning distribution of money were asked. Participants indicated the amount of money they would give to the applicant as the president of the charity organization by responding to the question:

What amount of money would you give to this injured party whose application package you have just read? [You can give the person zero or you can give him/her as much as you want. Remember you don't need to pay the medical bill in full for the applicant. More money given to this applicant means less money to be allocated to future applicants. Generally, your organization gives \$1000 to an applicant who has a moderate need.]

The second question asked participants the amount of money that they would give to the injured party if they now had an infinite amount of money to distribute to applicants. In this question, no number was given indicating a moderate amount and participants were told that they can give the injured party zero or they can give him or her as much as they want.

The two questions provided a reliability check for the measure of monetary distribution. To be consistent with Studies 1 and 2, the first question served as the dependent variable for Study 3. To check the manipulation of empathy, the same ten questions as in Study 2 were revised to measure whether participants in Study 3 focused on the information (“To what extent did you focus on the information in the package in making the decisions?,” “My judgment of the injured party was based only and exclusively on the information in the application package,” “I formed an impression of

the injured party relying solely on the information in the package,” and “I tried to be as objectively as possible.”) or feelings of the employee (“To what extent did you focus on the feelings of the injured party in making the decisions?,” “How much do you think that you understood what the injured party felt in making the decisions?,” “How much do you think that you felt what the injured party felt in making the decisions?,” “I got involved with the injured party’s feelings,” “I imagined how I would feel if I were in the injured party’s position,” and “I put myself in the injured party’s shoes and felt his or her feelings.”) in the process of making the distribution decision. As in Study 2, the empathy manipulation check also involved a list of emotion adjectives. Participants were asked to indicate how much they had experienced each emotion and how much the injured party had experienced each emotion in the process of reviewing the application package and making the distribution decision. These self-reports provided a further test of the effectiveness of the empathy manipulation. Included among the adjectives were eight distress adjectives (*alarmed, grieved, troubled, distressed, upset, disturbed, worried, and perturbed*), four sadness adjectives (*low-spirited, feeling low, heavyhearted, and sad*), and six empathy adjectives (*sympathetic, soft-hearted, warm, compassionate, tender, and moved*) used in previous research to measure empathy (see Batson, 1987, 1991; Batson et al., 1989; Batson et al., 1988; Fultz, Schaller, & Cialdini, 1988). Finally, participants responded to the Personal Belief in a Just World Scale (see Appendix B) and the Measure of Trait Empathy (see Appendix C), which includes five dimensions: perspective taking, fantasy, empathic concern, personal distress, and emotional contagion.

For all questions other than the two estimates of the distribution of money, participants used magnitude scales, in which 100 represented a moderate amount of the

variable that they were rating (Hamblin, 1974; Lodge, 1981; Shinn, 1974; see also Torgerson, 1958, for fractionation methods). For the two measures of the amount of money distributed, participants were asked to give \$1,000 to an applicant who has a moderate need, or they were told they had an infinite amount of money to distribute without being given a moderate amount (see Footnote 1). For all the magnitude scales and the two estimates of money, participants could use any non-negative number, with higher numbers representing greater amounts of the variable that was being assessed. At the end of the questionnaire, participants provided information about their sex, age, racial or ethnic background, nationality, native language, major, year in school, and marital status.

Data Transformation and Presentation

To meet statistical assumptions required for analyses within the general linear model, all the items were transformed by a power transformation (see Bauer & Fink, 1983; Kruskal, 1968). When a measure had one or more outliers, these values were trimmed by being recoded to a fixed upper value before further analysis. The transformed variables are used in all the analyses that follow.⁸ The means and standard deviations reported in the text are descriptive statistics, whereas the figures present estimated marginal means. All statistical tests are two tailed unless stated otherwise.

Results

Perception of Manipulations

Believability and realism. American participants (believable: $M = 243.83$, $SD = 257.16$; realistic: $M = 235.07$, $SD = 256.61$) perceived the situations as highly believable and realistic. Chinese participants (believable: $M = 117.50$, $SD = 99.47$; realistic: $M =$

143.33, $SD = 181.76$) perceived the situations as moderately believable and realistic (100 was used in the scale to indicate moderate believability and realism).⁹ U.S. participants perceived the situations as significantly more believable, $F(1, 326) = 48.60, p < .001, \eta^2 = .13$, and realistic, $F(1, 324) = 29.08, p < .001, \eta^2 = .08$, than Chinese participants. For U.S. participants, no significant differences were found in the perceptions of believability and realism between the two levels of the magnitude of need (large vs. small) and the two levels of the urgency of need (urgent vs. not urgent). For Chinese participants, no significant differences were found in the perception of believability and realism between the two levels of the urgency of need and in the perception of realism between the two levels of the magnitude of need. However, Chinese participants perceived that the large-need situations were more believable than the small-need situations.

Table 8 reports the results of the statistical tests for believability and realism between the two levels of the magnitude of need and of the urgency of need for U.S. and Chinese participants, respectively. The means and standard deviations for believability and realism by culture and need levels are found in Tables 9 and 10, respectively.

Need. A principal-components analysis was performed on the six-item scale for the magnitude of need. Two principal components had eigenvalues greater than 1. The last item (i.e., “What is the level of the injured party’s financial well-being?”) had a low loading (.163) on the first component and was deleted from the scale. Only one principal component with an eigenvalue greater than 1 was extracted from the remaining five items. This component accounted for 72% of the total variance. The loadings of the five items on the extracted component were .77, .77, .89, .89, and .91, respectively. The reliability coefficient (Cronbach’s α) of the summed five items for the magnitude of need scale

Table 8

Results of the Statistical Tests for Believability and Realism Between the Two Levels of the Magnitude of Need and of the Urgency of Need for U.S. and Chinese Participants in Study 3

		U.S.	China
Believability	Magnitude of Need	$F(1, 187) = .98, p < .32, \eta^2 = .01$	$F(1, 139) = 5.48, p < .02, \eta^2 = .04^a$
	Urgency of Need	$F(1, 187) = .88, p < .35, \eta^2 = .01$	$F(1, 139) = .19, p < .66, \eta^2 = .01$
Realism	Magnitude of Need	$F(1, 187) = .12, p < .73, \eta^2 = .01$	$F(1, 137) = .94, p < .33, \eta^2 = .01$
	Urgency of Need	$F(1, 187) = 2.83, p < .09, \eta^2 = .02$	$F(1, 137) = .05, p < .83, \eta^2 = .01$

^aThe statistical test here was significant, indicating that the large-need condition was perceived as more believable than the small-need condition for Chinese participants.

Table 9

Means and Standard Deviations for Believability by Culture and Levels of Need in Study

3 (N = 334)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Small Need	5.24	1.35	3.98 ^a	1.54	4.69 ^c	1.56
Large Need	5.46	1.61	4.51 ^a	1.10	5.06 ^c	1.49
Not-Urgent Need	5.25	1.54	4.29	1.34	4.83	1.53
Urgent Need	5.45	1.43	4.20	1.38	4.92	1.54
Overall	5.35 ^b	1.49	4.24 ^b	1.36		

^aThe two means were significantly different from each other at $p \leq .05$ level, indicating that the big-need condition was perceived as more believable than the small-need condition for Chinese participants.

^bThe two means were significantly different from each other at $p \leq .05$ level, indicating that overall U.S. participants perceived the situations as more believable than Chinese participants.

^cThe two means were significantly different from each other at $p \leq .05$ level, indicating that overall the big-need condition was perceived as more believable than the small-need condition.

Table 10

Means and Standard Deviations for Realism by Culture and Levels of Need in Study 3 (N = 332)

	US		China		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Small Need	5.23	1.40	4.19	1.49	4.79	1.53
Large Need	5.31	1.58	4.47	1.81	4.96	1.73
Not-Urgent Need	5.09	1.37	4.30	1.51	4.75	1.48
Urgent Need	5.45	1.58	4.36	1.81	4.99	1.76
Overall	5.27 ^a	1.49	4.33 ^a	1.66		

^aThe two means were significantly different from each other at $p \leq .05$ level, indicating that overall U.S. participants perceived the situations as more realistic than Chinese participants.

was .90. This principal component score was used in the subsequent analyses.

A principal-components analysis was performed on the two-item scale for the urgency of need. One principal component had an eigenvalue greater than 1. This component accounted for 90% of the total variance. The loadings of the two items on the extracted component were .95 and .95. The reliability coefficient (Cronbach's α) of the sum of the two items for the urgency of need scale was .89. This principal component score was used in the subsequent analyses.

The manipulation checks for need were performed between the two levels of the magnitude of need and the two levels of the urgency of need. Results showed that the large-need applicant (U.S.: $M = .39$, $SD = .91$; China: $M = .24$, $SD = .92$) was perceived as having larger need than the small-need applicant (U.S.: $M = -.35$, $SD = .85$; China: $M = -.31$, $SD = 1.12$), and the urgent-need applicant (U.S.: $M = .46$, $SD = .84$; China: $M = .35$, $SD = .95$) was perceived as having more urgent need than the not-urgent-need applicant (U.S.: $M = -.58$, $SD = .88$; China: $M = -.23$, $SD = .96$) for both Americans and Chinese. However, results also showed that the large-need applicant (U.S.: $M = .38$, $SD = .90$; China: $M = .34$, $SD = .89$) was perceived as having more urgent need than the small-need applicant (U.S.: $M = -.49$, $SD = .91$; China: $M = -.23$, $SD = 1.02$), and the urgent-need applicant (U.S.: $M = .34$, $SD = .93$; China: $M = .13$, $SD = 1.03$) was perceived as having larger need than the not-urgent-need applicant (U.S.: $M = -.31$, $SD = .87$; China: $M = -.20$, $SD = 1.07$) for both American and Chinese participants. These results suggest that participants did not regard the magnitude and urgency as two independent dimensions of need. Therefore, need was re-categorized as a three-level variable: High need (representing the large-and-urgent need condition), moderate need

(representing the large-and-not-urgent need condition and the small-and-urgent need condition), and low need (representing the small-and-not-urgent need condition). To check whether the three levels of need differed in terms of participants' perceptions, the original six-item magnitude-of-need scale and two-item urgency-of-need scale were combined. After dropping the last item ("What is the level of the injured party's financial well-being?") of the magnitude-of-need scale because of its low loading (.142), the remaining seven items loaded on only one principal component, which accounted for 70% of the total variance. The loadings of the seven items on the extracted component were .75, .73, .88, .87, .91, .83, and .87, respectively. The reliability coefficient (Cronbach's α) of the summed seven items was .93. This principal component score was used as the manipulation check of the newly created need variable with three levels.

For U.S. participants, a linear effect with polynomial contrast for the three levels of need was found, $p < .001$. The high-need condition ($M = .81$, $SD = .99$) was perceived as having greater need than the moderate-need condition ($M = -.02$, $SD = .61$, $F[1, 142] = 37.94$, $p < .001$, $\eta^2 = .21$), which was in turn perceived as having greater need than the low-need condition ($M = -.83$, $SD = .87$, $F[1, 137] = 40.48$, $p < .001$, $\eta^2 = .23$). For Chinese participants, a linear effect with polynomial contrast for the three levels of need was also found, $p < .001$. The high-need condition ($M = .56$, $SD = .93$) was perceived as having greater need than the moderate-need condition ($M = -.06$, $SD = .90$, $F[1, 105] = 10.94$, $p < .001$, $\eta^2 = .09$), which was in turn perceived as having greater need than the low-need condition ($M = -.47$, $SD = 1.18$, $F[1, 105] = 3.98$, $p < .049$, $\eta^2 = .04$). Therefore, the perception of need differed as expected due to the restructuring of the conditions across the three levels of the newly created need variable in each of the two cultures.

Responsibility. Three questions served to check the effectiveness of the manipulation of the cause of need: how responsible the applicant is perceived to be for the accident. Applicants in conditions where the accident was explained as caused by a truck driver should be perceived as less responsible than applicants in conditions where the responsibility was left unexplained. A principal-components analysis was performed on the three-item responsibility scale. One principal component had an eigenvalue greater than 1. This component accounted for 84% of the total variance. The loadings of the three items on the extracted component were .87, .94, and .94 respectively. The reliability coefficient (Cronbach's α) of the summed three items was .90. This principal component score was used in the manipulation tests. For the U.S. participants, applicants in the no-responsibility condition ($M = -1.02$, $SD = .67$) were perceived as less responsible than applicants in the no-explanation condition ($M = .38$, $SD = .81$), $F(1, 179) = 130.77$, $p < .001$, partial $\eta^2 = .42$. For Chinese participants, applicants in the no-responsibility condition ($M = -.14$, $SD = .93$) were also perceived as less responsible than applicants in the no-explanation condition ($M = .71$, $SD = .57$), $F(1, 136) = 39.63$, $p < .001$, partial $\eta^2 = .23$. Therefore, the two situations with or without an explanation of the cause of the accident differed in both cultures in terms of participants' perceptions of responsibility.

Empathy. The empathy manipulation was checked in four different ways: (1) Ten questions asked the extent to which participants focused on the information in the package and on feelings of the applicant; (2) participants reported how much they had experienced each of the eight distress and four sadness feelings; (3) participants also reported how much they understood the applicant had experienced each of the eight distress and four sadness feelings; and (4) participants indicated the extent to which they

had experienced each of the six empathic feelings.

To assess the extent to which participants focused on the applicant's feelings versus information in the package, a difference score was created by subtracting the four reported information-focused scores (transformed) from the six reported feelings-focused scores (transformed). The high-empathy condition should have a higher score on this measure than the low-empathy condition. U.S. participants reported a higher score on this difference measure in the high-empathy condition ($M = 7.70$, $SD = 9.52$) than in the low-empathy condition ($M = 4.81$, $SD = 11.43$), $F(1, 158) = 4.52$, $p < .035$, partial $\eta^2 = .03$. Chinese participants also reported a higher score on this difference measure in the high-empathy condition ($M = 10.40$, $SD = 7.34$) than in the low-empathy condition ($M = 8.77$, $SD = 7.86$), $F(1, 107) = 6.05$, $p < .016$, partial $\eta^2 = .05$. Therefore, the manipulation of empathy using the difference score was successful for both cultures.

A principal-components analysis was performed on the twelve distress and sadness emotions that participants had felt. One principal component had an eigenvalue greater than 1. The component had acceptable loadings ($\geq .64$) on all the twelve items and accounted for 53% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the sum of the twelve items was .92. No significant difference was found between the two conditions (high-empathy: $M = .10$, $SD = 1.00$; low-empathy: $M = .02$, $SD = 1.07$) for U.S. participants. However, Chinese participants reported a higher score on this measure in the high-empathy condition ($M = .06$, $SD = 1.07$) than in the low-empathy condition ($M = -.22$, $SD = .81$), $F(1, 111) = 4.87$, $p < .029$, partial $\eta^2 = .04$. Therefore, the manipulation of empathy by this measure was successful for only the Chinese participants.

A principal-components analysis was performed on the twelve distress and sadness emotions that participants understood the applicant had felt. Only one principal component had an eigenvalue greater than 1. The component had acceptable loadings ($\geq .70$) on all the twelve items and accounted for 63% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the summed twelve items was .94. U.S. participants reported a higher score on this measure in the high-empathy condition ($M = .30, SD = 1.09$) than in the low-empathy condition ($M = -.01, SD = .90$), $F(1, 155) = 7.33, p < .008$, partial $\eta^2 = .05$. No significant difference was found between the two conditions (high-empathy: $M = -.26, SD = .92$; low-empathy: $M = -.12, SD = 1.00$) for Chinese participants. Therefore, the manipulation of empathy by this measure was successful for only the U.S. participants.

Finally, a principal-components analysis was performed on the six empathic emotions that participants felt. Only one principal component had an eigenvalue greater than 1. The component had acceptable loadings on the six items ($\geq .79$) and accounted for 70% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the summed twelve items was .91. U.S. participants reported a higher score on this measure in the high-empathy condition ($M = .15, SD = 1.09$) than in the low-empathy condition ($M = -.08, SD = 1.10$), $F(1, 158) = 4.03, p < .046$, partial $\eta^2 = .03$. No significant difference was found between the two conditions (high-empathy: $M = -.03, SD = .79$; low-empathy: $M = -.06, SD = .94$) for Chinese participants. Therefore, the manipulation of empathy by this measure was successful for only the U.S. participants.

Trait empathy. A principal-components analysis was performed on the 35 items of

trait empathy. More than one component with an eigenvalue greater than 1 was extracted (see Figure 9). The first principal component accounted for 20% of the total variance. The reliability coefficient (Cronbach's α) of the summed thirty-five items was .87. This principal component score, created by combining the 35 items based on their loadings, was used in the subsequent analyses.

Dependent Variables: Monetary Reward

Two questions measured the amounts of money participants were willing to distribute to the applicant. In the first question, participants were told to give \$1,000 to an applicant in moderate need. In the second question, participants were told that they had an infinite amount of money to distribute and were not given a moderate amount. To be consistent with Studies 1 and 2, the first question served as the dependent variable. However, the correlation between the first and second questions can be used to provide some kind of reliability check for the dependent variable. The correlation between the two transformed questions was .56 ($p < .001$).

Predicting Distribution of Assistance Money

To assess the linear effect of need (with three levels) and its interactions with other independent variables, two regression models with need, empathy, culture, sex, and all two-way and three-way linear interactions between them plus trait empathy as independent variables and the first measure of the amount of money distributed as the dependent variable were analyzed, one in the situation in which the cause of the accident was unexplained and one in the other situation in which the cause of the accident was explained as not due to the applicant.¹⁰ Sex was entered as an independent variable to control for any effects it may have, by itself or in interactions with other independent

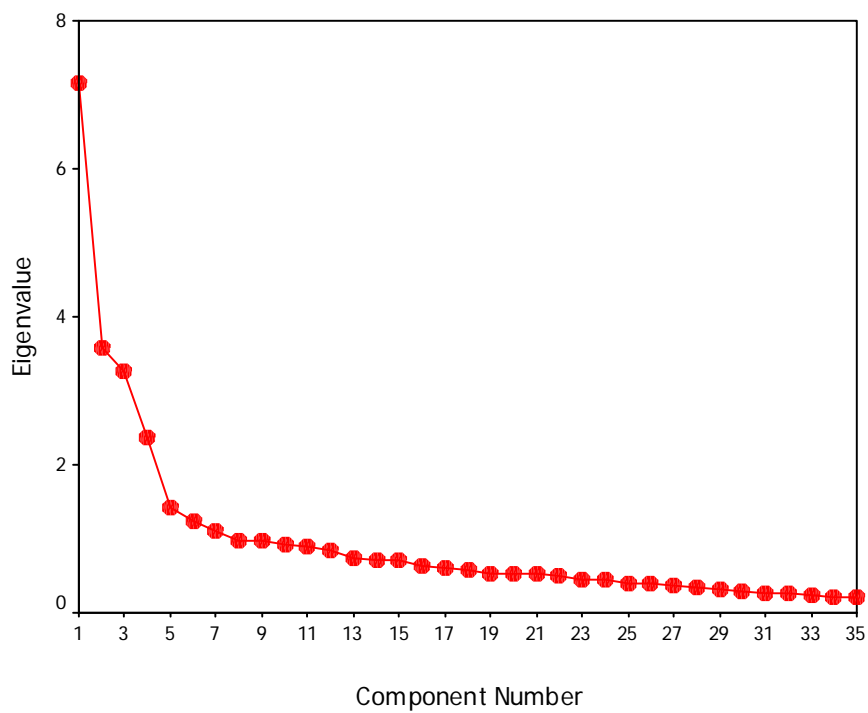


Figure 9. Scree plot for the principal components extracted from the 35 trait empathy items in Study 3.

variables, on the size of the bonus. Trait empathy was entered as an independent variable to control for the main effect it may have on the dependent variable.

For purposes of the regression analyses, the four predictors (need, empathy, culture and sex) were contrast coded with the means of the contrast codes made to equal zero. Interaction effects were created as the products of these contrast codes.¹¹ All two-way and three-way linear interactions were included in the regression models. The trait empathy variable, being a continuous variable, was added without being entered into interactions with other variables. For the no-explanation situation, the regression model was statistically significant: $F(15, 162) = 4.02, p < .001, R^2 = .27, \text{adjusted } R^2 = .20$. For the no-responsibility situation, the regression was also statistically significant: $F(15, 129) = 5.95, p < .001, R^2 = .41, \text{adjusted } R^2 = .34$. These two regression analyses are referred to in the hypothesis tests that follow (see Appendices O and P).

Need. Hypothesis 1 stated that for both cultures, more money is distributed to people with greater need than people with less need. For the no-explanation situation, a statistically significant linear effect of need was found, $B = 15.11, \beta = .47, t(162) = 6.77, p < .001, \text{partial } \eta^2 = .22$, with applicants in the high-need condition ($M = 26.67, SD = 8.57$) receiving the greatest amount of money, followed by those in the medium-need conditions ($M = 21.15, SD = 6.74$), and those in the low-need condition receiving the least amount of money ($M = 15.17, SD = 9.95$). For the no-responsibility situation, a statistically significant linear effect of need was also found, $B = 17.24, \beta = .50, t(129) = 7.27, p < .001, \text{partial } \eta^2 = .29$, with applicants in the high-need condition ($M = 28.87, SD = 7.23$) receiving the greatest amount of money, followed by those in the medium-need conditions ($M = 21.61, SD = 7.68$), and those in the low-need condition receiving the

least amount of money ($M = 15.45$, $SD = 9.91$). Therefore, Hypothesis 1 was supported in study 3.

Empathy. Hypothesis 2 predicted that for both cultures, more money is distributed to people with whom the distributor empathizes than people with whom the distributor does not empathize. For the no-explanation situation, the regression resulted in a statistically significant effect for empathy, $B = 3.25$, $\beta = .13$, $t(162) = 1.86$, $p < .03$ (one tailed), partial $\eta^2 = .02$, in which applicants empathized with ($M = 21.83$, $SD = 8.96$) received more money than those not empathized with ($M = 20.09$, $SD = 9.05$). No significant effect for empathy was found for the no-responsibility situation, $B = 1.71$, $\beta = .06$, $t(129) = .92$, $p < .18$ (one tailed), partial $\eta^2 = .01$. Therefore, Hypothesis 2 was supported only for the no-explanation situation.

Empathy and need. Hypothesis 3 predicted that empathy interacts with need such that more money is distributed to people in less need who are empathized with than not empathized with by the distributor, whereas empathy does not increase the amount of money distributed to people in greater need. No significant interactions were found for either the no-explanation, $B = 7.58$, $\beta = .08$, $t(162) = 1.19$, $p < .24$, partial $\eta^2 = .01$, or no-responsibility situations, $B = -5.03$, $\beta = -.05$, $t(129) = -.75$, $p < .46$, partial $\eta^2 = .01$. Therefore, Hypothesis 3 was not supported.

Empathy, need, and culture. Hypothesis 4 predicted a three-way interaction between empathy, need, and culture such that the effect of empathy on the relationship between need and the amount of money distributed is greater for Chinese than for U.S. Americans. No significant three-way interaction was found for the no-explanation condition, $B = -13.64$, $\beta = -.06$, $t(162) = -.88$, $p < .38$, partial $\eta^2 = .01$; however, the regression in the

no-responsibility condition resulted in a statistically significant three-way interaction between empathy, need, and culture, $B = -50.10$, $\beta = -.21$, $t(129) = -2.99$, $p < .003$, partial $\eta^2 = .06$ (see Figure 10). For U.S. Americans, empathy did not change the amount of money given to low-need applicants (Low empathy: $M = 15.07$, $SD = 3.41$; High empathy: $M = 10.98$, $SD = 9.35$), to medium-need applicants (Low empathy: $M = 23.31$, $SD = 7.13$; High empathy: $M = 22.12$, $SD = 8.94$), or to high-need applicants (Low empathy: $M = 28.30$, $SD = 8.68$; High empathy: $M = 28.90$, $SD = 7.58$). However, for Chinese participants, empathy increased the amount of money given to low-need applicants (Low empathy: $M = 13.66$, $SD = 11.99$; High empathy: $M = 23.73$, $SD = 8.42$) compared with the amount of money distributed to medium-need applicants (Low empathy: $M = 18.64$, $SD = 5.74$; High empathy: $M = 21.60$, $SD = 8.16$) and to high-need applicants (Low empathy: $M = 30.83$, $SD = 6.91$; High empathy: $M = 27.63$, $SD = 5.57$).

The research question asked if culture interacted with other variables to affect the amount of money distributed. No significant interactions between culture and other variables were found for the no-explanation situation. However, the regression for the no-responsibility situation resulted in a significant interaction between culture and empathy, $B = 9.67$, $\beta = .15$, $t(129) = 2.15$, $p < .034$, partial $\eta^2 = .03$ (see Figure 11). When empathy is low, U.S. Americans ($M = 23.24$, $SD = 8.23$) distributed a greater amount of money to applicants than Chinese ($M = 20.44$, $SD = 10.03$), whereas when empathy is high, Chinese ($M = 23.64$, $SD = 7.84$) gave a greater amount of money to applicants than U.S. Americans ($M = 21.35$, $SD = 10.76$).

Table 11 and 12 display the means and standard deviations for the amount of money by need, empathy, and culture in the no-explanation and no-responsibility situations.

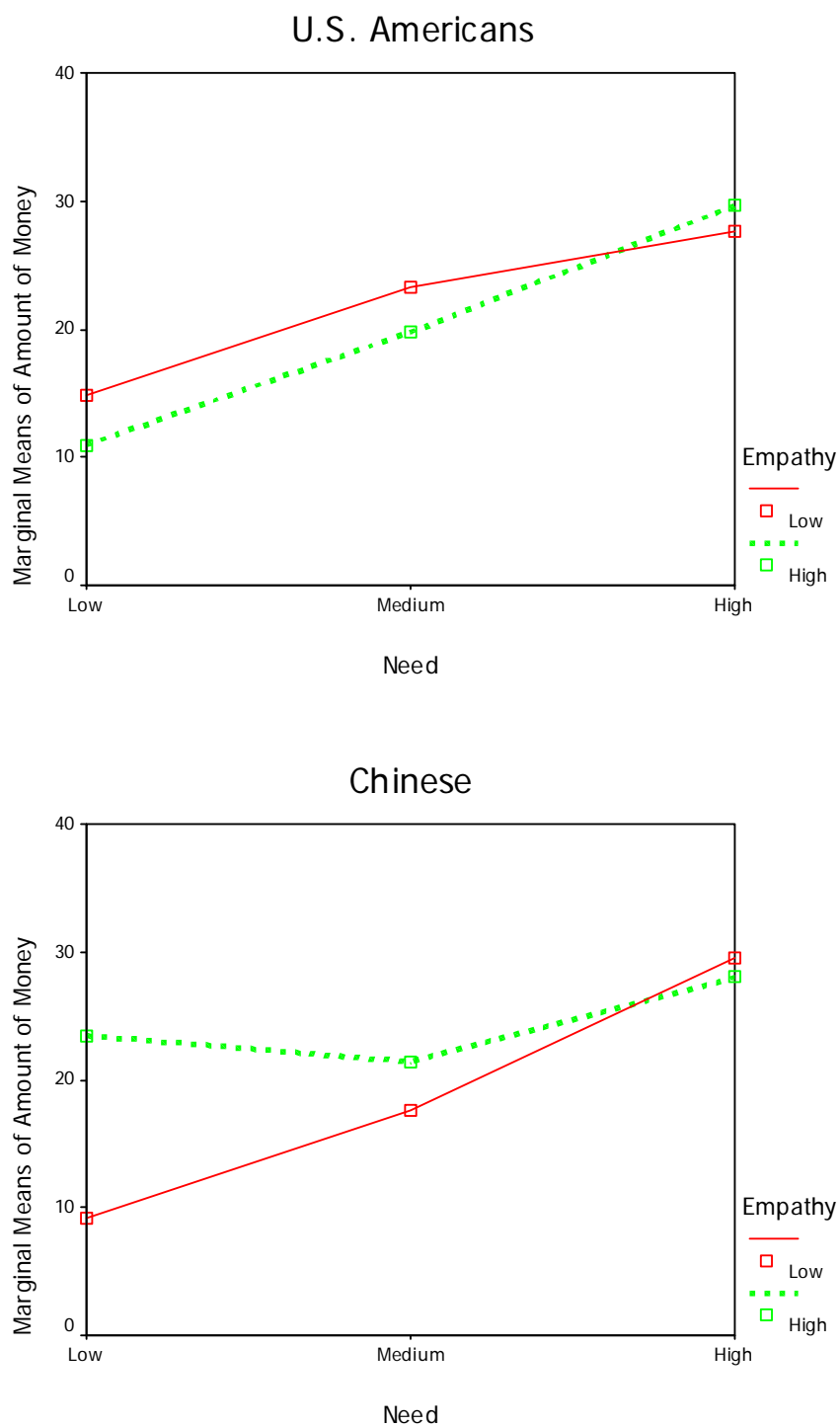


Figure 10. Amount of money by empathy, need and culture in Study 3.

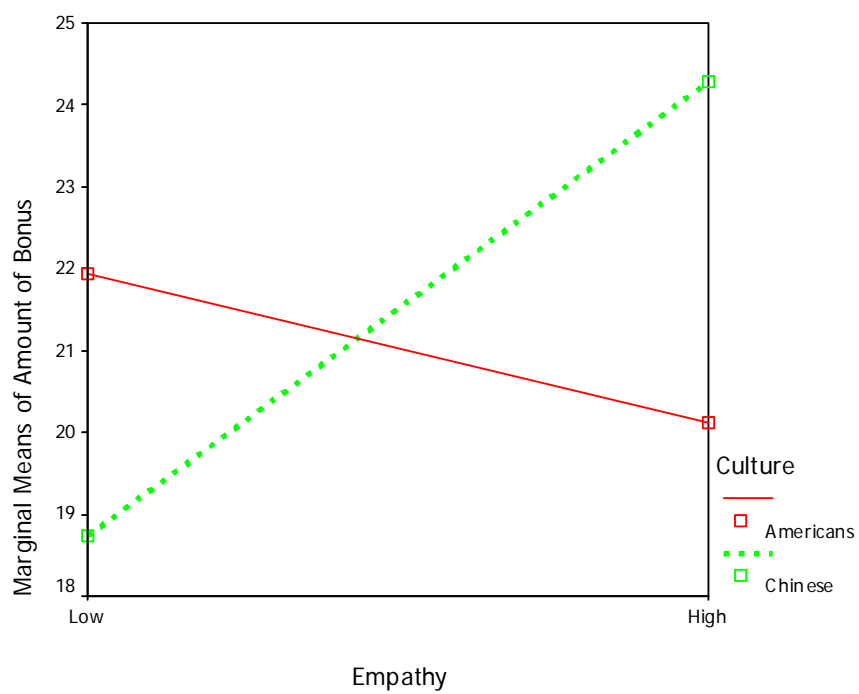


Figure 11. Amount of money by empathy and culture in Study 3.

Table 11

Means and Standard Deviations for Amount of Money by Need, Empathy, and Culture in the No-Explanation Situation in Study 3 (N = 184)

	US				China			
	Low Empathy		High Empathy		Low Empathy		High Empathy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Need	25.03	10.95	30.63	6.51	25.49	7.58	25.09	7.15
Moderate Need	19.02	5.03	21.62	6.04	21.00	7.96	23.57	7.80
Low Need	14.00	10.42	13.89	6.46	16.77	11.04	16.90	12.97

Table 12

Means and Standard Deviations for Amount of Money by Need, Empathy, and Culture in the No-Responsibility Situation in Study 3 (N = 149)

	US				China			
	Low Empathy		High Empathy		Low Empathy		High Empathy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Need	28.30	8.68	28.90	7.58	30.83	6.91	27.63	5.57
Moderate Need	23.31	7.13	22.12	8.94	18.64	5.74	21.60	8.16
Low Need	15.07	3.41	10.98	9.35	13.66	11.99	23.73	8.42

Discussion

Study 3 examined how empathy affected the use of the need principle in the distribution of assistance money situation in a charity organization, where need is the most salient distributive principle. Empathy was expected to interact with need such that greater difference in amounts of money distributed between high- and low-need people was expected when empathy was low than when empathy was high. This interaction between empathy and need was also expected to be greater for Chinese than for U.S. Americans.

Study 3 is different from Studies 1 and 2 in that the previous studies investigated the use of the equity distributive principle, whereas Study 3 examined the use of the need distributive principle. The use of the equity principle emphasizes that the amount of money distributed be proportional to the contribution made, that is, higher bonuses should be given to those with higher competence and making greater contributions, as in Studies 1 and 2. The need principle does not require that beneficiaries make contributions at all as long as a legitimate need is demonstrated. However, the use of the need principle is similar to the use of the equity principle in that the amount of money distributed to the person in need should be proportional to the magnitude of the need, that is, more money should be given to those with greater need (having larger or more urgent need). Therefore, in a situation in which equity is the most salient distributive principle, persons with a higher contribution (competence) should receive a higher monetary reward, which was supported in Studies 1 and 2. In the same light, in a situation where need is the most salient distributive principle, as in Study 3, it was also supported that persons with the greatest need receive the most money, followed by those with medium need receiving

smaller amounts of money, and those with the least need receiving the least money. The effect of competence and need on the amount of money distributed were quite strong in these studies.

Results in Study 3 showed no significant interaction between empathy and need. However, a significant three-way interaction was found between empathy, need, and culture when the accident was explained as not caused by the applicant. Similar to the three-way interaction between empathy, competence, and culture in Study 2, in which empathy increased the amount of money given to low-competence but not high-competence people for Chinese but not for U.S. Americans, the three-way interaction in Study 3 also demonstrated that empathy increased the amount of money given to low-need but not high-need people for Chinese but not for U.S. Americans. It seems that when empathy is aroused, the gap in the amount of money given to low-need and high-need persons is reduced for Chinese but not for U.S. participants.

Chapter 5

Study 4: The Distribution Situation in a University

The fourth study examined the relationship between empathy and the two distributive justice principles: need and equity. The research question asks how empathy affects the distribution of scholarship money in a university. The hypothetical scholarship program accepts both need-based and merit-based applications, therefore making both need and equity salient distributive justice principles in this situation. In Study 4, participants are asked to divide a certain amount of money between two applicants, one with need and the other with merit, rather than judging only one person as in Studies 1 to 3. In Study 4, empathy is expected to lead to the preference of the need principle over the equity principle. In other words, when empathy is aroused, more money will be allocated to the applicant with need than the applicant with merit. Moreover, this effect is expected to be greater for Chinese than for U.S. Americans.

Hypotheses

The fourth study examined the distribution of money across the two levels of empathy (high vs. low empathy) and two cultural groups, Chinese and U.S. Americans. The following hypotheses are organized based on the effect of empathy (H1) and the role of culture (H2 and the RQ).

H1: More money is distributed to the person with need and less money distributed to the person with merit when empathy is aroused than when empathy is not aroused.

H2: The effect of empathy on the relationship between need and merit is greater for Chinese than for U.S. Americans.

RQ: Does culture interact with other variables to influence the amount of money distributed?

Method

Participants

Participants ($N = 262$) were recruited from both China and the U.S. The U.S. participants were 144 undergraduates from communication classes at a large public U.S. east coast university. Sixty-two percent of the U.S. participants were female (89 females and 55 males). The average age of the U.S. participants was 19.78 years ($Mdn = 20.00$, $SD = 1.96$), and the ages ranged from 18 to 39 years. Sixty percent of the participants were Caucasian, 17% were African American, 15% were Asian, 4% were Hispanic, 1% were Native American, and 4% were not in any of the listed categories (the total is not equal to 100% due to rounding).

The Chinese participants were 118 undergraduates from a university in a southwestern city of China. One participant did not indicate his or her sex, age, and race. Another participant did not indicate his or her age. Of the 117 participants who indicated sex, fifty-six percent of the Chinese participants were female (66 females and 51 males). The average age of the Chinese participants was 20.66 years ($Mdn = 20.00$, $SD = 1.87$), and the ages ranged from 18 to 35 years. All participants from China identified their ethnic background as Chinese (as opposed to Korean or other possible ethnicities in China).

Procedure

U.S. Participants received a small amount of extra course credit for participating in the study. Participants came to an assigned location, which was not their regular

classroom, to read and sign the study's consent form and complete the questionnaire. An alternative class assignment or participation in other studies was offered as an option for students who did not want to participate in this study.

The Chinese participants did the study as a voluntary activity. They read and signed the study's consent form and completed the questionnaire outside of their regular classroom and returned the study materials to their instructor. For both Chinese and U.S. participants, no student declined to participate in the study, and questionnaires and consent forms were collected separately. The questionnaire took approximately 60 minutes to complete.

Stimulus Materials

Four scholarship program application packages (see Appendix F) were created to describe four types of applicants: high performance, high need, medium performance, and medium need. For each applicant, the application package included a cover page and the Applicant Information Form. The applicant is represented by an ID number on the forms to exclude the influence of a name.

The cover page introduced the hypothetical Dean's Scholarship Program. The Dean's Scholarship was described as a program that accepts both need-based and merit-based applications and is awarded every semester to current students who have demonstrated financial need or outstanding academic performance. The cover page also described the basic requirements for need-based and merit-based application. The cover page was the same across all conditions. In the first part of the Applicant Information Form, the applicant, identified by an applicant ID and a University ID, was described as a current full-time student. For each of the two need-based applications, the applicant had chosen

the need-based application option and completed part 2 of the form in which the applicant indicated that his or her family income qualified him or her for this scholarship and then gave reasons for the application. The two types of need, high and medium, were created by varying the reasons given for the application. The applicant, whose application was based on need, also indicated that he or she had not applied for or received any other need-based scholarships. For each of the two merit-based applications, the applicant chose the merit-based application option and then completed part 3 of the form in which the applicant gave his or her GPA and reasons for the application. The two types of academic performance, high and medium, were created by varying the value of GPA and the reasons given for the application. The applicant, whose application was based on academic performance, also indicated that he or she had not applied for or received any other merit-based scholarships.

In the high-need condition, the applicant was described as belonging to a low-income family with an unemployed father still trying to find a job. Because the father was the sole bread-winner in the family, and there were other children who needed support, the family could no longer support the applicant financially for his or her college education. In the medium-need condition, the applicant was described as belonging to a middle-income family and thus ineligible for many federal financial aid programs. The applicant was experiencing financial difficulties because his or her parents did not help pay for college as much as they should. In the high-performance condition, the applicant was described as having a 4.0 GPA and achieving As in all classes. The applicant was also described as a member of the honors program in his or her department, receiving a university medal, and serving on several university-wide committees. In the

medium-performance condition, the applicant was described as having a 3.5 GPA and achieving As and Bs in all classes. The applicant explained his or her goals, activities, and abilities without giving much evidence of achievements. The four descriptions of reasons for the scholarship were made relatively the same in length. Part 4 of the Applicant Information Form was a signature section that was used to make the scenarios look believable and realistic. The signature was made unidentifiable and exactly the same for the four situations in order to reduce the influence of a name.

Questionnaire Design

As in Study 3, two versions of the questionnaire were created, one in which participants were asked to empathize with the applicant (high-empathy conditions) and one in which participants were instructed to focus only on the information in the application package (low-empathy conditions). For Chinese participants, the questionnaire and application package were translated into Chinese by the dissertation researcher, who is a native Chinese speaker, and back-translated by another native Chinese speaker. The two translators discussed any incongruities in the pre- and post-translated English versions and constructed a final Chinese version of the application package and questionnaire.

The application package was prepared as a separate document from the questionnaire. In both cultures, each participant was randomly assigned to read one of the two versions of the questionnaire, the high-empathy or the low-empathy condition. Participants were also randomly assigned to read two applications, one of the two need-based applications and one of the two merit-based applications, with either the need-based or the merit-based application being the first one they read. This arrangement created sixteen

different experimental conditions: 2 (empathy) × 2 (need-based) × 2 (merit-based) × 2 (order).

In the introductory section of the questionnaire, participants in each condition were first asked to imagine themselves as the chairperson of the Dean's Scholarship Program in a university. Participants were also told that the Dean's Scholarship was established as a program that accepts both need-based and merit-based applications, which had helped many students from low- and middle-income families to address their financial needs as well as rewarded students with outstanding academic performance. The basic requirements for need-based and merit-based applications were then described. These descriptions were used to make need and equity both salient principles in the distribution situation. Participants were then asked to review two applications (prepared as a separate document from the questionnaire) in the order they were presented. Participants were told that the first applicant referred to the student whose application package they read first and the second applicant referred to the second student application they read. They were asked to form an overall impression of each of the two applicants, who were described as the same sex with the participant, before answering additional questions in the questionnaire. Participants were instructed to briefly write down their impressions of each of the two applicants to further put them in the imagined situation.

Next, two items measured the believability and realism of the imagined situation ("How believable is the situation?" and "How realistic is the situation?"). Five items served as a manipulation check for the magnitude of need for the first applicant ("How great is the financial need of the first applicant?", "How much is the first applicant in need of money?," "What is the level of the first applicant's financial difficulty?," "How

much financial support is the first applicant in need of?,” and “What is the level of the first applicant’s financial well-being?”). Four questions were used to check the manipulation of the performance of the first applicant (“How well did the first applicant perform academically?,” “How academically competent is the first applicant?,” “How academically accomplished is the first applicant?,” and “What is the level of the first applicant’s academic ability?”). The same nine questions measuring need and performance were asked about the second applicant.

Participants then read an instruction for how to allocate scholarship money to applicants. The instruction was one of two versions that were used to manipulate the high-empathy and low-empathy conditions. The two instructions were made relatively the same in length. The instructions were revised from the work of Stotland, Sherman, and Shaver (1971) and Fink (1975).

High-Empathy Instruction:

According to research conducted by universities, the best way to judge and allocate scholarship money to students is to really understand their *feelings*. Before you decide how to divide scholarship money between these two student applicants, please follow the instructions below and imagine how *you yourself* would feel if *you* were in *each student’s* position.

First, picture to yourself just how *you* would feel in *the first student’s* shoes (You are to keep clearly in mind that you are to react as if it *were you* who are in the *first* application package and are being evaluated). Concentrate on the way *you* would feel in that situation. In your mind’s eye, you are to visualize how it would feel to *you* to be the *first* student in his or her position.

Now, picture to yourself just how you would feel in *the second student's* shoes (You are to keep clearly in mind that you are to react as if it were you who are in the *second* application package and are being evaluated). Concentrate on the way you would feel in that situation. In your mind's eye, you are to visualize how it would feel to you to be the *second* student in his or her position.

Reread the instructions once again.

Low-Empathy Instruction:

According to research conducted by universities, the best way to judge and allocate scholarship money to students is to be as objective as possible and focus only on the information in the application packages. Before you decide how to divide scholarship money between these two student applicants, please follow the instructions below and decide based on exactly what's in each student's application package.

First, you are to notice any information in *the first student's* file: the Applicant Information Form, and other relevant forms, if any, included in the *first* package (You are to keep clearly in mind that you are to base your judgment solely on the information in the *first* application package). You are to remain objective and notice anything that is included in the *first* package, whatever it is.

Now, you are to notice any information in *the second student's* file: the Applicant Information Form, and other relevant forms, if any, included in the *second* package (You are to keep clearly in mind that you are to base your judgment solely on the information in the *second* application package). You are to remain objective and notice anything that is included in the *second* package, whatever it is.

Reread the instructions once again.

After reading the instructions, participants were asked to reread the two application packages based on the instructions they had just read. Next, three questions concerning distribution of scholarship money were asked in which participants indicated the amount of money that they would give to each of the two applicants. For the first question, participants were told that they had \$1,000 to divide between the two applicants:

Based on your judgment, what amount of money would you give to each of the two applicants if you had \$1000 scholarship money to divide between them? [You can divide the \$1000 in whatever way you want: give any amount of money or zero to any of the two applicants as long as the total amount *is equal to* \$1000. More money given to one of them means less money for the other. Please make sure the two numbers add up to 1000.]

The second question asked participants what amount of money they would give to each of the two applicants if they had \$5,000 to divide between them. For the third question, participants distributed money based on applicants' need or academic performance without having to divide money between them:

Now, imagine you don't have to divide money between the two applicants. You can give each of the two applicants zero or you can give each of them as much as you want. Remember more money given to them means less money to be allocated to future applicants. Generally, the Dean's Scholarship Program gives \$1000 to a student who has a moderate financial need or a student who is moderately accomplished in academic performance. What amount of money would you give to each of the two applicants based on your judgment?

The three questions provided a reliability check for the measure of monetary distribution for Study 4. Next, to check the manipulation of empathy, the same ten questions as used in Studies 2 and 3 were revised to measure whether participants in Study 4 focused on the information (“To what extent did you focus on the information in the two packages in making the decisions?,” “My judgment of the two applicants was based only and exclusively on the information in the application packages,” “I formed an impression of the two applicants relying solely on the information in the packages,” and “I tried to be as objectively as possible.”) or feelings of the applicants (“To what extent did you focus on the feelings of the two applicants in making the decisions?,” “How much did you understand what the two applicants felt in making the decisions?,” “How much did you feel what the two applicants felt in making the decisions?,” “I got involved with the two applicants’ feelings,” “I imagined how I would feel if I were in the two applicants’ positions,” and “I put myself in the two applicants’ shoes and felt their feelings.”) in the process of making the distribution decision. The empathy manipulation check also involved a list of emotion adjectives that participants used to indicate how much they had experienced each emotion in the process of reviewing the application packages and making the distribution decision. These self-reports provided a further test of the effectiveness of the empathy manipulation. Included among the adjectives were eight distress adjectives (*alarmed, grieved, troubled, distressed, upset, disturbed, worried, and perturbed*), four sadness adjectives (*low-spirited, feeling low, heavyhearted, and sad*), and six empathy adjectives (*sympathetic, soft-hearted, warm, compassionate, tender, and moved*) used in previous research to measure empathy (see Batson, 1987, 1991, Batson et al., 1989; Batson et al., 1988; Fultz et al., 1988). Finally, participants responded to the

Personal Belief in a Just World Scale (see Appendix B) and the Measure of Trait Empathy (see Appendix C), which includes five dimensions: perspective taking, fantasy, empathic concern, personal distress, and emotional contagion.

For all questions other than the three estimates of the distribution of money, participants used magnitude scales, in which 100 represented a moderate amount of the variable that they were rating (Hamblin, 1974; Lodge, 1981; Shinn, 1974; see also Torgerson, 1958, for fractionation methods). For the first two measures of the amount of money distributed, participants were asked to divide \$1,000 or \$5,000 between the two applicants; for the third measure, participants were asked to indicate the amount of money they would give to the two applicants separately using \$1,000 as the yardstick for an applicant who has moderate need or moderate academic performance (see Footnote 1). For all the magnitude scales and the three estimates of provision of money, participants could use any non-negative number, with higher numbers representing greater amounts of the variable that was being assessed. At the end of the questionnaire, participants provided information about their sex, age, racial or ethnic background, nationality, native language, major, year in school, and marital status.

Data Transformation and Presentation

To meet statistical assumptions required for analyses within the general linear model, all the items were transformed by a power transformation (see Bauer & Fink, 1983; Kruskal, 1968). When a measure had one or more outliers, these values were trimmed by being recoded to a fixed upper value before further analysis. The transformed variables are used in all the analyses that follow.¹² The means and standard deviations reported in the text are descriptive statistics, whereas the figures present estimated marginal means.

All statistical tests are two tailed unless stated otherwise.

Results

Perception of Manipulations

Believability and realism. American participants (believable: $M = 280.41$, $SD = 262.80$; realistic: $M = 286.44$, $SD = 264.80$) perceived the situation as highly believable and realistic. Chinese participants (believable: $M = 147.27$, $SD = 174.68$; realistic: $M = 156.07$, $SD = 187.99$) perceived the situation as moderately believable and realistic (100 was used in the scale to indicate moderate believability and realism).¹³ U.S. participants perceived the situation as significantly more believable ($M = 5.98$, $SD = 1.63$) and realistic ($M = 6.03$, $SD = 1.61$) than did Chinese participants (believability: $M = 4.76$, $SD = 1.48$; realism: $M = 4.74$, $SD = 1.70$): believability, $F(1, 260) = 39.48$, $p < .001$, $\eta^2 = .13$; realism, $F(1, 259) = 39.03$, $p < .001$, $\eta^2 = .13$.

Need. A principal-components analysis was performed on the five-item need scale for the *first* applicant. One principal component had an eigenvalue greater than 1. However, the last item (i.e., “What is the level of the first applicant’s financial well-being?”) had a low loading (.207) on this component and was therefore deleted from the scale. Only one principal component with an eigenvalue greater than 1 was extracted from the remaining four items. This component accounted for 80% of the total variance. The loadings of the four items on the extracted component were .86, .91, .91, and .90, respectively. The reliability coefficient (Cronbach’s α) of the summed four items for the need scale was .92. This principal component score was used in the subsequent analyses for the first applicant. Because the same questions were asked for the second applicant, a principal-components analysis was performed on the five-item need scale for the *second*

applicant. One principal component had an eigenvalue greater than 1. However, the last item (i.e., “What is the level of the first applicant’s financial well-being?”) had a low loading (.263) on this component and was therefore deleted from the scale. Only one principal component with an eigenvalue greater than 1 was extracted from the remaining four items. This component accounted for 85% of the total variance. The loadings of the four items on the extracted component were .92, .93, .90, and .92, respectively. The reliability coefficient (Cronbach’s α) of the summed four items for the need scale was .94. This principal component score was used in the subsequent analyses for the second applicant.

Each participant in the study rated two applicants, one need-based and the other merit-based. The two applicants were presented to participants in two different orders: some participants read the applicant applying for a need-based scholarship first and the others read the applicant applying for the merit-based scholarship first. Therefore, some scores in the two need components derived above for the first and second applicants were ratings about the need of an academically accomplished applicant. To check the manipulation of need, only the need ratings for the high-need applicant were compared with the need ratings for the medium-need applicant.

The manipulation check for need was performed between the two levels of need. Results showed that the high-need applicant (U.S.: $M = 1.01$, $SD = .75$; China: $M = .56$, $SD = .67$) was perceived as having significantly higher need than the medium-need applicant (U.S.: $M = .34$, $SD = .62$; China: $M = .29$, $SD = .85$) for U.S. participants, $F(1, 142) = 33.62$, $p < .001$, partial $\eta^2 = .19$, and for Chinese participants, $F(1, 116) = 3.61$, $p < .03$ (one tailed), partial $\eta^2 = .03$. Therefore, the manipulation of need was successful for

participants from both cultures.

Performance. A principal-components analysis was performed on the four-item performance scale for the *first* applicant. One principal component had an eigenvalue greater than 1. This component accounted for 84% of the total variance. The loadings of the four items on the extracted component were .90, .92, .94, and .91, respectively. The reliability coefficient (Cronbach's α) of the sum of the four items for the performance scale was .94. This principal component score was used in the subsequent analyses for the first applicant. Because the same questions were asked for the second applicant, a principal-components analysis was performed on the four-item performance scale for the *second* applicant. One principal component had an eigenvalue greater than 1. This component accounted for 89% of the total variance. The loadings of the four items on the extracted component were .94, .94, .96, and .94, respectively. The reliability coefficient (Cronbach's α) of the sum of the four items for the need scale was .96. This principal component score was used in the subsequent analyses for the second applicant.

In the current study, each participant rated two applicants, one with high or low need and the other with high or low academic performance. The two applicants were presented to participants in two different orders: Some participants read the applicant requesting a need-based scholarship first and the others read the applicant requesting the merit-based scholarship first. Therefore, some scores in the two performance components derived above for the first and second applicants were ratings about the performance of an applicant with need. To check the manipulation of performance, only the performance ratings for the high-performance applicant were compared with the performance ratings for the medium-performance applicant.

The manipulation check for performance was conducted between the two levels of performance. Results showed that for U.S. participants, the high-performance applicant ($M = .85, SD = .94$) was perceived as having higher academic performance than the medium-performance applicant (U.S.: $M = .17, SD = .64$), $F(1, 133) = 23.98, p < .001$, partial $\eta^2 = .15$. However, for Chinese participants, no significant difference was found between the perception of high-performance ($M = .43, SD = .90$) and low-performance applicant ($M = .25, SD = 1.00$). Therefore, the manipulation of performance was successful for the U.S. participants but not for the Chinese participants.

Empathy. The empathy manipulation was checked in three different ways: (1) Ten questions asked the extent to which participants focused on the information in the package and on feelings of the applicants, (2) participants reported how much they had experienced each of the eight distress and four sadness feelings, and (3) participants indicated the extent to which they had experienced each of the six empathic feelings.

To assess the extent to which participants focused on the applicant's feelings versus information in the package, a difference score was created by subtracting the four reported information-focused scores (transformed) from the six reported feelings-focused scores (transformed). The high-empathy condition should have a higher score on this measure than does the low-empathy condition. U.S. participants reported a higher score on this difference measure in the high-empathy condition ($M = 10.09, SD = 9.72$) than in the low-empathy condition ($M = 5.70, SD = 9.59$), $F(1, 142) = 7.42, p < .004$ (one tailed), partial $\eta^2 = .05$. However, Chinese participants did not report significantly different scores between the low-empathy condition ($M = 10.53, SD = 8.09$) and the high-empathy condition ($M = 11.86, SD = 8.88$), $F(1, 116) = .73, p < .20$ (one tailed), partial $\eta^2 = .01$.

Therefore, the manipulation of empathy using the difference score was successful for only the U.S. participants.

A principal-components analysis was performed on the twelve distress and sadness emotions that participants had felt. Two principal components had an eigenvalue greater than 1. The first component had acceptable loadings ($\geq .59$) on all the twelve items and accounted for 46% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the sum of the twelve items was .89. The test of manipulation check using this measure showed that participants in the high-empathy condition (U.S.: $M = .18$, $SD = 1.01$; China: $M = .20$, $SD = 1.01$) reported a higher component score than those in the low-empathy condition (U.S.: $M = -.17$, $SD = .97$; China: $M = -.20$, $SD = .97$), for U.S. participants, $F(1, 142) = 4.70$, $p < .032$, partial $\eta^2 = .03$, and for Chinese participants, $F(1, 115) = 4.77$, $p < .031$, partial $\eta^2 = .04$. Therefore, the manipulation of empathy using this measure was successful for both cultures.

Finally, a principal-components analysis was performed on the six empathic emotions that participants felt. Only one principal component had an eigenvalue greater than 1. This component had acceptable loadings on the six items ($\geq .68$) and accounted for 60% of the total variance. This principal component score was used in the subsequent analyses. The reliability coefficient (Cronbach's α) of the sum of the twelve items was .86. U.S. participants reported a higher score on this measure in the high-empathy condition ($M = .04$, $SD = .96$) than in the low-empathy condition ($M = -.27$, $SD = 1.11$), $F(1, 142) = 3.22$, $p < .04$ (one tailed), partial $\eta^2 = .02$. No significant difference was found between the high- ($M = .26$, $SD = .83$) and low-empathy ($M = .01$, $SD = 1.01$)

conditions for Chinese participants, $F(1, 115) = 2.17, p < .07$ (one tailed), partial $\eta^2 = .02$. Therefore, the manipulation of empathy by this measure was successful for only the U.S. participants.

Trait empathy. A principal-components analysis was performed on the 35 items of trait empathy. More than one component with an eigenvalue greater than 1 was extracted (see Figure 12). The first principal component accounted for 23% of the total variance. The reliability coefficient (Cronbach's α) of the summed thirty-five items was .89. This principal component score, created by combining the 35 items based on their loadings, was used in the subsequent analyses.

Dependent Variables: Difference Score in Monetary Reward

Three questions measured the amounts of money participants were willing to distribute to the first and second applicants, respectively. In the first question, participants were told to divide \$1,000 between the two applicants; the second question asked participants to divide \$5,000 between the two applicants; and the third question instructed participants to indicate the amount of money they would give to the two applicants separately without having to divide a certain amount of money between them using \$1,000 as the yardstick for an applicant who has moderate need or moderate academic performance. If for a participant the total amount of money distributed was not equal to 1,000 for the first question or 5,000 for the second question, the two values for that question were counted as invalid and deleted from the final analyses. The dependent variable was created by subtracting the total amount of money participants gave to the merit-based scholarship applicant in the first and second questions from the total amount of money participants gave to the need-based scholarship applicant in these two

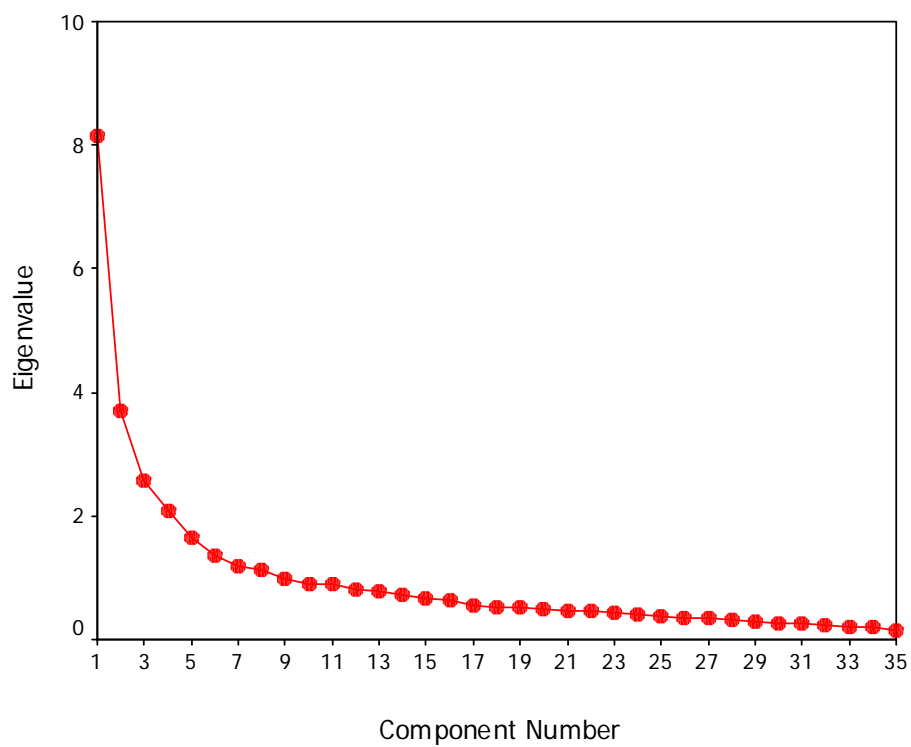


Figure 12. Scree plot for the principal components extracted from the 35 trait empathy items in Study 4.

questions. A higher value of this dependent variable indicated more money being distributed to the need-based applicant. Another difference score was also created by subtracting the amount of money (transformed) participants gave to the merit-based applicant from the amount (transformed) distributed to the need-based scholarship applicant for the third question. A higher value of this variable also indicated more money distributed to the need-based scholarship applicant. This second difference score provided a reliability check for the dependent variable. The correlation between the two difference scores is .76 ($p < .001$).

Predicting the Distribution of Scholarship Money

To assess the two hypotheses and the research question, an analysis of covariance (ANCOVA) was conducted, with empathy (high vs. low), culture (China vs. U.S.), and sex of participant (male vs. female), as the independent variables, with trait empathy as the covariate, and the difference score derived above as the dependent variable. Sex was entered as an independent variable to control for any effects it may have, by itself or in interactions with other independent variables, on the size of the bonus. Trait empathy was entered as a covariate to control for the main effect it may have on the dependent variable. Order (i.e., the applicant in need being the first or second applicant in the application package) was tested and did not have an effect on the dependent variable, and therefore was not included in the model. The ANCOVA model was statistically significant, $F(8, 232) = 2.78, p < .006, R^2 = .09, \text{adjusted } R^2 = .06$. The ANCOVA is referred to in the hypothesis tests that follow (see Appendix Q).

Empathy. Hypothesis 1 predicted that more money is distributed to the applicant with need and less money is distributed to the applicant with merit when empathy is aroused

than when empathy is not aroused. Because the dependent variable is a difference score derived from subtracting the amount given to the accomplished applicant from the amount given to the needy applicant, Hypothesis 1 is supported if a higher value of this variable is associated with a higher value of empathy (i.e., if there is a main effect of empathy on the dependent variable). The ANCOVA did not result in a significant effect of empathy, $F(1, 232) = .03, p < .86, \text{partial } \eta^2 = .01$. Therefore, Hypothesis 1 was not supported.

Empathy and culture. Hypothesis 2 predicted that the effect of empathy on the relationship between need and merit as predicted in Hypothesis 1 is greater for Chinese than for U.S. Americans. This hypothesis tested whether there is an interaction between empathy and culture on the dependent variable. The ANCOVA resulted in a significant interaction between culture and empathy, $F(1, 232) = 3.44, p < .03$ (one tailed), $\text{partial } \eta^2 = .02$ (see Figure 13). The difference between the amount given to the applicant applying for a need-based scholarship and the applicant requesting a merit-based scholarship was relatively the same for Chinese and U.S. participants when empathy was not aroused (i.e., they both gave more money to the need-based scholarship applicant; U.S.: $M = 1042.86, SD = 2456.97$; China: $M = 403.57, SD = 2461.78$). When empathy was aroused, the difference was greater for U.S. Americans than for Chinese, such that U.S. participants gave more to the need-based applicant, whereas Chinese participants gave less money to the need-based applicant (U.S.: $M = 1493.94, SD = 2016.69$; China: $M = 5.89, SD = 2111.35$). Therefore, the relationship proposed in the second hypothesis was significant but in an opposite direction than predicted; Hypothesis 2 was not supported.

The research question asked whether culture interacted with other variables to

influence the amount of money distributed. No significant interactions were found between culture and other variables.

Table 13 displays the means and standard deviations for the difference score in monetary reward by empathy and culture.

Discussion

Study 4 examined how empathy influenced the use of the need and equity distributive principles when the two principles were both salient in scholarship situation in a university. Empathy was expected to affect the amount of money distributed between need-based applicants and merit-based applicants such that when empathy is aroused, more money is distributed to applicants with need and less money is distributed to applicants with merit than when empathy is not aroused. This effect of empathy was expected to be greater for Chinese than for U.S. Americans. Study 4 is different from Studies 1 to 3 in that participants in Study 4 judged and compared two applicants and divided a certain amount of money between them instead of distributing money only to one person as in the previous studies. Therefore, Study 4 did not test the effect of empathy on the use of one particular distributive principle but rather tested the effect of empathy on the use of need and equity principles against each other.

In Study 4, participants were randomly assigned to read the need-based applicants first or the merit-based applicants first in order to test the effect of order on the results. Because order did not have an effect on the dependent variable, it was not included in the final reporting of the results. Moreover, four different combinations were created by crossing the two levels of need (high vs. medium) and the two levels of performance (high vs. medium) manipulated in application packages in Study 4. Participants'

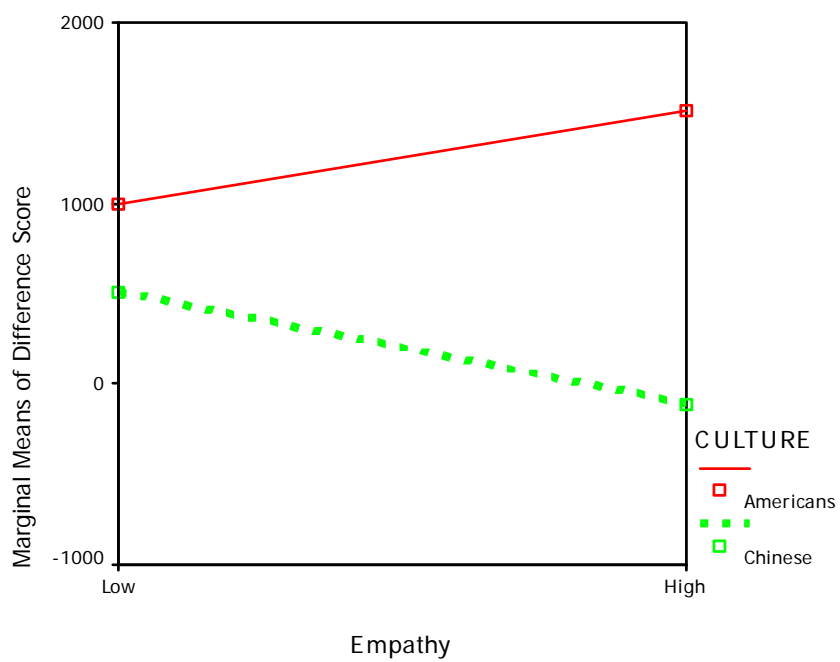


Figure 13. Difference score in monetary reward by empathy and culture in Study 4.

Table 13

Means and Standard Deviations for Difference Score in Monetary Reward by Empathy and Culture in Study 4 (N = 248)

US				China			
Low Empathy		High Empathy		Low Empathy		High Empathy	
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1042.86	2456.97	1493.94	2016.69	403.57	2461.78	5.89	2111.35

responses were analyzed across the four combinations to ensure that the explanation of results was not limited to a certain level of need or performance.

Results in Study 4 showed no significant effect of empathy on the distribution of money between the need-based applicant and the merit-based applicant. However, this effect of empathy was found to differ significantly between the two cultures. When empathy was not aroused, U.S. participants distributed more money (\$1,042.86) to the need-based applicant than to the merit-based applicant; when empathy was aroused, they distributed even more money (\$1,493.94) to the need-based applicant compared to the merit-based applicant. For Chinese participants, when empathy was not aroused, they also distributed more money (\$403.57) to the need-based applicant than to the merit-based applicant; when empathy was aroused, they distributed only \$5.89 more to the applicant applying for a need-based scholarship compared to the applicant applying for a merit-based scholarship, thus assigning less to the need-based applicant than in the low-empathy condition. This result was opposite to the prediction that Chinese are more affected by empathy such that greater amount of money is distributed to the need-based applicant when empathy is aroused than when it is not.

Chapter 6

Overall Discussion

This chapter consists of four parts. The first part provides a summary of this dissertation research. The second part summarizes and interprets the results and discusses the implications of the research. Limitations and future directions of the studies are included in the third part. The last part of the chapter explains the theoretical and methodological significance of the research and ends with a conclusion.

Summary of the Research

The research question addressed in this dissertation is the following: How does empathy influence the use of the distributive justice principles of need and equity, and how does culture affect this process? Empathy was proposed as a mechanism that explained the cultural differences in the use of distributive justice principles. Four studies were conducted to examine the role of empathy in explaining these cultural differences with the first two studies focusing on how empathy affected the equity principle, the third study on how empathy influenced the need principle, and the fourth study on how empathy affected the choice between equity and need.

The distribution situations used in the four studies can be categorized into three types: an equity-dominant situation in which equity is the most salient distributive principle such as the bonus distribution situation in a company used in Studies 1 and 2, a need-dominant situation in which need is the most salient distributive principle such as the assistance-fund distribution situation in a charity organization in Study 3, and a mixed-principle situation in which both equity and need are salient distributive principles such as the need- and merit-based scholarship distribution situation in a university used in

Study 4.

In all four studies, participants were asked to assume the role of a high-status person and make an evaluation and distribution decision. They were instructed to imagine themselves as the president of a company distributing a bonus to an employee (Studies 1 and 2), the president of a charity organization allocating assistance funds to an applicant (Study 3), or the chairperson of a scholarship committee assigning a scholarship based on a merit-based application and a need-based application (Study 4). An evaluation or application package was prepared separately from a questionnaire for each participant. The name of the person being evaluated was not identified in either the questionnaire or the package to eliminate the influence of a name. In the evaluation or application package, an ID number was used to represent the person being judged, who was referred to as *the employee* or *the applicant* in the questionnaire. The person under evaluation was described as of the same sex as the participant.

The four studies used similar procedures. Participants first read the introduction of the company, the charity organization, or the scholarship program before reading the evaluation or application package. Then participants responded to questions measuring the believability and realism of the situation and questions checking the manipulations in the package, such as the levels of competence or need. Participants were then randomly assigned to one of the two conditions of empathy by reading an instruction about how to distribute money. The high-empathy instruction asked participants to focus on the feelings of the person they judged and the low-empathy instruction asked them to focus only on the information in the package. This empathy induction was followed by the distribution questions and questions checking the empathy manipulation. Finally,

participants responded to questions from the trait empathy scale as well as demographic questions.

Data were collected from both China and the U.S. for each of the four studies. In total, participants were 1,022 undergraduate students from both countries ($N_1 = 179$; $N_2 = 246$; $N_3 = 335$; $N_4 = 262$). For Chinese participants, the questionnaires and packages were translated into Chinese and back-translated into English to ensure equivalence in meaning. The situations in the four studies were rated as moderately to highly believable and realistic by both Chinese and U.S. participants.

Results showed that empathy acted in line with the ethics of caring and benefited those who may otherwise be perceived as not deserving under the ethics of justice. Culture was found to be a significant moderator in this process. A summary and interpretation of the results is provided in the following section.

Summary and Interpretation of Results

Equity

In the equity-dominant company situation, greater competence demonstrated by an employee was used to indicate greater contribution made by the employee to the company, and therefore was expected to lead to larger bonuses distributed to the employee based on the equity principle. When empathy was aroused, however, the low-competence employee may not be judged as harshly and strictly as when empathy was not aroused. Therefore, empathy was expected to increase the bonus distributed to low-competence employees to a greater extent than the bonus to high-competence employees, resulting in a predicted two-way interaction between empathy and competence. This interaction between empathy and competence was expected to be

moderated by culture: When empathy was aroused, Chinese were expected to give a larger bonus than U.S. Americans to low-competence employees.

The effect of competence was supported in both Studies 1 and 2, showing that for both cultures larger bonuses were distributed to employees with greater competence. The large effect sizes (Study 1: partial $\eta_1^2 = .43$; Study 2: partial $\eta_2^2 = .70$, partial $\eta_3^2 = .80$, partial $\eta_4^2 = .77$) revealed strong effects of competence, indicating that competence was a primary predictor of bonus distribution in a company and that equity was the dominant principle used in the company situation in both cultures.

The effect of empathy was largely supported when the high-competence condition was contrasted with the low-competence-without-reason condition in Study 1 and with the low-competence with either a negative or positive condition in Study 2. The effect of empathy demonstrated that for both cultures, larger bonuses were distributed to employees with whom the distributor empathized than employees with whom the distributor did not empathize. Given the relatively weak manipulation of empathy, an instruction in the high-empathy condition asking participants to simply focus on the feelings of the employee, this result was surprising. A between-subjects design was used in Studies 1 and 2: Each participant only evaluated one employee and was asked to distribute bonuses on the criterion that a moderately competent employee would receive \$1,000. The empathy effect showed that when their feelings were aroused, participants gave bonuses to employees more than under the low-empathy condition. Therefore, empathy seems to be more congruent with the ethics of care than the ethics of justice in that it raised the size of bonuses above what was warranted by one's competence level.

The two-way interaction between competence and empathy was only significant

when the high-competence condition was contrasted with the low-competence-with-negative-reason condition. The interpretation of the two-way interaction needs to be modified in view of the three-way interaction between competence, empathy, and culture. A significant three-way interaction was found when the low-competence condition was accompanied with either a positive or negative reason, indicating that the two-way interaction was significant only in the Chinese but not the U.S. sample. Empathy did affect the use of the equity principle, but only for the Chinese participants. When the low competence of an employee was not explained, empathy did not help a low-competence employee. However, when the low competence was explained by either a positive or negative reason, empathy increased the amount of money distributed to the low-competence employee and decreased the amount of bonus money given to the high-competence employee by Chinese; whereas for U.S. Americans, empathy increased the amount of money to low- and high-competence employees to the same degree (see Figures 6 and 7).

The finding that empathy could benefit low-competence more than high-competence employees further confirmed that empathy acted in line with the ethics of care rather than the ethics of justice. The ethics of justice, emphasizing impartiality, emphasizes that individuals should be judged by their contributions or merits. On the contrary, the ethics of care, emphasizing particularity, cultivates individuals' ability to care for others regardless of their merit. If the amount of bonus distributed to low-competence employees under the low-empathy condition was the amount they deserved, the increase under the high-empathy condition may be regarded as unjust based on the ethics of justice, especially when this increase narrowed the bonus gap between low-competence

and high-competence employees.

The reason that empathy acted to the advantage of low-competence rather than high-competence employees may be that participants were more likely to feel negative rather than positive feelings when imagining how a low-competence person felt, which may have motivated them to try to alleviate the person of these negative feelings. It is also possible that participants were concerned that the effort of a low-competence employee was more likely to go unrewarded than that of a high-competence employee. Hoffman (2000) tried to link empathy with effort or competence. He argued that empathy may be directly related to effort-based justice because observers can readily empathize with negative feelings brought about by unrewarded effort, but empathy may only be indirectly related to competence because the empathy-effort link can extend to competence only when competence is perceived as requiring efforts. In Study 2, the low-competence employee may be perceived as having already made effort, which allowed empathy to work in his or her favor. This speculation can explain why in both Studies 1 and 2, when the low-competence condition was not accompanied by a reason, empathy did not act to the advantage of the low-competence employees. However, this speculation can not explain why empathy still benefited low-competence employees when a negative reason was offered. Specifically, in the evaluation package, the negative reason was: "The employee has, in general, a negative attitude toward work. His/her poor performance was mainly due to lack of motivation and effort." In contrast, the positive reason was the following: "The employee has, in general, a positive attitude toward work. His/her poor performance was mainly due to lack of training and skills." The employee was clearly described as lacking effort in the negative-reason condition. That empathy

still benefited the low-competence employee with a negative reason may be explained by a similar phenomenon in persuasion. Research on compliance gaining and persuasion has confirmed the phenomenon of mindless or automatic compliance, which suggests that people are more likely to comply with a request if a reason is also offered, even if the reason makes no sense (Cialdini, 2001; Langer, Blank, & Chanowitz, 1978). The mere presence of a reason may be sufficient for empathy to work in favor of the low-competence employee.

The significant moderating effect of culture was demonstrated by empathy's differential effects on the principle of equity in the two cultural groups: Empathy narrowed the bonus difference between low- and high-competence employees for the Chinese participants, but maintained the difference for U.S. Americans. Given the between-subjects design, it is surprising that empathy increased the size of the bonus for low- and high-competence employees to the same degree for U.S. Americans. In a merit-based society such as the U.S., the principle of equity, which requires that rewards distributed to a person be proportional to his or her contribution, may be too deep-rooted, especially in a competitive company situation, to allow disproportional bonuses to low- and high-competence employees. It is also surprising that empathy seems to equalize the amount of money given to the low- and high-competence employees for the Chinese by decreasing the amount of the bonus given to the high-competence employee and increasing the amount of the bonus given to the low-competence employee. The imagined positive emotions of the high-competence employee may have caused the Chinese participants to decrease the bonus because the employee was already in a positive mood and maybe some money could be spared to enhance the mood of the

low-competence employee.

Need

In the need-dominant charity situation, greater need demonstrated by an applicant was expected to lead to a greater amount of assistance money distributed to the applicant. When empathy was aroused, however, the low-need applicant may be judged as more deserving of the rewards than when empathy was not aroused. Therefore, empathy was expected to increase the amount of assistance money distributed to low-need applicants to a greater extent than the amount of money distributed to high-need applicants, resulting in a two-way interaction between empathy and need. This interaction between empathy and need was expected to be moderated by culture: When empathy was aroused, Chinese gave even more assistance money than U.S. Americans to low-need applicants.

The effect of need was supported in both the no-explanation and no-responsibility situations in Study 3, showing that for both cultures more money was distributed to applicants with greater need. The effect sizes (no-explanation: $\eta^2 = .22$; no-responsibility: $\eta^2 = .29$) revealed relatively strong effects of need, indicating that need was an important predictor in assistance-fund distribution in a charity organization and that need was the dominant principle used in the situation for both cultures.

The two-way interaction between need and empathy was not significant in either the no-explanation or the no-responsibility situation. A significant three-way interaction was found in the no-responsibility situation. Empathy influenced the use of the need principle but only for the Chinese participants. When the cause of the need was not explained, empathy did not act in favor of low-need applicants. However, when the cause of the need was explained as not due to the applicant, empathy increased the amount of money

given to low-need applicants to a greater extent than the amount of money distributed to medium- and high-need applicants for Chinese. For U.S. Americans, empathy did not much change the amount of money given to low-, medium-, and high-need applicants (see Figure 10). The finding that empathy benefited low-need more than high-need applicants showed that empathy was more congruent with the ethics of care rather than the ethics of justice. The ethics of care cultivates individuals' ability to care for others regardless of their merit and therefore may encourage help to any need, small or large. On the other hand, the ethics of justice, emphasizing merit, may facilitate the differentiation of need to ensure that those who really need help get it. Empathy, working in concert with the ethics of care, narrowed the money gap between the low- and high-need applicants by increasing money to the low-need applicant more than to the high-need applicant, which may be perceived as unjust based on the ethics of justice. And this effect of empathy was only observed in the Chinese sample.

Empathy acted to the advantage of low-need rather than high-need applicants perhaps because people, aroused by empathy, were concerned that low need was more likely to go unnoticed and unrewarded than high need. This concern was apparently only shared among Chinese as empathy tended to equalized the amount of money given to low- and high-need applicants for Chinese: Empathy increased the amount of money to the low-need applicant to a greater extent than to the moderate-need applicant although decreasing the amount of money to the high-need applicant. For U.S. Americans, empathy did not much change the amount of money distributed to each party, only slightly decreasing the amount of money to low- and moderate-need applicants although increasing to a small degree the amount of money to the high-need applicant. It seems

that the ethics of justice is so well-established in the U.S. that empathy could not change the use of the equity rule.

Equity and Need

In the mixed-principle scholarship situation, need-based applications were judged against merit-based applications, leading to the conflict between the need and equity principles. In this situation, the applicant with need may arouse more negative emotions than the applicant with merit when empathy was aroused. Therefore, empathy was expected to increase the amount of money given to the need-based applicant and decrease the amount of money given to the merit-based applicant when a fixed amount of money was divided between them. This effect of empathy was expected to be moderated by culture: When empathy was aroused, Chinese were expected to give more money than U.S. Americans to applicants with need.

Results from Study 4 did not confirm these predictions. When empathy was aroused, the American participants gave more money to applicants with need and less money to applicants with merit than when empathy was not aroused. This effect was in an opposite direction for the Chinese participants. When empathy was aroused, the Chinese participants gave more money to merit-based applicants and less money to need-based applicants than when empathy was not aroused, resulting in almost an equal amount of money given to each of the two types of applicants (see Figure 11). Like the effect of empathy on the need and equity principles for Chinese in Studies 2 and 3, empathy in Study 4 seems to again equalize the amounts of money distributed to need-based applicants and merit-based applicants for the Chinese.

The reason that the Chinese empathized more with those with merit than those with

need may be that Chinese found the need situations less believable than the merit situations. Preliminary analyses of some subjective responses showed that Chinese participants were suspicious of the need situations. The two need situations, especially the moderate-need situation describing a middle-class student who couldn't pay tuition because of ineligibility for federal financial aid programs and unsupportive parents, were created more in line with situations in the U.S. rather than in China. This explained why Chinese participants found the situations only moderately believable and realistic, whereas U.S. participants found the situations highly believable and realistic. However, because participants were not asked to rate the merit situations separately from the need situations, there is no way of knowing whether Chinese regarded the merit situations more believable and realistic than the need situations. It is also possible that the findings do reflect how people in different cultures are treated when empathy is aroused: U.S. Americans switched their attention from those with merit to those with need, while Chinese did the opposite.

Limitations and Future Directions

Study 4 did not result in the predicted effect of empathy for Chinese. In Study 4, participants were given two people to judge and they divided a certain amount of money between them as opposed to the previous studies (Studies 1, 2, and 3) in which participants judged only one person. The process of empathizing with both applicants may be difficult for participants. Future research may need to investigate the mixed-principle situation using a between-subjects design and further test the effect of empathy in this situation.

Empathy was manipulated by asking participants to either focus on the information

in the packages or focus on the feelings of the persons they judged. The manipulation check for empathy was more successful for Americans than for Chinese. Perhaps the Chinese were influenced by the feelings of the people they judged even when they were told to only focus on the packet information. Overall, Chinese reported higher level of trait empathy than U.S. Americans. One of the manipulation checks on empathy across all four studies was a difference score created by subtracting reported information-focused scores (transformed) from reported feelings-focused scores (transformed). For all four studies, when the influences of all other variables (i.e., manipulated competence or need, manipulated empathy, and sex) were controlled, culture still had a significant effect on the difference score such that Chinese reported that they focused more on feelings rather than information as compared to U.S. Americans (Study 1: $F[1, 162] = 37.21, p < .001$, partial $\eta^2 = .19$; Study 2: $F[1, 210] = 48.90, p < .001$, partial $\eta^2 = .19$; Study 3: $F[1, 304] = 6.76, p < .01$, partial $\eta^2 = .02$; Study 4: $F[1, 253] = 10.91, p < .001$, partial $\eta^2 = .04$). For each of the four studies, the degree of focusing on feelings rather than information for Chinese in the low-empathy condition was even higher than that for Americans in the high-empathy condition (Study 1: U.S. high empathy, $M = -1.04, SD = 1.59$; China low empathy, $M = .12, SD = 1.74$; Study 2: U.S. high empathy, $M = 1.85, SD = 11.03$; China low empathy, $M = 5.26, SD = 9.04$; Study 3: U.S. high empathy, $M = 7.70, SD = 9.52$; China low empathy, $M = 8.77, SD = 7.86$; Study 4: U.S. high empathy, $M = 10.09, SD = 9.72$; China low empathy, $M = 10.53, SD = 8.09$). Moreover, in Studies 1, 2, and 4, the Chinese participants had significantly higher trait empathy than U.S. Americans. These effects indicated that the Chinese participants generally had a high trait empathy level and, compared to U.S. Americans, maintained a

relatively high level of empathy even when asked not to empathize. This trend raised the question whether the use of empathy in the Chinese society is a norm compared with the U.S. society. People in the merit-based U.S. society may choose to restrict the influence of emotions in their moral judgment, whereas people in the Chinese society with an affect-based moral tradition may allow emotions to influence their moral judgment. Future research needs to confirm the cultural differences in empathy and examine the extent to which emotions are allowed to influence moral judgment across different situations and cultures.

The manipulation of empathy in the studies was made by instructing participants to read the evaluation or self-description of the person they judged while trying to focus on his or her feelings. This empathy induction was relatively weak because the empathized person was not described as a family member or a close friend, not even someone participants had seen or interacted with before. If relational closeness had been used in the induction, empathy would have been stronger due to empathy's familiarity bias, which refers to individuals being more likely to empathize with those they are familiar with than those they are not familiar with (Hoffman, 2000). The empathy manipulation used in the current study is also less strong than putting participants in a situation in which they interact in some way with the persons they will judge because then empathy may be vulnerable to a here-and-now bias, which suggests that people may be more likely to empathize with those who are present in the immediate situation than with those who are absent (Hoffman, 2000). Therefore, the effect of empathy may be more prominent if empathy is manipulated in face-to-face interactions. Future studies need to look into the possibilities of using other ways to manipulate empathy beyond simply

using instructions in questionnaires.

The current studies focused on the effect of empathy on distributive justice principles and cultural influences in this process. There are other factors that may also influence this process such as relationship between the distributor and the beneficiary. Leung and Bond (1984) argued that equality was not always the choice in collectivistic cultures, in fact, the relational closeness between distributors and recipients affected the distribution principle that would be preferred. They used collectivism as the explanatory variable to show that people from China used the equity principle with out-group members whereas with in-group members they used a generosity rule, relying on the equity principle when their own input was low and the equality principle when their own input was high. Moreover, because this distinction between in-group and out-group members was greater in some East Asian countries such as China, Korea, and Japan than in some Western countries such as the U.S., the relationship between distributors and recipients may influence, by itself or in interactions with culture, the distributive decisions. Relational closeness may also influence empathy because aside from the here-and-now bias, empathy also has a familiarity bias in which individuals are more likely to empathize with those they are familiar with than those they are not familiar with (Hoffman, 2000). Hoffman (2000) pointed out three types of familiarity bias: in-group bias, friendship bias, and similarity bias, arguing that people are likely to empathize with their in-group members, friends, and those who are similar to them. Therefore, given cultural differences in empathy, the relational closeness between the distributor and the beneficiary may interact with empathy and culture in affecting the distributive decisions. The current research only examined distribution situations when relationship between

distributors and recipients was not close. Future research needs to investigate the possible complex interactions between relational closeness, empathy, and culture and their effects on the distribution decisions.

In all the four studies, U.S. participants received a small amount of extra course credit for their participation. These U.S. participants came from communication classes in a research pool at a large public east coast university. They could choose to participate in other studies to earn extra course credits or not to participate in studies for the research pool. However, Chinese participants volunteered to participate either as an in-class or outside-class activity without receiving any incentives. The differential recruitment methods for Chinese and U.S. participants raised the question of comparability between results from the two cultural groups. The effects of incentives have been a topic for debate for researchers for a long time (e.g., Boring, 1929; Schultz, 1969; van Dijk, Sonnemans, & van Winden, 1998). Tomporowski, Simpson, and Hager (1993) assessed three methods of recruiting participants for laboratory cognitive tests of attention and memory in a series of studies. In their studies, students who received either monetary or course-credit incentives were compared with students whose participation was a course requirement. Results showed that monetary incentives led to slight, but significant, improvements in test performance, whereas students with course-credit incentives did not perform better than students whose participation was a course requirement. Tomporowski, Simpson, and Hager's (1993) research echoed some of the research findings that monetary incentives led to recruiting participants with different personality attributes (Burns, 1974) and participation characteristics (Maughan & Higbee, 1981). Thus, it seems that course-credit incentives, different from monetary incentives, did not provide a

different level of motivation from the no-incentive method. However, because little evidence exists on the effects of incentives in cross-cultural research, future research comparing cultural differences should aim to use consistent participant recruitment methods across cultural groups.

In all four studies, convenience student samples were used. Using college students as participants raises issues of generalizability, which is particularly true in these studies, because students were asked to imagine themselves in situations in which they assumed the roles of the president or chairperson of a company, a charity organization, or a scholarship program in a university. They were asked to make distribution decisions in these situations. However, students rarely take these roles and therefore may not experience the same kind and degree of concern that actual presidents and chairpersons experience when they are making distributive decisions. Another issue is that the students in this research were reporting how much money they would like to distribute on paper if they were in the imagined situation. They were not really distributing money to others. Thus, students may not have taken the task seriously. Therefore, future research should replicate these studies in other populations such as in samples using actual decision makers or in laboratory experiments in which students make real distribution decisions which have consequences for others.

One advantage of using student samples is that students generally are in the same age group so that any differences that may be due to age can be controlled for. In three of the four studies (studies 1, 3, and 4), Chinese and U.S. participants were in the same age group (with an age difference less than 2 years). But, in study 2, the age difference between Chinese and U.S. participants was around 4 years. Therefore, an alternative

analysis was performed for each of the three ANCOVAs in study 2: Age was entered as an additional covariate to test the possible effects it may have on hypothesized relationships. Results showed that age was not a significant predictor, nor did it alter any of the significant or non-significant results of the original analyses.

In all four studies, the American sample included a small percentage of participants who identified themselves as Asian Americans (Study 1: 15%; Study 2: 15%; Study 3: 17%; Study 4: 15%). It is possible that these Asian American participants may act more like Chinese than U.S. Americans. Two alternative analyses were performed for each of the four studies: one in which data from all Asian American participants were deleted; the other in which data from all Asian American participants were counted as from the Chinese sample. When these data were deleted, most results remained the same except that the effect of empathy became insignificant in the third ANCOVA in Study 2 and in Study 3 as well, and that the two-way interaction between culture and empathy became marginally significant in Study 4. When these data were regarded as from the Chinese sample, most results remained the same except that the two-way interaction between culture and empathy became insignificant in Study 4. In conclusion, the small percentage of Asian Americans did not significantly affect the results because the most important results, the three-way interactions between competence (need), empathy and culture remained significant in both Studies 2 and 3.

Theoretical and Methodological Significance of the Research

Methodological Contributions

The current dissertation research developed scenarios that are very similar to actual decision making situations. Instead of reading a paragraph describing a person's

competence or need level, participants judged the person's competence or need level for themselves by reading an evaluation or application package that was made as similar to forms from the workplace as possible. This procedure allowed participants to imagine themselves as the high-status person who was about to make an important decision. Although face-to-face evaluations in an interview were not used in this research, the evaluation-form format allowed for experimental controls so that the crucial variables were isolated for the study. Moreover, evaluation based on forms rather than face-to-face interactions is prevalent in organizations.

The current research used a series of studies to test its hypotheses. To ensure comparability, these studies were made as similar as possible: For the questionnaire, the same order of types of questions was used in each study, the same scales were used for the same variables, and the same manipulation of empathy was used; for the evaluation or application package, great care was taken to make it look realistic such as by including a cover page and a signature page. This arrangement ensured consistency between studies and allowed for comparison between them.

Theoretical Contributions

Contribution to cross-cultural research. Gudykunst (2002; Gudykunst & Lee, 2002) argued that cross-cultural studies of communication should be theory based and that doing atheoretical research was unwarranted given the state of theorizing in the field. In building cross-cultural theories, finding cultural differences in specific aspects of behavior should only be regarded as the first step. We cannot stop at this stage if building cross-cultural theories is the goal. It is important to ask what it is about culture that leads to these behavioral differences. The discovery of the underlying mechanisms that can

explain the cultural differences found in specific behaviors should be the goal in doing theory-based cross-cultural research.

The current research makes a contribution to cross-cultural theory building in two aspects. First, the research connects two cross-cultural research findings: Cultural differences have been found in research on caring versus justice dilemmas and also in research on the use of distributive justice principles.

The ethics of caring and justice are both important human motives. In a caring versus justice dilemma, the ethics of caring, emphasizing particularity, cultivates individuals' ability to care for others regardless of their merit, whereas the ethics of justice, emphasizing universality, emphasizes judgments based on individuals' merit. The ethics of caring and justice may conflict in a distribution situation where the care for others contradicts the desire to distribute resources based on merit. The use of the distributive justice principles of equity and need has not been examined before in terms of the caring versus justice framework. The principles of equity and need require that a greater amount of resources be given to those who make a greater contribution or have a greater need. However, if enough care is directed toward those who make a lesser contribution or have a lesser need, the ethics of care may lead to more resources being distributed to them than is justified by the ethics of justice. Moreover, when a distribution situation involves comparing those with merit and those with need, the ethics of care may be more congruent with the need rather than the equity principle. Given the connection between the two areas, it is not surprising that differences between some Asian cultures and the U.S. culture have been found both in the choice between the ethics of care and of justice (e.g., Dien, 1982; Ma, 1997; Miller, 1994; Miller & Bersoff, 1992; Miller, Bersoff, &

Harwood, 1990; Miller & Luthar, 1989; Ohbuchi, Fukushima, & Tedeschi, 1999) and in the choice between the distributive justice principles (e.g., Leung 1988, 1997). Therefore, it is important to look into the process that contributes to these cultural differences, and this dissertation did so.

The current research also makes a contribution to cross-cultural theory building by providing a different underlying mechanism to explain cultural differences from the cultural dimension of individualism-collectivism (Hofstede, 2001; Triandis, 1994). The problems associated with individualism-collectivism and self construal (Fiske, 2002; Levin et al., 2003; Mastumoto, 1999; Oyserman, Coon, & Kemmelmeier, 2002; Park & Levine, 1999) may be partly due to the fact that they have been overused in cross-cultural and intercultural research. Although individualism-collectivism and self construal were useful in explaining some cultural differences, the scope of phenomena they were used to explain may be too broad to allow sufficient precision and insight into specific cultural differences found in diverse fields. Therefore, it is important to find other moderators and mediators which are closely related to specific behaviours to help explain the observed cultural differences.

The current research proposes empathy as a possible explanation for cultural differences in the conflict between care and justice as reflected in the use of the need and equity distributive principles: People in some Asian cultures have been found to prefer the ethics of care over the ethics of justice as compared to people in the U.S. (Miller, 1994; Miller & Bersoff, 1992; Miller, Bersoff, & Harwood, 1990; Miller & Luthar, 1989; Ohbuchi, Fukushima, & Tedeschi, 1999; Simpson, 1974). Empathy was chosen in this research as a possible mechanism to explain cultural differences in justice because

empathy has been found to influence justice and to differ across cultures: Empathy has been found to facilitate caring at the cost of principles of justice (Batson, Klein, Highberger, & Shaw, 1995) and people in some Asian cultures have been found to have greater empathic reactions than people in some western cultures (Enz, Zoll, & Xu, 2006; Kobayashi & Trommsdorff, 1993; Trommsdorff, 1995). The high level of empathy may have made it more likely for people in the Asian cultures to choose the ethics of caring than the ethics of justice.

Contribution to the relationship between empathy and justice. The theoretical relationship between empathy and justice has long been speculated on by researchers (e.g., Hoffman, 2000; Rawls, 1971). In his influential theory of justice, Rawls (1971) argued against the importance of empathy for distributive justice. Rawlsian justice is “a merit-based justice constrained by ‘need’” (Hoffman, 2000, p. 231). Rawls advocates the distribution of goods and services based on merit, which is supposed to increase goods and services for all, especially “the least advantaged members of society” (Rawls, 1971, p. 15). Although merit-based distribution can stimulate productivity, merit itself does not justify unequal distribution because merit-based advantages may be due to heredity or class and therefore be undeserved. Rawlsian justice allows for merit-based inequalities only when they function to the greatest benefit of the least disadvantaged members in society. Rawls discarded the role of empathy because his tools of analysis, the “original position of equality” and the “veil of ignorance,” seemed to have made empathy unnecessary. In Rawls’s hypothetical original position of equality, participants, being rational and self-interested, are asked to choose justice principles to advance their own interests and attain the highest gain for themselves under the constraints that they do not

know their position in the society they are constructing, such as their race, gender, class, social status, religion, assets, or abilities. Rawls assumes that rational and self-interested people, understanding the possibility of occupying any position in the new society, will protect their welfare by choosing the justice principles that rule out extremely miserable and uncomfortable life conditions. By relying on the guiding principles of rationality and self-interest, Rawls rejects the role of empathy.

Hoffman (2000) disagreed with Rawls in terms of the role of empathy for distributive justice. He questioned whether people with merit-based advantages, being aware of their positions in life without the constraint of the veil of ignorance, would abide by Rawls's justice principles, which were designed to benefit the least advantaged in society.

Hoffman (2000) argued that Rawls's abstract idea could not prevent people with merit-based advantages from acting out of self-interest and ignoring the needs of the least advantaged. He believed that empathy could be a motive powerful enough to operate against self-interest and benefit those vulnerable. Empathy has been found to benefit victims including those least advantaged in society according to Rawls's definition (Hoffman, 2000). More specifically, Hoffman (2000) speculated about how empathy would influence distributive justice: "Empathy thus seems congruent with justice principles – directly congruent with need, and to some extent effort, and circuitously with productivity and competence" (Hoffman, 2000, p. 230). Empathy's contribution to need can be demonstrated by people's empathic reactions to those who need basic necessities of life; empathy may be related to effort-based justice because observers can readily empathize with negative feelings brought about by unrewarded effort; but empathy may be indirectly associated to productivity or competence because the empathy-effort link

can extend to productivity and competence when they are perceived as requiring efforts (Hoffman, 2000).

However, Hoffman did not speculate how empathy influences the distributive principle of need when people empathize with those in greater versus lesser need, nor did he theorize how empathy affects the principle of equity when those with greater versus lesser merit are empathized with. Moreover, Hoffman's theorizing about the relation between empathy and distributive justice remained speculative and has not been subject to empirical tests. Therefore, the current dissertation research makes a contribution by providing an empirical test of the supposed relation between empathy and distributive justice. Results of the current research showed that empathy rewarded those with low-competence, whether this level of competence was explained with either a negative or positive reason, more than those with high-competence (Study 2). Perhaps, as Hoffman predicted, empathy can be linked to unrewarded effort; thus, people are concerned that the effort of a person described as having low-competence is more likely to go unrewarded than that of a high-competence person. For the principle of need, results showed that empathy rewarded those with low need more than those with high need (Study 3), perhaps because participants were concerned that low need was more likely to go unnoticed and unrewarded than high need. However, the effects of empathy on the principles of equity and need were only found for Chinese and not for U.S. Americans. Thus, Hoffman's theorizing has neglected the influence of culture on the relation between empathy and justice.

Hoffman (2000) also theorized that empathy would be more congruent with need than with productivity or competence. Empathy was found to be correlated positively

with a preference for need-based justice and negatively with a preference for productivity-based justice (Montada, Schmitt, & Dalbert, 1986). Hoffman also found that high-empathy people preferred need-based justice because they believed productivity-based distribution harmed the disadvantaged (Hoffman, 2000). The current dissertation research found that empathizing participants chose to reward a student with need more than a student with merit but only in the U.S. sample. For Chinese, empathy led to a preference of equity over need principles (Study 4). Again, the dissertation research indicates the importance of cultural influences on the relationship between empathy and distributive justice.

In two experiments conducted by Batson, Klein, Highberger, and Shaw (1995), participants were asked to make allocation decisions that affected the welfare of others. They found that a person for whom empathy was felt received preferential treatment and was put above the interests of those equally deserving or even more deserving of the preferential treatment. They concluded that empathy-induced partiality could lead one to act in a way that violates the moral principle of justice. That study seemed to have confirmed that empathy could increase sensitivity to and therefore benefit those with lesser need. Batson et al (1995) claimed:

Apparently, empathy did not lead participants to adopt a general principle of justice based on need, as Hoffman (1989) predicted; Rather than producing a general sensitivity to the needs of all, empathy increased sensitivity to the need of the individual who was the target of empathy. (p. 1050)

However, the authors did not show what would happen if empathy also was targeted at those in greater need. Specifically, they failed to demonstrate the extent to which

empathy would benefit those with greater and lesser need. The current dissertation research has shown that empathy influenced the general distributive justice of need in that it benefited those in lesser need to a larger degree than those in greater need but only for Chinese; for Americans, empathy benefited those in greater and lesser need to the same degree.

In summary, the current research has made a contribution to the relation between empathy and justice, specifically distributive justice. It provides a broader theoretical framework for examining how empathy affects the general distributive principles of need and equity individually and when these principles come into conflict; it also tested a proposed theoretical framework. More importantly, the current research indicates the importance of examining the role of culture in the relationship between empathy and justice because results from the research clearly demonstrated cultural differences in this regard, which were largely ignored in the theorizing and testing by previous researchers.

Contribution to the relationship between culture and justice. Justice is “the first virtue of social institutions, as truth is of systems of thought” (Rawls, 1971, p. 3). The concept of justice has been under intense theoretical and empirical investigation by researchers across a variety of fields. However, the theories of justice have been largely developed and tested in Western contexts. As globalization increases and social institutions and organizations strive to operate in a global arena, culture-bound research regarding a concept as important as justice could limit both the validity and utility of justice research. The important moral value of justice, regarded as the social glue that makes society possible, has been shown to differ across cultures. The current research makes a contribution by providing some explanation for the cultural differences in the

use of justice principles.

Understanding the causes of cultural differences in important moral values is the first step toward a resolution of the conflicts that may result from these differences.

Rationality is a distinct characteristic of Western civilization. The painstaking efforts by moral rationalists such as Kant and Rawls to exclude emotions from their moral and justice frameworks reflect this emphasis on rationality and reason as the guiding principles of moral judgment. The largely merit-based U.S. society has been strongly influenced by this tradition. On the other hand, rationality has never been a distinct feature of the Chinese philosophical tradition. Confucian moral philosophy placed compassion at the heart of benevolence (Mencius, 320 BCE/1970). The current research showed that empathy has a great influence on Chinese moral judgment: People who are judged as less deserving in a strict sense of justice benefit more, relative to those who are more deserving, when empathy is aroused. It is no less surprising that empathy has no effect on the differentiated distribution pattern prevalent in the merit-based U.S. society. It is true that an American may be shocked at a Chinese distributor's "injustice" in rewarding those who do not really deserve the rewards, whereas a Chinese may be alarmed at an American distributor's "lack of consideration" for those who have needs. They don't have to agree, but at least they should know where each viewpoint comes from.

Footnotes

¹For the measure of bonus, Chinese participants were asked to indicate the amount of bonus they would give to the employee using 1,000 *yuan* (the Chinese currency) as the yardstick for a moderately competent employee. One question in study 1 tested whether Chinese and U.S. participants would regard the amount of 1,000 in their own currency to be the moderate amount of bonus in a company. The question asked participants to estimate the range (give a low-end and a high-end number) of a typical year-end bonus for an employee (such as someone they had read in the package) within a company. The data were untrimmed and untransformed. Results showed that the U.S. participants' estimates (median: from \$750 to \$2,000; mean: from \$4,385.21 to \$24,514.63) were similar to the Chinese participants' estimates (median: 1,000 *yuan* to 5,000 *yuan*; mean: 4,602.38 *yuan* to 13,595.24 *yuan*) especially for the low-end numbers. An ANOVA with culture as the independent variable and the low-end numbers as the dependent variable showed a non-significant effect of culture, $F(1, 176) = .01, p < .94, \eta^2 = .01$, indicating that Chinese and U.S. American participants estimated in their respective currencies relatively the same low-end amount of money for a typical year-end bonus. Thus, even though different currencies were used, the numbers seem to be on a same scale and can be compared.

²The raw data were trimmed to exclude the influence of outliers. The trimmed data were exponentiated to a power for each variable in Study 1. The items for the manipulation check of believability, realism, competence, and empathy, and for the trait empathy scale, were all trimmed to a top number of 1,000; the dependent variable, the bonus item, was trimmed to 5,000. The two items for believability and realism and the

three items for competence were raised to the 0.34 power; the two items for the empathy manipulation check were raised to the 0.30 power; the thirty-five items of the trait empathy scale were raised to the 0.32 power; and the bonus item was raised to the 0.35 power, respectively.

³Trimmed data without transformation were used to calculate the means and standard deviations for believability and realism reported here. Transformed data were used in the statistical tests related to believability and realism and in calculating the means and standard deviations displayed in Tables 1 and 2.

⁴All the scales used in the four studies in this dissertation were subject to the data reduction method of the principal-components analysis. For a specific scale, the first component was extracted to represent the scale items. In most cases, the first component was the only component with an eigenvalue greater than 1. This principal-component score, a product of combining the scale items based on their loadings on this component, was used in subsequent analyses.

⁵The raw data were trimmed to exclude the influence of outliers. The trimmed data were exponentiated to a power for each variable in Study 2. The items for the manipulation check of competence, explanation, and empathy (including the emotions), and for the trait empathy scale, were all trimmed to a maximum of 1,000; the dependent variable, the bonus item, was trimmed to 3,000. The two items for believability and realism, the four items for competence, and the two items for explanation were all raised to the 0.34 power; the items for the empathy manipulation check (including the emotions) were raised to the 0.33 power; the thirty-five items of the trait empathy scale were raised to the 0.31 power; and the bonus item was raised to the 0.43 power, respectively.

⁶Trimmed data without transformation were used to calculate the means and standard deviations for believability and realism reported here. Transformed data were used in the statistical tests related to believability and realism and in calculating the means and standard deviations displayed in Tables 4 and 5.

⁷The difference score was calculated by the formula (the variables were all transformed): $(\text{feeling1} + \text{feeling2} + \text{feeling3} + \text{feeling4} + \text{feeling5} + \text{feeling6}) - (\text{info1} + \text{info2} + \text{info3} + \text{info4})$.

⁸The raw data were trimmed to exclude the influence of outliers. The trimmed data were exponentiated to a power for each variable in Study 3. The items for the manipulation check of believability, realism, need, and empathy (including the emotions), and for the trait empathy scale, were all trimmed to a maximum of 1,000; the dependent variable, the assistance money item, was trimmed to 5,000. The two items for believability and realism, and the eight items for need were raised to the 0.32 power; the items for the empathy manipulation check were raised to the 0.33 power; the emotion items were raised to the 0.35 power; the thirty-five items of the trait empathy scale were raised to the 0.35 power; and the assistance money item was raised to the 0.43 power, respectively.

⁹Trimmed data without transformation were used to calculate the means and standard deviations for believability and realism reported here. Transformed data were used in the statistical tests related to believability and realism and in calculating the means and standard deviations displayed in Tables 7 and 8.

¹⁰Regression analyses were used here because the analyses of covariance would not produce the appropriate interactions between the linear effect of need and other

independent variables.

¹¹To obtain the linear effect of need and its interactions with the other independent variables, need, with three levels, was coded as one variable with coding of -.404 (low), 0 (medium), and .380 (high) representing the linear effect. Empathy was coded as -.354 (low) and .348 (high); culture was coded as -.354 (U.S. Americans) and .470 (Chinese); and sex was coded as -.354 (male) and .172 (female), respectively. Variables representing all linear two-way and three-way interactions between these independent variables were created as products using these codes.

¹²The raw data were trimmed to exclude the influence of outliers. The trimmed data were exponentiated to a power for each variable in Study 4. The items for the manipulation check of believability, realism, need, performance, and empathy were trimmed to a maximum of 1,000; the emotion items and the items for the trait empathy scale were trimmed to a maximum of 500. The two items for believability and realism, the five items for need, and the four items for performance were raised to the 0.33 power; the items for the empathy manipulation check were raised to the 0.35 power; the emotion items were raised to the 0.01 power; and the thirty-five items of the trait empathy scale were raised to the 0.44 power, respectively.

¹³Trimmed data without transformation were used to calculate the means and standard deviations for believability and realism reported here. Transformed data were used in the statistical tests related to believability and realism and in calculating the means and standard deviations.

Appendix A

EMPLOYEE PERFORMANCE REVIEW

[In different versions, employee competence will be manipulated as follows: a *highly* competent employee will be indicated by checking "outstanding" in every category, and a *low*-competence employee will be indicated by checking "below expectations" in every category.]

Employee ID number: 025

Direct Supervisor: Terry Hoffman

Period Covering: 01/01/2006-12/31/2006

Date of Review: 12/15/2006

OVERALL RATING SCALE:

Outstanding Exemplary performance in all areas of the job.
Meets Expectations Good performance. Consistently meets standards and established performance expectations in important areas of the job.
Below Expectations Performance falls below expectations in many areas of the job. Substantial improvement critical.

1. CUSTOMER SERVICE

Definition of "Meets Expectations": Understanding the needs of internal and external customers; making special effort to be responsive in meeting their needs and in building customer satisfaction.

Outstanding		Meets Expectations		Below Expectations
X				

2. COOPERATION AND TEAMWORK

Definition of "Meets Expectations": Putting the group's success ahead of personal goals; sharing information and resources with others; giving timely response to requests made by others; promoting teamwork; exhibiting positive attitudes during times of change; taking on new tasks with enthusiasm and energy.

Outstanding		Meets Expectations		Below Expectations
X				

3. COMMUNICATION SKILLS

Definition of "Meets Expectations": Speaking clearly, concisely, and using words easily understood; exchanging ideas with others; listening to understand meaning or oral material; writing reports, memos, letters, etc.; using appropriate style, format, spelling, and grammar; writing in a clear, concise and appropriate manner.

Outstanding		Meets Expectations		Below Expectations
X				

4. ATTENDANCE AND PUNCTUALITY

Definition of "Meets Expectations": Coming to work regularly without excessive absences; maintaining assigned work schedules.

Outstanding		Meets Expectations		Below Expectations
X				

5. QUALITY OF WORK

Definition of "Meets Expectations": Completing work thoroughly, accurately, neatly, and according to specifications; producing output with minimal errors.

Outstanding		Meets Expectations		Below Expectations
X				

6. QUANTITY OF WORK

Definition of "Meets Expectations": Consistently producing a high volume of acceptable work; producing services or output quickly and efficiently.

Outstanding		Meets Expectations		Below Expectations
X				

7. JOB KNOWLEDGE

Definition of "Meets Expectations": Understanding job procedures, policies, and responsibilities; keeping up-to-date technically; acting as a resource person on whom others rely for assistance.

Outstanding		Meets Expectations		Below Expectations
X				

8. CREATIVITY AND INITIATIVE

Definition of "Meets Expectations": Contributing creative ideas to projects in teamwork; assuming greater responsibility; monitoring projects independently.

Outstanding		Meets Expectations		Below Expectations
X				

9. RESPONSIBILITY AND DEPENDABILITY

Definition of "Meets Expectations": Following through projects; adhering to time frames; responding appropriately to instructions and procedures.

Outstanding		Meets Expectations		Below Expectations
X				

10. ADAPTABILITY AND JUDGMENT

Definition of "Meets Expectations": Adjusting to any change in duties quickly; accepting new ideas and approaches to work; responding appropriately to constructive criticism and suggestions; thinking logically; analyzing problems effectively; exhibiting timely and decisive action.

Outstanding		Meets Expectations		Below Expectations
X				

11. OVERALL RATING

The supervisor must assign an overall rating to the employee's cumulative performance throughout the review cycle. The determination of the overall rating shall be consistent with the rating scale below.

Outstanding	<u>Exemplary performance</u> in all areas of the job.
Meets Expectations	<u>Good performance.</u> Consistently meets standards and established performance expectations in important areas of the job.
Below Expectations	Performance falls <u>below expectations in many areas</u> of the job. Substantial improvement critical.

Outstanding		Meets Expectations		Below Expectations
X				

Employee Training Requirement Form

1. Employee ID number _____ 025 _____
2. Direct Supervisor _____ Terry Hoffman _____
3. Period Covering: _____ 01/01/2006-12/31/2006 _____
4. Have you participated in all the required training during this period?
Yes No
5. Do you estimate your additional voluntary training hours equal or exceed 20 hours?
Yes No

SIGNATURES

Employee _____ Date _____

Supervisor _____ Date _____

CONFIDENTIAL

Request for Leave of Absence Without Pay (LWOP)

Date: _____ 12/15/2006 _____

Employee ID number _____ 025 _____

Specify Reason for Leave Without Pay (Illness, Study, Personal Reason, or Other Reason)I did not request leave without pay during this year.**Beginning and Ending Dates of LWOP:** _____ N/A _____**Employee Signature:** _____**Recommendation of Supervisor:**Approved Disapproved

Date: _____ Signature: _____

Action of Director of Human Resources:Approved Disapproved

Date: _____ Signature: _____

Appendix B: Personal Belief in a Just World Scale

1. I believe that, by and large, I deserve what happens to me.
2. I am usually treated fairly.
3. I believe that I usually get what I deserve.
4. Overall, events in my life are just.
5. In my life injustice is the exception rather than the rule.
6. I believe that most of the things that happen in my life are fair.
7. I think that important decisions that are made concerning me are usually just.

Appendix C: Measure of Trait Empathy

Perspective Taking Dimension

1. I sometimes find it difficult to see things from the “other guy’s” point of view.
2. I try to look at everybody’s side of disagreement before I make a decision.
3. I sometimes try to understand my friends better by imagining how things look from their perspective.
4. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments.
5. I believe that there are two sides to every question and try to look at them both.
6. When I’m upset at someone, I usually try to “put myself in his shoes” for a while.
7. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Fantasy Dimension

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I really get involved with the feelings of the characters in a novel.
3. I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it.
4. Becoming extremely involved in a good book or movie is somewhat rare for me.
5. After seeing a play or movie, I have felt as though I were one of the characters.
6. When I watch a good movie, I can very easily put myself in the place of a leading character.
7. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

Empathic Concern Dimension

1. I often have tender, concerned feelings for people less fortunate than me.
2. Sometimes I don't feel very sorry for other people when they are having problems.
3. When I see someone being taken advantage of, I feel kind of protective towards them.
4. Other people's misfortunes do not usually disturb me a great deal.
5. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
6. I am often quite touched by things that I see happen.
7. I would describe myself as a pretty soft-hearted person.

Personal Distress Dimension:

1. In emergency situations, I feel apprehensive and ill at ease.
2. I sometimes feel helpless when I am in the middle of a very emotional situation.
3. When I see someone get hurt, I tend to remain calm.
4. Being in a tense emotional situation scares me.
5. I am usually pretty effective in dealing with emergencies.
6. I tend to lose control during emergencies.
7. When I see someone who badly needs help in an emergency, I go to pieces.

Emotional Contagion Dimension:

1. I often find that I can remain cool in spite of the excitement around me.
2. I tend to lose control when I am bringing bad news to people.
3. I tend to remain calm even though those around me worry.

4. I cannot continue to feel O.K. if people around me are depressed.
5. I don't get upset just because a friend is acting upset.
6. I become nervous if others around me are nervous.
7. The people around me have a great influence on my moods.

Appendix D

EMPLOYEE PERFORMANCE REVIEW

[In different versions, employee competence will be manipulated as follows: a *highly* competent employee will be indicated by checking "outstanding" in every category, and a *low*-competence employee will be indicated by checking "below expectations" in every category.]

Employee ID number: 025

Direct Supervisor: Terry Hoffman

Period Covering: 01/01/2007-12/31/2007

Date of Review: 12/15/2007

OVERALL RATING SCALE:

Outstanding Exemplary performance in all areas of the job.
Meets Expectations Good performance. Consistently meets standards and established performance expectations in important areas of the job.
Below Expectations Performance falls below expectations in many areas of the job. Substantial improvement critical.

1. CUSTOMER SERVICE

Definition of "Meets Expectations": Understanding the needs of internal and external customers; making special effort to be responsive in meeting their needs and in building customer satisfaction.

Outstanding		Meets Expectations		Below Expectations
X				

2. COOPERATION AND TEAMWORK

Definition of "Meets Expectations": Putting the group's success ahead of personal goals; sharing information and resources with others; giving timely response to requests made by others; promoting teamwork; exhibiting positive attitudes during times of change; taking on new tasks with enthusiasm and energy.

Outstanding		Meets Expectations		Below Expectations
X				

3. COMMUNICATION SKILLS

Definition of "Meets Expectations": Speaking clearly, concisely, and using words easily understood; exchanging ideas with others; listening to understand meaning or oral material; writing reports, memos, letters, etc.; using appropriate style, format, spelling, and grammar; writing in a clear, concise and appropriate manner.

Outstanding		Meets Expectations		Below Expectations
X				

4. ATTENDANCE AND PUNCTUALITY

Definition of "Meets Expectations": Coming to work regularly without excessive absences; maintaining assigned work schedules.

Outstanding		Meets Expectations		Below Expectations
X				

5. QUALITY OF WORK

Definition of "Meets Expectations": Completing work thoroughly, accurately, neatly, and according to specifications; producing output with minimal errors.

Outstanding		Meets Expectations		Below Expectations
X				

6. QUANTITY OF WORK

Definition of "Meets Expectations": Consistently producing a high volume of acceptable work; producing services or output quickly and efficiently.

Outstanding		Meets Expectations		Below Expectations
X				

7. JOB KNOWLEDGE

Definition of "Meets Expectations": Understanding job procedures, policies, and responsibilities; keeping up-to-date technically; acting as a resource person on whom others rely for assistance.

Outstanding		Meets Expectations		Below Expectations
X				

8. CREATIVITY AND INITIATIVE

Definition of "Meets Expectations": Contributing creative ideas to projects in teamwork; assuming greater responsibility; monitoring projects independently.

Outstanding		Meets Expectations		Below Expectations
X				

9. RESPONSIBILITY AND DEPENDABILITY

Definition of "Meets Expectations": Following through projects; adhering to time frames; responding appropriately to instructions and procedures.

Outstanding		Meets Expectations		Below Expectations
X				

10. ADAPTABILITY AND JUDGMENT

Definition of "Meets Expectations": Adjusting to any change in duties quickly; accepting new ideas and approaches to work; responding appropriately to constructive criticism and suggestions; thinking logically; analyzing problems effectively; exhibiting timely and decisive action.

Outstanding		Meets Expectations		Below Expectations
X				

11. OVERALL RATING

The supervisor must assign an overall rating to the employee's cumulative performance throughout the review cycle. The determination of the overall rating shall be consistent with the rating scale below.

Outstanding	<u>Exemplary performance</u> in all areas of the job.
Meets Expectations	<u>Good performance.</u> Consistently meets standards and established performance expectations in important areas of the job.
Below Expectations	Performance falls <u>below expectations in many areas</u> of the job. Substantial improvement critical.

Outstanding		Meets Expectations		Below Expectations
X				

Additional Comments by the Employee's Direct Supervisor (if any):

[In the high-competence condition, the comment box will be left blank. In the low-competence conditions, the comment box will be used to manipulate three conditions: For low competence without explanation, the comment box will be left blank; for low competence with negative explanation, the comment will read: "The employee has, in general, a negative attitude toward work. His/her poor performance was mainly due to lack of motivation and effort;" for low competence with positive explanation, the comment will read: "The employee has, in general, a positive attitude toward work. His/her poor performance was mainly due to lack of training and skills."]

Employee Training Requirement Form

1. Employee ID number _____ 025 _____
2. Direct Supervisor _____ Terry Hoffman _____
3. Period Covering: _____ 01/01/2007-12/31/2007 _____
4. Have you participated in all the required training during this period?
Yes No

SIGNATURES

Employee _____ Date _____

Supervisor _____ Date _____

CONFIDENTIAL

Request for Leave of Absence Without Pay (LWOP)

Date: _____ 12/15/2007 _____

Employee ID number _____ 025 _____

Specify Reason for Leave Without Pay (Illness, Study, Personal Reason, or Other Reason)

I did not request leave without pay during this year.

Beginning and Ending Dates of LWOP: _____ Not Applicable _____

Employee Signature: _____

Recommendation of Supervisor:

Approved Disapproved

Date: _____ Signature: _____

Action of Director of Human Resources:

Approved Disapproved

Date: _____ Signature: _____

*Employees normally apply for LWOP after they have used up their Leave of Absence With Pay days.

Appendix E

ROADSAFETY CHARITY CARE PROGRAM

Dear Applicant:

Attached you will find the RoadSafety Charity Care Program Application.

Completion of this application will help us consider your request of financial assistance for your hospital bills or expected hospital charges related to road accidents.

We understand your desire for privacy. Accordingly, except for verification purposes, the information included in your application will be treated as confidential information. It will only be shared within RoadSafety on a need to know basis.

Please complete each item on the application. If you need additional space for any explanations, please utilize the back of the application.

**ROADSAFETY CHARITY CARE PROGRAM
APPLICATION FOR CHARITY CARE ASSISTANCE-Form 1**

Part 1: Injured Party Information

Applicant ID #: RCC524

Account #: H-263-783-619

Marital Status:

- Married
 Single
 Divorced
 Widowed
 Separated

Are you employed?

Yes No

Do you have medical insurance?

Yes No

Do you belong to the low-income family category based on RoadSafety's criteria (information regarding the low-income family category can be found in the program materials)?

Yes No

Is anyone or any organization assisting you with payment or expected payment of your hospital bills (including hospital programs, physicians, other charities, employer, friends, etc.)? Yes No

Who is assisting you? _____

How much assistance are you receiving? _____

Name of Employer: ___ Terry Hoffman ___ Telephone #: ___ 301-228-2371 ___

Part 2: Statement of Reasons for Application

Date of Accident: 08/03/2007

Please describe below your reasons for applying for RoadSafety Charity Care Assistance:

I am writing to apply for the RoadSafety Charity Care Assistance on behalf of my spouse who was seriously injured last week in a car accident. The doctors explained that my spouse was in a critical condition due to an injury to the spinal column and was in urgent need of a series of operations to avoid lifetime paralysis. However, we are not insured and have no other means to pay for the medical bills. I know RoadSafety aims to care for victims injured in car accidents in the community. We are asking for your help. Please consider our application. [big and urgent need condition]

[In the other three conditions, the reasons will be described respectively as the following]

I am writing to apply for the RoadSafety Charity Care Assistance on behalf of my spouse who was injured last week in a car accident. The doctors explained that my spouse was in a stable condition but needed immediately to undergo a small operation to treat bone fractures in one leg. However, we are not insured and have no other means to pay for the medical bills. I know RoadSafety aims to care for victims injured in car accidents in the community. We are asking for your help. Please consider our application. [small and urgent need condition]

I am writing to apply for the RoadSafety Charity Care Assistance. I was injured one year ago in a car accident that resulted in the amputation of my left leg just above the knee. Losing one leg made my life difficult, but I have learned to work through those difficulties. I now want to be fitted with a prosthetic limb so that I can make the most of my life. However, I am not insured and have no other means to pay for the medical bills. I know RoadSafety aims to care for victims injured in car accidents in the community. I am asking for your help. Please consider my application. [big and not urgent need condition]

I am writing to apply for the RoadSafety Charity Care Assistance. I was injured one year ago in a car accident which resulted in a long and deep cut on my left leg. After treatment, a long and large scar remained on the leg. There were times when I had to deal with others' surprising looks when they saw my scar. I now want to use skin reconstruction to make the scar less perceptible. However, I am not insured and have no other means to pay for the medical bills. I know RoadSafety aims to care for victims injured in car accidents in the community. I am asking for your help. Please consider my application. [small and not urgent need condition]

Part 3: Signature

I understand that RoadSafety may verify the information contained in this application and hereby authorize RoadSafety to contact my employer and other authorities to certify the information provided. I am aware that this information will be used to determine my eligibility for and magnitude of charity assistance and that the falsification of information in this application may result in denial of charity care assistance.

Signature of Person Making Request, If Injured Party

Date

Signature of Person Making Request, If Not Injured Party

Date

[In the not responsible condition, this Form 2 was added.]

ROADSAFETY CHARITY CARE PROGRAM ACCIDENT DATA COLLECTION FORM*-Form 2		
Applicant ID #: RCC524	Staff ID #: 025	Date: 08/08/2007
<p><i>The following description is based on the police report about the accident involving the injured party in the above application:</i></p> <p><u>The injured party was driving his/her company's car when the accident occurred. It was a hit and run. Witnesses described that the injured party was parking his/her car in a safe area on the side of the road when a truck lost control and hit it. The truck driver fled the scene afterwards. Police later confirmed that the truck driver was the responsible party but is still at large. [not responsible]</u></p>		
<p>*The staff of RoadSafety Charity Care Program regularly collects information from the police department about accidents reported in the application form.</p>		

Appendix F

DEAN'S SCHOLARSHIP PROGRAM APPLICATION

Dear Applicant:

Attached you will find the Dean's Scholarship Program Application.

The Dean's Scholarship was established as a program that accepts both **need-based** and **merit-based** applications. Therefore, the scholarship is awarded every semester to current students who have demonstrated financial need or those who have demonstrated outstanding academic performance.

As applicant, you need to indicate at the beginning which type of application you are submitting, need-based or merit-based. For need-based application, you are requested to have your FAFSA (Free Application for Federal Student Aid) and EFC (Expected Family Contribution) information on file with the university. For merit-based application, your current GPA should be 3.5 or higher on a 4.0 scale.

We understand your desire for privacy. Accordingly, except for verification purposes, the information included in your application will be treated as confidential information.

Please complete each item on the application. If you need additional space for any explanations, please utilize the back of the application.

DEAN'S SCHOLARSHIP PROGRAM APPLICATION APPLICANT INFORMATION	
Part 1: Personal Information	
Applicant ID #: DSP524	University ID #: 109306478
Are you currently enrolled as a full-time student? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Please check the type of application you are submitting: <i>[The first applicant will choose one of the choices, the second applicant will choose the other in the two applications.]</i>	
Need-Based <input checked="" type="checkbox"/> If you check this, please go to Part 2 .	
Merit-Based <input type="checkbox"/> If you check this, please go to Part 3 .	
Part 2: Need-Based Application	
Do your family income (provided in your FAFSA file) and EFC (Expected Family Contribution) qualify you for this scholarship based on the program criteria (information regarding the criteria can be found in the program materials)?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Statement of Reasons for Application:	
<p><u>I am writing to apply for the Dean's Scholarship based on my financial need. I am experiencing financial difficulties because my father, the sole bread-earner in the family, was laid off and is still trying to find a job. We were a low-income small-asset family even before his unemployment. My mother does not work and stays at home taking care of my little sisters. My brother and I are both in college. Due to this situation, my parents can no longer support me financially and my part-time job can not cover all the expenses. Being the first-generation college student in my family, I have been determined to complete my college education. I need the scholarship to help me overcome present financial difficulties. [high-need condition]</u></p> <p><i>[In the other need-based application condition, the reason will be described as the following:]</i></p> <p><u>I am writing to apply for the Dean's Scholarship based on my financial need. I am experiencing financial difficulties now. My family was categorized as a middle-income family. Therefore, I was not eligible for many federal financial aid programs, which set a maximum amount for the Expected Family Contribution (EFC). My family income made my EFC greater than the maximum amount. Although I am the only child of my parents, my parents don't help pay for college as much as they should. My part-time job can not cover all the expenses I have. I know this scholarship also helps people in my situation. I am quite committed to my college education. I need the scholarship to help me overcome present financial difficulties. [medium-need condition]</u></p>	

Have you applied or received other need-based scholarship(s)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, which scholarship(s) and how much will you receive? _____
Part 3: Merit-Based Application
What is your GPA? _____
Statement of Reasons for Application:
Have you applied or received other merit-based scholarship(s)? Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, which scholarship(s) and how much will you receive? _____

Part 4: Signature

By submitting this form, I certify that the information contained in this application is correct. I also understand that my FAFSA and EFC information or my transcript on file will be reviewed as part of the application process. I am aware that the Dean's Scholarship Program staff may verify the information provided on this application and hereby authorize the staff to contact other authorities to certify the information provided. I understand that this information will be used to determine my eligibility for and the magnitude of the scholarship and that the falsification of information in this application may result in denial of current and future scholarships.

Student's Signature

Date

DEAN'S SCHOLARSHIP PROGRAM APPLICATION

Dear Applicant:

Attached you will find the Dean's Scholarship Program Application.

The Dean's Scholarship was established as a program that accepts both **need-based** and **merit-based** applications. Therefore, the scholarship is awarded every semester to current students who have demonstrated financial need or those who have demonstrated outstanding academic performance.

As applicant, you need to indicate at the beginning which type of application you are submitting, need-based or merit-based. For need-based application, you are requested to have your FAFSA (Free Application for Federal Student Aid) and EFC (Expected Family Contribution) information on file with the university. For merit-based application, your current GPA should be 3.5 or higher on a 4.0 scale.

We understand your desire for privacy. Accordingly, except for verification purposes, the information included in your application will be treated as confidential information.

Please complete each item on the application. If you need additional space for any explanations, please utilize the back of the application.

DEAN'S SCHOLARSHIP PROGRAM APPLICATION APPLICANT INFORMATION	
Part 1: Personal Information	
Applicant ID #: DSP525	University ID #: 106098378
Are you currently enrolled as a full-time student? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Please check the type of application you are submitting: <i>[The first applicant will choose one of the choices, the second applicant will choose the other in the two applications.]</i>	
Need-Based <input type="checkbox"/> If you check this, please go to Part 2 .	
Merit-Based <input checked="" type="checkbox"/> If you check this, please go to Part 3 .	
Part 2: Need-Based Application	
Do your family income (provided in your FAFSA file) and EFC (Expected Family Contribution) qualify you for this scholarship based on the program criteria (information regarding the criteria can be found in the program materials)?	
Yes <input type="checkbox"/> No <input type="checkbox"/>	
Statement of Reasons for Application:	
Have you applied or received other need-based scholarship(s)? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If yes, which scholarship(s) and how much will you receive? _____	
Part 3: Merit-Based Application	
What is your GPA? <u>4.0</u> <i>[in the high-performance condition, this is 4.0; in the medium-performance condition, this is 3.5]</i>	
Statement of Reasons for Application:	
<u>I am writing to apply for the Dean's Scholarship based on my academic performance. Since I entered this university, I achieved As in all the classes I have taken. I was admitted into the Honors Program in my department and have since maintained an outstanding record in the program. I also received a very competitive award, the University Medal for excellent undergraduate research involvement, last semester. In addition, I have been actively involved in service promoting academic excellence among undergraduates. I have served on several university-wide committees, including the Provost's</u>	

Advisory Committee for Undergraduate Research. I hope my performance will qualify me for this scholarship. [high-performance condition]

[In the other merit-based application condition, the reason will be described as the following:]

I am writing to apply for the Dean's Scholarship based on my academic performance. I have strived for academic excellence since I came to this university. I have been strongly motivated by my desire to learn. My commitment to academic excellence was demonstrated in my mastery of the subject matter under study, the improvement of my critical thinking abilities, and very good grades. My grades are all As and Bs. I also strived to develop my leadership skills in group projects and activities. I took every chance to work with faculty members on research projects to develop my research abilities. I hope my performance will qualify me for this scholarship. [medium-performance condition]

Have you applied or received other merit-based scholarship(s)? Yes No

If yes, which scholarship(s) and how much will you receive? _____

Part 4: Signature

By submitting this form, I certify that the information contained in this application is correct. I also understand that my FAFSA and EFC information or my transcript on file will be reviewed as part of the application process. I am aware that the Dean's Scholarship Program staff may verify the information provided on this application and hereby authorize the staff to contact other authorities to certify the information provided. I understand that this information will be used to determine my eligibility for and the magnitude of the scholarship and that the falsification of information in this application may result in denial of current and future scholarships.

Student's Signature_____
Date

Appendix G

雇员业绩评估表

雇员身份号： 025

部门领导： 李文

评估时段： 2007-01-01——2007-12-31

评定时间： 2007-12-15

全面评估标准：

优秀：在工作中所有方面都有模范表现。**合格：**良好的表现。在工作中重要的方面一贯符合标准和已建立的行为准则。**不合格：**在工作中许多方面的表现低于期望，急需实质性的改进。

1. 顾客服务

合格的定义：了解内外顾客的需要；努力满足他们的需求并增强他们的满意度。

优秀	合格	不合格
		√

2. 团队合作

合格的定义：把集体的成功放到个人目标之前；与他人分享信息及资源；对他人提出的要求及时给予回应；促进团队工作；在变化时表现出积极的态度；充满热情和活力地接受新的任务。

优秀	合格	不合格
		√

3. 交流技巧

合格的定义：说话清晰、简洁且用词易懂；与他人交流思想；倾听以理解意思或口头表达；写报告、备忘录、书信、等；会运用适当的风格、格式、拼写和语法；以一种清晰、简洁和恰当的风格写作。

优秀	合格	不合格
		√

4. 出勤及守时

合格的定义：按时出勤无过多的缺旷，保持指定的工作进度。

优秀	合格	不合格
		√

5. 工作质量

合格的定义：彻底、准确、干净利落地按规定完成任务；工作中产生最少的错误。

优秀	合格	不合格
		√

6. 工作数量

合格的定义：工作中保持合格的高额产出量，提供快而有效的服务和产品。

优秀	合格	不合格
		√

7. 业务知识

合格的定义：清楚工作程序、方针及责任；技术上不断更新；在工作中成为可以给别人提供帮助的有学识的人。

优秀	合格	不合格
		√

8. 创造性和主动性

合格的定义：为团队项目提供创造性的意见，承担较大的责任，独立监控项目。

优秀	合格	不合格
		√

9. 责任和可靠性

合格的定义：从头到尾负责完成项目；遵守时限；恰当地遵循指示和工作程序。

优秀	合格	不合格
		√

10. 适应性和判断力

合格的定义：很快适应责任上的任何调整；接受新的思想及工作方法；对建设性的批评与建议给予恰当的回应；逻辑地思考；有效地分析问题；采取及时和果断的行动。

优秀	合格	不合格
		√

11. 全面评估

在整个评估过程中，部门领导必须给雇员的总体表现作一个全面评估。全面评估要符合以下评估标准。

优秀：在工作中所有方面都有模范表现。

合格：良好的表现。在工作中重要的方面一贯符合标准和已建立的行为准则。

不合格：在工作中许多方面的表现低于期望，急需实质性的改进。

优秀		合格		不合格
				√

这位雇员的部门领导的附加评论 (如果有评论的话):

[负面解释]:

总的来说，这位雇员的工作态度是消极的。他（她）的不合格的工作表现主要是由于缺乏动力和不努力造成的。

[正面解释]:

总的来说，这位雇员的工作态度是积极的。他（她）的不合格的工作表现主要是由于缺乏培训和缺少技能造成的。

雇员培训登记表

6. 雇员身份号: _____ 025 _____
7. 部门领导: _____ 李文 _____
8. 评估时段: _____ 2007-01-01——2007-12-31 _____
9. 在此评估时段你是否已经完成了所有要求的培训?
是 否

签名

雇员 _____ 日期 _____

部门领导 _____ 日期 _____

机密

无薪休假申请表*

日期：_____2007-12-15_____

雇员身份号：_____025_____

说明申请无薪休假的理由（生病、学习、个人理由或其他理由）：

我今年没有申请无薪休假。

无薪休假的起止日期：_____2007-12-01——2007-12-31_____

雇员签名：_____

部门领导的建议：

同意 [v] 不同意 []

日期：_____ 签名：_____

人力资源部领导的决定：

同意 [v] 不同意 []

日期：_____ 签名：_____

*雇员通常在他们用完带薪休假的天数后申请无薪休假。

Appendix H

道路安全基金会慈善关怀项目

亲爱的申请者：

在下面的附件中，你会找到道路安全基金会慈善关怀项目的申请表格。

填完这份申请表将有助于我们考虑关于帮你支付因交通事故而产生的医疗费用或预计的医疗费用的请求。

我们理解你对隐私的要求。因此除了核实的目的外，你申请表中的信息将被看作是保密的。它仅会在道路安全基金会内部作为提供申请人基本情况的材料来使用。

请填完申请表中的每一项内容。如果你需要附加任何解释，请写在申请表背面。

道路安全基金会慈善关怀项目
慈善关怀援助申请表（表 1）

第一部分：受伤者信息

申请人身份号：
RCC524

帐号：H-263-783-619

婚姻状况：

- 已婚
 未婚
 离异
 丧偶
 分居

你有工作吗？ 有 无

你有医疗保险吗？ 有 无

根据道路安全基金会标准，你的家庭属于低收入家庭的范畴吗（有关如何划分低收入家庭的信息可在项目资料中找到）？

是 不是

有任何人或组织在帮你支付已有或将有的医疗费用吗（包括医院的援助项目，医生，其它慈善机构，雇主，朋友，等等）？ 有 无

谁在资助你？ _____

你收到多少资助？ _____

雇主姓名：李文

电话号码：031-22823713

第二部分：申请理由陈述

申请日期：2007.8.3

请在下面描述你申请道路安全基金会慈善关怀援助的理由：

我现在代表我爱人申请道路安全基金会的慈善关怀援助因为我爱人在上周一次交通事故中受重伤。医生解释说我爱人由于脊柱受到损伤而处于危急状态并且急需进行一系列手术以避免终身瘫痪。然而我们没有保险而且也没有其它办法来支付医疗费用。我知道道路安全基金会的目标是关心本社区在车祸中受伤的受害者。我们请求你们的援助。请考虑我们的申请。[大而紧急的需求]

我现在代表我爱人申请道路安全基金会的慈善关怀援助因为我爱人在上周一次交通事故中受伤。医生解释说我爱人处于稳定状态但却急需进行一个小手术以治疗在一条腿上的多处骨折。然而我们没有保险而且也没有其它办法来支付医疗费用。我知道道路安全基金会的目标是关心本社区在车祸中受伤的受害者。我们请求你们的援助。请考虑我们的申请。[小而紧急的需求]

我现在申请道路安全基金会的慈善关怀援助。我一年前在一次交通事故中受伤。那次事故导致了我的左腿从膝盖以下被截肢。失去一条腿使我的生活变得困难，但我已经学会解决那些困难。我现在想安装一只假肢以便我能最大限度地去体验生活。然而我没有保险而且也没有其它办法来支付医疗费用。我知道道路安全基金会的目标是关心本社区在车祸中受伤的受害者。我请求你们的援助。请考虑我的申请。[大而不紧急的需求]

我现在申请道路安全基金会的慈善关怀援助。我一年前在一次交通事故中受伤。那次事故使我的左腿被划了一道长而深的伤口。经过治疗，一条又长又大的疤痕留在了这条腿上。有时我不得不面对别人看到我的伤疤后的惊讶表情。我现在想利用皮肤再造术使这条疤痕不那么明显。然而我没有保险而且也没有其它办法来支付医疗费用。我知道道路安全基金会的目标是关心本社区在车祸中受伤的受害者。我请求你们的援助。请考虑我的申请。[小而不紧急的需求]

第三部分：签名

我明白道路安全基金会可能会核实这份申请表中的信息并且因此授权道路安全基金会与我的雇主及有关当局联系以证实所提供的信息。我知道此信息将被用来决定我是否有资格获得慈善援助以及援助金额的多少并且知道在这份申请中伪造信息会导致我被拒绝慈善关怀援助。

申请人签名（如果是受伤者）

日期

申请人签名（如果不是受伤者）

日期

[表2 代表“没有责任”的情况]

道路安全基金会慈善关怀项目 事故信息调查表*（表 2）		
申请人身份号： RCC524	员工身份号：025	日期：2007.8.8
<p>以下是根据警方的事故调查报告来描述上述申请表中受伤者的：</p> <p>当事故发生时，该受伤者正驾驶着公司的车。这是一个撞车后逃逸的事故。目击者描述说，该受伤者正在路边一个安全区域停车，这时一辆卡车失去控制并撞到了他（她）的车。卡车司机之后逃离了现场。警方后来证实了卡车司机是责任方但仍未被抓获。[没有责任]</p>		
*道路安全基金会慈善关怀项目的员工不时地从警察局收集有关申请表内提到的事故的信息。		

Appendix I

院长奖(助)学金项目申请表

亲爱的申请者：

在下面的附件中，你会找到院长奖(助)学金项目的申请表格。

院长奖(助)学金项目是为**资助生活困难的学生或奖励学业优秀的学生**而设立的。因此这个奖(助)学金每学期发给那些有生活困难或有突出学业成绩的在校生。

作为申请人，你需要在一开始就指明你提交的是哪一种申请：为生活困难的学生提供的助学金还是为学业优秀的学生提供的奖学金。作为生活困难助学金的申请人，你需要在学校的档案里有国家助学贷款的申请资料和家庭所能支付多少费用的证明材料。作为学业优秀奖学金的申请人，你现在的学习成绩总平均分应该在 85 分或更高。

我们理解你对隐私的要求。因此除了核实的目的外，你申请表中的信息将被看作是保密的。

请填写申请表中的每一项内容。如果你需要附加任何解释，请写在申请表背面。

院长奖(助)学金项目申请表
申请人信息

第一部分：个人信息

申请人身份号: DSP524

学生证号: 109306478

你现在是一名注册在读的全日制学生吗? 是 否

请标明你提交的申请类型:

生活困难助学金 如果你标明这项, 请看**第二部分**。
学业优秀奖学金 如果你标明这项, 请看**第三部分**。

第二部分：生活困难助学金申请

根据这个项目的标准, 你的家庭收入(在你的国家助学贷款的申请资料中提供)及家庭所能支付费用的多少使你具有申请这个助学金的资格吗(有关这个项目的标准可在项目资料中查询)?

是 否

申请理由陈述:

我现在根据我的经济需求来申请院长助学金。我正经历经济困难, 因为我的父亲, 家中唯一的经济支柱, 被解雇了并正在求职。甚至在他失业前, 我们就是一个低收入少资产的家庭。我的母亲没有工作, 在家里照顾我的妹妹们。我的弟弟和我都在上大学。由于这种情况, 我的父母不能再给我经济支持, 而且我兼职打工挣的钱也不能完全支付开支。作为家庭的第一代大学生, 我一直决心要完成我的大学学业。我需要该奖学金来帮助我克服目前的经济困难。[高需求]

我现在根据我的经济需求来申请院长助学金。我现在正经历经济困难。我的家庭属于中等收入家庭。因此我不符合国家的许多助学贷款项目的要求, 这些项目规定了家庭所能支付费用的最大值。我的家庭收入使得我的家庭所能支付的费用高于了这个最大值。尽管我是父母唯一的儿子, 我的父母并没有帮我支付足够的上大学的费用。我兼职打工挣的钱也不能完全支付我的开支。我知道这个奖学金也帮助像我这种情况的人。我对完成我的大学学业很执着。我需要该奖学金来帮助我克服目前的经济困难。[中等需求]

通过提交这个表格，我证明申请材料中的信息是准确的。我也明白作为申请过程的一个部分，在我档案中的国家助学贷款申请资料和家庭所能支付多少费用的证明材料或我的成绩单将被审查。我明白院长奖(助)学金项目的工作人员可能会核实这份申请表中的信息并且因此授权工作人员与有关部门联系以证实所提供的信息。我知道此信息将被用来决定我是否有资格获得这项奖(助)学金以及奖(助)学金的多少并且知道在这份申请中伪造信息会导致我现在和将来的奖(助)学金申请被拒绝。

学生签名

日期

院长奖(助)学金项目申请表

亲爱的申请者：

在下面的附件中，你会找到院长奖(助)学金项目的申请表格。

院长奖(助)学金项目是为**资助生活困难的学生或奖励学业优秀的学生**而设立的。因此这个奖(助)学金每学期发给那些有生活困难或有突出学业成绩的在校生。

作为申请人，你需要在一开始就指明你提交的是哪一种申请：为生活困难的学生提供的助学金还是为学业优秀的学生提供的奖学金。作为生活困难助学金的申请人，你需要在学校的档案里有国家助学贷款的申请资料和家庭所能支付多少费用的证明材料。作为学业优秀奖学金的申请人，你现在的学习成绩总平均分应该在 85 分或更高。

我们理解你对隐私的要求。因此除了核实的目的外，你申请表中的信息将被看作是保密的。

请填写申请表中的每一项内容。如果你需要附加任何解释，请写在申请表背面。

院长奖(助)学金项目申请表 申请人信息	
第一部分：个人信息	
申请人身份号: DSP525	学生证号: 106098378
你现在是一名注册在读的全日制学生吗？ 是 <input checked="" type="checkbox"/> 否 <input type="checkbox"/>	
请标明你提交的申请类型：	
生活困难助学金 <input type="checkbox"/>	如果你标明这项，请看 第二部分 。
学业优秀奖学金 <input checked="" type="checkbox"/>	如果你标明这项，请看 第三部分 。
第二部分：生活困难助学金申请	
根据这个项目的标准，你的家庭收入（在你的国家助学贷款的申请资料中提供）及家庭所能支付费用的多少使你具有申请这个助学金的资格吗（有关这个项目的标准可在项目资料中查询）？	
是 <input type="checkbox"/> 否 <input type="checkbox"/>	
申请理由陈述：	
你已申请或接受了其它的生活困难助学金吗？ 有 <input type="checkbox"/> 没有 <input type="checkbox"/>	
如果有，是什么助学金，数目是多少？ _____	
第三部分：学业优秀奖学金申请	
你的学习成绩总平均分是多少？ <u>95 [在中等成绩的描述中，这个成绩为 85]</u>	
申请理由陈述：	
<p><u>我现在根据我的学业表现来申请院长奖学金。自从我进入这个大学，我在所有上过的课上拿到了优的成绩。我被允许进入系里的荣誉项目，并自此在项目中保持了杰出的记录。在上学期我也通过激烈竞争得到了一份奖励：本科生参与研究有杰出表现的学校奖章。此外，我一直积极参与到促进本科生取得优异学业的服务项目中。我已经成为本校的几个校级委员会的成员，包括促进本科生参与研究的教务长咨询委员会。我希望我的表现将使我具有获得该奖学金的资格。[优秀成绩]</u></p>	

我现在根据我的学业表现来申请院长奖学金。自从我进入这个大学,我一直争取获得优异的学业。我一直被我的强烈的学习欲望所激励。我对优异学业表现的努力追求体现在我对课程知识的掌握、我的批判性思考能力的提高、和很高的分数方面。我的分数全部是优或良。我也努力争取在团队项目和活动中培养我的领导能力。我利用一切在教授的研究项目中工作的机会来培养我的研究能力。我希望我的表现将使我具有获得该奖学金的资格。[中等成绩]

你已申请或接受了其它的学业优秀奖学金吗? 有 没有

如果有, 是什么奖学金, 数目是多少? _____

通过提交这个表格，我证明申请材料中的信息是准确的。我也明白作为申请过程的一个部分，在我档案中的国家助学贷款申请资料和家庭所能支付多少费用的证明材料或我的成绩单将被审查。我明白院长奖(助)学金项目的工作人员可能会核实这份申请表中的信息并且因此授权工作人员与有关部门联系以证实所提供的信息。我知道此信息将被用来决定我是否有资格获得这项奖(助)学金以及奖(助)学金的多少并且知道在这份申请中伪造信息会导致我现在和将来的奖(助)学金申请被拒绝。

学生签名

日期

Appendix J^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	3919.313	16	244.957	15.687	.000	.617
Intercept	11429.378	1	11429.378	731.920	.000	.824
Trait Empathy	.002	1	.002	.000	.992	.000
Competence	1862.152	1	1862.152	119.249	.000	.433
Empathy	64.883	1	64.883	4.155	.043	.026
Culture	47.858	1	47.858	3.065	.082	.019
Sex	.376	1	.376	.024	.877	.000
Competence * Empathy	14.404	1	14.404	.922	.338	.006
Competence * Culture	180.478	1	180.478	11.558	.001	.069
Empathy * Culture	92.813	1	92.813	5.944	.016	.037
Competence * Empathy * Culture	1.142	1	1.142	.073	.787	.000
Competence * Sex	.874	1	.874	.056	.813	.000
Empathy * Sex	5.835	1	5.835	.374	.542	.002
Competence * Empathy * Sex	.255	1	.255	.016	.899	.000
Culture * Sex	14.011	1	14.011	.897	.345	.006
Competence * Culture * Sex	69.837	1	69.837	4.472	.036	.028
Empathy * Culture * Sex	35.806	1	35.806	2.293	.132	.014
Competence * Empathy * Culture * Sex	31.262	1	31.262	2.002	.159	.013
Error	2436.036	156	15.616			
Total	26026.789	173				
Corrected Total	6355.349	172				

^aThe table is the SPSS output for the ANCOVA with competence, empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable in study 1.

^bR Squared = .617 (Adjusted R Squared = .577)

Appendix K^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	18244.074	32	570.127	16.313	.000	.719
Intercept	32683.612	1	32683.612	935.187	.000	.821
Trait Empathy	8.210	1	8.210	.235	.628	.001
Competence	13926.848	3	4642.283	132.831	.000	.661
Empathy	333.771	1	333.771	9.550	.002	.045
Culture	578.999	1	578.999	16.567	.000	.075
Sex	29.115	1	29.115	.833	.362	.004
Competence * Empathy	88.728	3	29.576	.846	.470	.012
Competence * Culture	88.701	3	29.567	.846	.470	.012
Empathy * Culture	6.482	1	6.482	.185	.667	.001
Competence * Empathy * Culture	258.161	3	86.054	2.462	.064	.035
Competence * Sex	345.779	3	115.260	3.298	.021	.046
Empathy * Sex	10.960	1	10.960	.314	.576	.002
Competence * Empathy * Sex	15.659	3	5.220	.149	.930	.002
Culture * Sex	25.623	1	25.623	.733	.393	.004
Competence * Culture * Sex	139.554	3	46.518	1.331	.265	.019
Empathy * Culture * Sex	.216	1	.216	.006	.937	.000
Competence * Empathy * Culture * Sex	102.864	3	34.288	.981	.403	.014
Error	7129.547	204	34.949			
Total	61573.718	237				
Corrected Total	25373.621	236				

^aThe table is the SPSS output for the overall ANCOVA with competence (4 levels), empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable in study 2.

^bR Squared = .719 (Adjusted R Squared = .675)

Appendix L^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	10853.280	16	678.330	17.851	.000	.731
Intercept	31771.748	1	31771.748	836.116	.000	.888
Trait Empathy	22.012	1	22.012	.579	.448	.005
Competence	9091.799	1	9091.799	239.263	.000	.695
Empathy	53.002	1	53.002	1.395	.240	.013
Culture	197.296	1	197.296	5.192	.025	.047
Sex	204.249	1	204.249	5.375	.022	.049
Competence * Empathy	15.253	1	15.253	.401	.528	.004
Competence * Culture	73.623	1	73.623	1.937	.167	.018
Empathy * Culture	61.478	1	61.478	1.618	.206	.015
Competence * Empathy * culture	49.051	1	49.051	1.291	.258	.012
Competence * Sex	103.603	1	103.603	2.726	.102	.025
Empathy * Sex	17.890	1	17.890	.471	.494	.004
Competence * Empathy * Sex	2.405	1	2.405	.063	.802	.001
Culture * Sex	7.636	1	7.636	.201	.655	.002
Competence * Culture * Sex	5.113	1	5.113	.135	.714	.001
Empathy * Culture * Sex	18.807	1	18.807	.495	.483	.005
Competence * Empathy * Culture * Sex	52.974	1	52.974	1.394	.240	.013
Error	3989.916	105	37.999			
Total	51433.825	122				
Corrected Total	14843.196	121				

^aThe table is the SPSS output for the first ANCOVA with competence (high competence vs. low competence without explanation), empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable in study 2.

^bR Squared = .731 (Adjusted R Squared = .690)

Appendix M^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	12790.047	16	799.378	29.919	.000	.829
Intercept	27780.945	1	27780.945	1039.775	.000	.913
Trait Empathy	36.674	1	36.674	1.373	.244	.014
Competence	10227.720	1	10227.720	382.799	.000	.795
Empathy	152.027	1	152.027	5.690	.019	.054
Culture	114.633	1	114.633	4.290	.041	.042
Sex	7.301	1	7.301	.273	.602	.003
Competence * Empathy	84.457	1	84.457	3.161	.078	.031
Competence * Culture	37.287	1	37.287	1.396	.240	.014
Empathy * Culture	.161	1	.161	.006	.938	.000
Competence * Empathy * Culture	204.589	1	204.589	7.657	.007	.072
Competence * Sex	44.763	1	44.763	1.675	.199	.017
Empathy * Sex	17.129	1	17.129	.641	.425	.006
Competence * Empathy * Sex	2.287	1	2.287	.086	.770	.001
Culture * Sex	54.199	1	54.199	2.029	.158	.020
Competence * Culture * Sex	52.514	1	52.514	1.965	.164	.019
Empathy * Culture * Sex	6.472	1	6.472	.242	.624	.002
Competence * Empathy * Culture * Sex	72.023	1	72.023	2.696	.104	.027
Error	2645.104	99	26.718			
Total	47818.344	116				
Corrected Total	15435.152	115				

^aThe table is the SPSS output for the second ANCOVA with competence (high competence vs. low competence with negative explanation), empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable in study 2.

^bR Squared = .829 (Adjusted R Squared = .801)

Appendix N^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	10728.974	16	670.561	27.456	.000	.809
Intercept	33331.482	1	33331.482	1364.754	.000	.929
Trait Empathy	11.536	1	11.536	.472	.493	.005
Competence	8563.806	1	8563.806	350.644	.000	.771
Empathy	85.331	1	85.331	3.494	.064	.033
Culture	173.887	1	173.887	7.120	.009	.064
Sex	.082	1	.082	.003	.954	.000
Competence * Empathy	33.694	1	33.694	1.380	.243	.013
Competence * Culture	58.137	1	58.137	2.380	.126	.022
Empathy * Culture	13.567	1	13.567	.555	.458	.005
Competence * Empathy * Culture	131.163	1	131.163	5.370	.022	.049
Competence * Sex	20.465	1	20.465	.838	.362	.008
Empathy * Sex	3.303	1	3.303	.135	.714	.001
Competence * Empathy * Sex	16.149	1	16.149	.661	.418	.006
Culture * Sex	11.658	1	11.658	.477	.491	.005
Competence * Culture * Sex	16.322	1	16.322	.668	.416	.006
Empathy * Culture * Sex	22.807	1	22.807	.934	.336	.009
Competence * Empathy * Culture * Sex	48.234	1	48.234	1.975	.163	.019
Error	2539.999	104	24.423			
Total	49414.558	121				
Corrected Total	13268.973	120				

^aThe table is the SPSS output for the third ANCOVA with competence (high competence vs. low competence with positive explanation), empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of bonus as the dependent variable in study 2.

^bR Squared = .809 (Adjusted R Squared = .779)

Appendix O^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21.641	.647		33.444	.000
	Need	17.240	2.370	.503	7.274	.000
	Empathy	1.705	1.852	.063	.920	.359
	Culture	-.815	1.619	-.035	-.504	.615
	Sex	5.487	2.708	.138	2.027	.045
	Need * Empathy	-5.029	6.751	-.052	-.745	.458
	Need * Culture	-4.338	5.806	-.051	-.747	.456
	Need * Sex	-11.368	9.474	-.083	-1.200	.232
	Empathy * Culture	9.674	4.509	.146	2.145	.034
	Empathy * Sex	-10.629	7.703	-.094	-1.380	.170
	Culture * Sex	7.562	6.693	.078	1.130	.261
	Need * Empathy * Culture	-50.097	16.772	-.209	-2.987	.003
	Need * Empathy * Sex	3.235	27.533	.008	.117	.907
	Need * Culture * Sex	-6.477	23.661	-.019	-.274	.785
	Empathy * Culture * Sex	-18.080	18.962	-.065	-.954	.342
	Trait Empathy	1.703	.795	.157	2.141	.034

^aThe table is the SPSS output for the regression model with need, empathy, culture, sex, and all two-way and three-way linear interactions between them plus trait empathy as independent variables and the amount of assistance-money distributed as the dependent variable in the no-responsibility situation in study 3.

Appendix P^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21.226	.611		34.727	.000
	Need	15.114	2.234	.467	6.765	.000
	Empathy	3.253	1.752	.127	1.856	.065
	Culture	.895	1.504	.041	.595	.553
	Sex	2.505	2.411	.071	1.039	.300
	Need * Empathy	7.583	6.374	.082	1.190	.236
	Need * Culture	-7.258	5.500	-.091	-1.320	.189
	Need * Sex	-14.771	8.716	-.117	-1.695	.092
	Empathy * Culture	-.957	4.281	-.015	-.224	.823
	Empathy * Sex	.727	6.866	.007	.106	.916
	Culture * Sex	6.477	5.910	.075	1.096	.275
	Need * Empathy * Culture	-13.638	15.549	-.060	-.877	.382
	Need * Empathy * Sex	-4.269	24.852	-.012	-.172	.864
	Need * Culture * Sex	-10.141	21.371	-.033	-.475	.636
	Empathy * Culture * Sex	-1.401	16.880	-.006	-.083	.934
	Trait Empathy	-.081	.570	-.010	-.142	.887

^aThe table is the SPSS output for the regression model with need, empathy, culture, sex, and all two-way and three-way linear interactions between them plus trait empathy as independent variables and the amount of assistance-money distributed as the dependent variable in the no-explanation situation in study 3.

Appendix Q^a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model ^b	116350973.470	8	14543871.684	2.777	.006	.087
Intercept	120663317.859	1	120663317.859	23.041	.000	.090
Trait Empathy	1505853.404	1	1505853.404	.288	.592	.001
Empathy	156680.866	1	156680.866	.030	.863	.000
Culture	59954592.163	1	59954592.163	11.449	.001	.047
Sex	1585891.372	1	1585891.372	.303	.583	.001
Empathy * Culture	17998286.430	1	17998286.430	3.437	.065	.015
Empathy * Sex	691229.856	1	691229.856	.132	.717	.001
Culture * Sex	12635135.549	1	12635135.549	2.413	.122	.010
Empathy * Culture * Sex	8210366.653	1	8210366.653	1.568	.212	.007
Error	1214953192.505	232	5236867.209			
Total	1479100900.000	241				
Corrected Total	1331304165.975	240				

^aThe table is the SPSS output for the ANCOVA with empathy, culture, and sex as the independent variables, trait empathy as the covariate, and the amount of scholarship-money distributed as the dependent variable in study 4.

^bR Squared = .087 (Adjusted R Squared = .056)

References

- Adams, G. R., Jones, R. M., Schvaneveldt, J. D., & Jenson, G. O. (1982). Antecedents of affective role-taking behavior: Adolescent perception of parental socialization styles. *Journal of Adolescence*, *5*, 259-265.
- Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, *67*, 422-436.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267-299). New York: Academic Press.
- Agnes, M. et al. (2001). *Webster's new world college dictionary* (4th ed.). Foster City, CA: IDG Books Worldwide.
- Albin, C. (2001). *Justice and fairness in international negotiation*. Cambridge, England: Cambridge University Press.
- Aronson, E., Wilson, T., & Akert, R. (2004). *Social psychology, media and research update* (4th ed.). Upper Saddle River, NJ: Pearson Education.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Babcock, L., Loewenstein, G., & Issacharoff, S. (1997). Creating convergence: Debiasing biased litigants. *Law and Social Inquiry*, *22*, 913-925.
- Babcock, L., Loewenstein, G., Issacharoff, S., & Camerer, C. (1995). Biased judgments of fairness in bargaining. *American Economic Review*, *85*, 1337-1343.
- Babcock, L., Wang, X., & Loewenstein, G. (1996). Choosing the wrong pond: Social comparisons that reflect a self-serving bias. *Quarterly Journal of Economics*, *111*, 1-19.

- Barrett-Howard, E., & Tyler, T. R. (1986). Procedural justice as a criterion in allocation decisions. *Journal of Personality and Social Psychology, 50*, 296-304.
- Bar-Tal, D., Bar-Zohar, Y., Greenberg, M. S., & Hermon, M. (1977). Reciprocity behavior in the relationship between donor and recipient and between harm-doer and victim. *Sociometry, 40*, 293-298.
- Batson, C. D. (1987). Prosocial motivation: Is it ever truly altruistic? In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 20, pp. 65-122). New York: Academic Press.
- Batson, C. D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Erlbaum.
- Batson, C. D., Batson, J. G., Griffitt, C. A., Barrientos, S., Brandt, J. R., Sprengelmeyer, P., & Bayly, M. J. (1989). Negative-state relief and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology, 56*, 922-933.
- Batson, C. D., Batson, J. G., Todd, R. M., Brummett, B. H., Shaw, L. L., & Aldeguer, C. M. (1995). Empathy and the collective good: Caring for one of the others in a social dilemma. *Journal of Personality and Social Psychology, 68*, 619-631.
- Batson, C. D., Duncan, B., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology, 40*, 290-302.
- Batson, C. D., Dyck, J. L., Brandt, J. R., Batson, J. G., Powell, A. L., McMaster, M. R., & Griffitt, C. (1988). Five studies testing two new egoistic alternatives to the empathy-altruism hypothesis. *Journal of Personality and Social Psychology, 55*, 52-77.

- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective taking: Imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin*, 23, 751-758.
- Batson, C. D., Klein, T. R., Highberger, L., & Shaw, L. L. (1995). Immorality from empathy-induced altruism. *Journal of Personality and Social Psychology*, 68, 1042-1054.
- Batson, C. D., O'Quin, K., Fultz, J., Vanderplas, M., & Isen, A. (1983). Self-reported distress and empathy and egoistic versus altruistic motivation for helping. *Journal of Personality and Social Psychology*, 45, 706-718.
- Bauer, C. L., & Fink, E. L. (1983). Fitting equations with power transformations: Examining variables with error. In R. N. Bostrom (Ed.), *Communication yearbook 7* (pp. 146-199). Beverly Hills, CA: Sage.
- Boring, E. G. (1929). *A history of experimental psychology*. New York: Appleton.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development*, 53, 413-425.
- Burns, J. L. (1974). Some personality attributes of volunteers and of non-volunteers for psychological experimentation. *Journal of Social Psychology*, 92, 161-162.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). Boston: Allyn & Bacon.
- Clark, M. S. (1981). Noncomparability of benefits given and received: A cue to the existence of friendship. *Social Psychology Quarterly*, 44, 375-381.

- Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social Psychology, 37*, 2-24.
- Coke, J. S., Batson, C. D., & McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology, 36*, 752-766.
- Costin, S. E., & Jones, C. J. (1992). Friendship as a facilitator of emotional responsiveness and prosocial interventions among young children. *Developmental Psychology, 28*, 941-947.
- Dalbert, C. (1999). The world is more just for me than generally: About the Personal Belief in Just World Scale's validity. *Social Justice Research, 12*, 79-98.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113-126.
- de Dreu, C. K. W., Nauta, A., & van de Vliert, E. (1995). Self-serving evaluations of conflict behavior and escalation of the dispute. *Journal of Applied Social Psychology, 25*, 2049-2066.
- Deutsch, M. (1975). Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *Journal of Social Issues, 31*, 137-149.
- Diekmann, A. (2004). The power of reciprocity: Fairness, reciprocity, and stakes in variants of the dictator game. *Journal of Conflict Resolution, 48*, 487-505.
- Dien, D. S. (1982). A Chinese perspective on Kohlberg's theory of moral development. *Development Review, 2*, 331-341.

- Dillard, J. P., & Hunter, J. E. (1989). On the use and interpretation of the emotional empathy scale, the self-consciousness scales, and the self-monitoring scale. *Communication Research, 16*, 104-129.
- Eisenberg, N., & Miller, P. A. (1987). Relation of empathy to prosocial behavior. *Psychological Bulletin, 101*, 91-119.
- Ekman, P., Friesen, W., O'Sullivan, M., & Chan, A. (1987). Universals and cultural differences in the judgments of facial expressions of emotion. *Journal of Personality and Social Psychology, 53*, 712-717.
- Enz, S., Zoll, C., & Xu, Q. (2006). *Cultural differences in empathy between China, Portugal, Germany, and the U.K.* Retrieved January 19, 2006, from <http://www.nicve.salford.ac.uk/elvis/resources/Empathy.pdf>
- Epley, N., Caruso, E. M., & Bazerman, M. H. (2006). When perspective taking increases taking: Reactive egoism in social interaction. *Journal of Personality and Social Psychology, 91*, 872-889.
- Fehr, E., & Fischbacher, U. (2003). The nature of human altruism. *Nature, 425*, 785-791.
- Fehr, E., & Fischbacher, U. (2004). Social norms and human cooperation. *Trends in cognitive sciences, 8*, 185-190.
- Fehr, E., & Gächter, S. (2000). Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives, 14*, 159-181.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Fink, E. L. (1975). *An empirical analysis of vicarious embarrassment: A study of social interaction and emotion*. Unpublished doctoral dissertation, University of Wisconsin, Madison.

- Fiske, A. P. (2002). Using individualism and collectivism to compare cultures: A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin*, *128*, 78-88.
- Friedman, J. W. (1977). *Oligopoly and the theory of games*. Amsterdam: North-Holland.
- Frith, U., & Frith, C. D. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences*, *358*, 459-473.
- Fultz, J., Batson, C. D., Fortenbach, V. A., McCarthy, P. M., & Varney, L. L. (1986). Social evaluation and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, *50*, 761-769.
- Fultz, J., Schaller, M., & Cialdini, R. B. (1988). Empathy, sadness, and distress: Three related but distinct vicarious affective responses to another's suffering. *Personality and Social Psychology Bulletin*, *14*, 312-325.
- Gallagher, H. L., Jack, A. I., Roepstorff, A., & Frith, C. D. (2002). Imaging the intentional stance in a competitive game. *NeuroImage*, *16*, 814-821.
- Gebhard, M. E. (1949). Changes in the attractiveness of activities: The effect of expectation preceding performance. *Journal of Experimental Psychology*, *39*, 404-413.
- Gelfand, M. J., Higgins, M., Nishii, L. H., Raver, J. L., Dominguez, A., Murakami, F., Yamaguchi, S., & Toyama, M. (2002). Culture and egocentric perceptions of fairness in conflict and negotiation. *Journal of Applied Psychology*, *87*, 833-845.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.

- Gilligan, C., Lyons, N. P., & Hanmer, T. J. (Eds.). (1989). *Making connections: The relational worlds of adolescent girls at Emma Willard School*. Cambridge, MA: Harvard University Press.
- Gilligan, C., Ward, J. V., & Taylor, J. M. (Eds.). (1988). *Mapping the moral domain*. Cambridge, MA: Harvard University Press.
- Gintis, H., Bowles, S., Boyd, R., & Fehr, E. (2003). Explaining altruistic behavior in humans. *Evolution and Human Behavior*, 24, 153-172.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, 161-178.
- Gudykunst, W. B. (2002). Issues in cross-cultural communication research. In W. B. Gudykunst & B. Mody (Eds.), *Handbook of international and intercultural communication* (2nd ed., pp. 165-177). Thousand Oaks, CA: Sage.
- Gudykunst, W. B., & Lee, C. M. (2002). Cross-cultural communication theories. In W. B. Gudykunst & B. Mody (Eds.), *Handbook of international and intercultural communication* (2nd ed., pp. 25-50). Thousand Oaks, CA: Sage.
- Güth, W., Schmittberger, R., & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, 3, 367-388.
- Hamblin, R. L. (1974). Social attitudes: Magnitude estimation and theory. In H. M. Blalock Jr. (Ed.), *Measurement in the social sciences* (pp. 61-120). Chicago: Aldine.
- Hamilton, V. L., & Sanders, J. (1992). *Everyday justice: Responsibility and the individual in Japan and the United States*. New Haven, CT: Yale University Press.
- Harlow, C. M. (Ed.). (1986). *From learning to love: The selected papers of H. F. Harlow*. New York: Praeger.

- Harlow, H. F. (1971). *Learning to love*. San Francisco: Albion.
- Harlow, H. F. (1979). *The human model: Primate perspectives*. New York: Halsted Press.
- Harsanyi, J. (1977). *Rational behavior and bargaining equilibrium in games and social situations*. Cambridge, UK: Cambridge University Press.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Hoffman, M. L. (1976). Empathy, role-taking, guilt, and development of altruistic motives. In T. Lickona (Ed.), *Moral development and behavior: Theory, research, and social issues* (pp. 124-143). New York: Holt, Rinehart & Winston.
- Hoffman, M. L. (1978). Empathy, its development and prosocial implications. *Nebraska Symposium on Motivation*, 25, 169-218.
- Hoffman, M. L. (1984). Empathy, its limitations, and its role in a comprehensive moral theory. In J. Gewirtz & W. Kurtines (Eds.), *Morality, moral development, and moral behavior* (pp. 283-302). New York: John Wiley.
- Hoffman, M. L. (1987). The contribution of empathy to justice and moral judgment. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 47-80). New York: Cambridge University Press.
- Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*. Cambridge, UK: Cambridge University Press.
- Hofstede, G. (2001). *Culture's consequences* (2nd ed.). Beverly Hills, CA: Sage.
- Hogan, R., & Emler, N. P. (1981). Retributive justice. In M. J. Lerner & S. C. Lerner (Eds.), *The justice motive in social behavior* (pp. 125-143). New York: Academic Press.

- Homans, G. C. (1950). *The human group*. New York: Harcourt, Brace.
- Homans, G. C. (1961). *Social behavior: Its elementary forms*. New York: Harcourt, Brace.
- Hui, C. H., Triandis, H. C., & Yee, C. (1991). Cultural differences in reward allocation: Is collectivism the explanation? *British Journal of Social Psychology*, *30*, 145-157.
- Hume, D. (1957). *An inquiry concerning the principle of morals*. New York: Liberal Arts Press. (Original work published 1751).
- Ickes, W. (1997). *Empathic accuracy*. New York: Guilford.
- Jackson, P. L., Meltzoff, A. N., & Decety, J. (2005). How do we perceive the pain of others: A window into the neural processes involved in empathy. *NeuroImage*, *24*, 771-779.
- Johnston, D. K. (1988). Adolescents' solutions to dilemmas in fables: Two moral orientations – two problem-solving strategies. In C. Gilligan, J. V. Ward, & J. M. Taylor (Eds.), *Mapping the moral domain* (pp. 49-72). Cambridge, MA: Harvard University Press.
- Kant, I. (1990). *Foundations of the metaphysics of morals* (L. W. Beck, Trans.). New York: Macmillan. (Original work published 1785).
- Katz, I., Glass, D. C., & Cohen, S. (1973). Ambivalence, guilt, and the scapegoating of minority group victims. *Journal of Experimental Social Psychology*, *9*, 423-436.
- Keysers, C., Wicker, B., Gazzola, V., Anton, J.-L., Fogassi, L., & Gallese, V. (2004). A touching sight: SII/PV activation during the observation and experience of touch. *Neuron*, *42*, 335-346.

- Kim, K. I., Park, H. J., & Suzuki, N. (1990). Reward allocations in the United States, Japan, and Korea: A comparison of individualistic and collectivistic cultures. *Academy of Management Journal*, 33, 188-198.
- Klein, R. (1971). Some factors influencing empathy in six- and seven-year-old children varying in ethnic background (Doctoral dissertation, University of California, Los Angeles, 1970). *Dissertation Abstracts International*, 31, 3960A.
- Kobayashi, R., & Trommsdorff, G. (1993). Empathy and prosocial behavior: German and Japanese children in cross-cultural comparison. In G. Rudinger, C. Rietz, U. Kleinemas, & T. Meiser (Eds.), *Developmental psychology in a changing Europe* (p. 142). Bonn: Pace.
- Kohlberg, L. (1963). The development of children's orientations toward moral order: Sequence in the development of moral thought. *Vita Humana*, 6, 11-33.
- Kohlberg, L. (1969). Stage and sequence: The cognitive developmental approach to socialization. In D. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 347-380). Chicago: Rand McNally.
- Kohlberg, L. (1981). *The philosophy of moral development: Moral stages and the idea of justice*. San Francisco: Harper & Row.
- Kramer, R. M., Newton, E., & Pommerenke, P. L. (1993). Self-enhancement biases and negotiator judgment: Effects of self-esteem and mood. *Organizational Behavior and Human Decision Processes*, 56, 110-133.
- Krebs, D. L. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, 32, 1134-1146.
- Kruskal, J. B. (1968). Statistical analysis, special problems of transformations of data. In

- D. L. Sills (Ed.), *International encyclopedia of the social sciences* (Vol. 15, pp. 182-193). New York: Macmillan.
- Langer, E., Blank, A., & Chanowitz, B. (1978). The mindlessness of ostensibly thoughtful action: The role of "placebic" information in interpersonal interaction. *Journal of Personality and Social Psychology*, 36, 635-642.
- Lennon, R., & Eisenberg, N. (1987). Gender and age differences in empathy and sympathy. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 195-217). Cambridge, UK: Cambridge University Press.
- Lerner, M. J. (1980). *The belief in a just world*. New York: Plenum.
- Leung, K. (1988). Theoretical advances in justice behavior: Some cross-cultural input. In M. H. Bond (Ed.), *The cross-cultural challenge to social psychology* (pp. 218-229). Newbury Park, CA: Sage.
- Leung, K. (1997). Negotiation and reward allocations across cultures. In P. C. Earley & M. Erez (Eds.), *New perspectives on international industrial/organizational psychology* (pp. 640-675). San Francisco: Jossey-Bass.
- Leung, K., & Bond, M. H. (1982). How Chinese and Americans reward task-related contributions: A preliminary study. *Psychologia: An International Journal of Psychology in the Orient*, 25, 32-39.
- Leung, K., & Bond, M. H. (1984). The impact of cultural collectivism on reward allocation. *Journal of Personality and Social Psychology*, 47, 793-804.
- Leung, K., & Stephan, W. G. (2001) Social justice from a cultural perspective. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 151-170). New York: Oxford University Press.

- Leung, K., & Tong, K.-K. (2004). Justice across culture: A three-stage model for intercultural negotiation. In M. J. Gelfand & J. M. Brett (Eds.), *The handbook of negotiation and culture* (pp. 295-312). Stanford, CA: Stanford University Press.
- Levine, T., Bresnahan, M. J., Park, H. S., Lapinski, M. K., Wittenbaum, G. M., Shearman, S. M., et al. (2003). Self-construal scales lack validity. *Human Communication Research, 29*, 210-252.
- Lodge, M. (1981). *Magnitude scaling*. Newbury Park, CA: Sage.
- Loewenstein, G., Issacharoff, S., Camerer, C., & Babcock, L. (1993). Self-serving assessments of fairness and pretrial bargaining. *Journal of Legal Studies, 22*, 135-159.
- Ma, H. K. (1997). The affective and cognitive aspects of moral development: A Chinese perspective. In K. Sinha (Ed.), *Asian perspective on psychology* (pp. 93-109). Thousand Oaks, CA: Sage.
- Marin, G. (1985). The preference for equity when judging the attractiveness and fairness of an allocator: The role of familiarity and culture. *Journal of Social Psychology, 125*, 543-549.
- Matsumoto, D. (1999). Culture and self: An empirical assessment of Markus and Kitayama's theory of independent and interdependent self-construals. *Asian Journal of Social Psychology, 2*, 289-310.
- Maughan, M. R., & Higbee, K. L. (1981). Effect of subjects' incentives for participation on estimated compliance for self and others. *Psychological Reports, 49*, 119-122.

- McDevitt, T. M., Lennon, R., & Kopriva, R. J. (1991). Adolescents' perceptions of mothers' and fathers' prosocial actions and empathic responses. *Youth and Society*, 22, 387-409.
- McGovern, M. K. (2005, May 18). *Empathy*. Retrieved May 18, 2005, from <http://serendip.brynmawr.edu/bb/neuro/neuro05/web3/mmcgovern.html#11>
- Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.
- Meindl, J. R., & Lerner, M. J. (1984). Exacerbation of extreme responses to an out-group. *Journal of Personality and Social Psychology*, 47, 71-84.
- Mencius (1970). *Mencius*. (D. C. Lau, Trans.). New York: Penguin Classics. (Original work published 320 BCE)
- Merton, R. K., & Kitt, A. S. (1950). Contributions to the theory of reference group behavior. In R. K. Merton & P. F. Lazarsfeld (Eds.), *Continuities in social research* (pp. 40-105). Glencoe, IL: Free Press.
- Messé, L. A., Hymes, R. W., & MacCoun, R. J. (1986). Group categorization and distributive justice decisions. In H. W. Bierhoff, R. L. Cohen, & J. Greenberg (Eds.), *Justice in social relations* (pp. 227-248). New York: Plenum.
- Messick, D. M., Bloom, S., Boldizar, J. P., & Samuelson, C. D. (1985). Why we are fairer than others? *Journal of Experimental Social Psychology*, 21, 480-500.
- Miller, J. G. (1994). Cultural diversity in the morality of caring: Individually-oriented versus duty-based interpersonal moral codes. *Cross-Cultural Research*, 28, 3-39.
- Miller, J. G., & Bersoff, D. M. (1992). Culture and moral judgment: How are conflicts between justice and friendship resolved? *Journal of Personality and Social Psychology*, 62, 541-554.

- Miller, J. G., Bersoff, D. M., & Harwood, R. L. (1990). Perceptions of social responsibilities in India and in the United States: Moral imperatives or personal decisions? *Journal of Personality and Social Psychology*, *58*, 33-47.
- Miller, J., & Clark, M. S. (1994). Communal and exchange relationships: Controversies and research. In R. Erber & R. Gilmour (Eds.), *Theoretical frameworks for personal relationships* (pp. 29-42). Hillsdale, NJ: Erlbaum.
- Miller, J. G., & Luthar, S. (1989). Issues of interpersonal responsibility and accountability: A comparison of Indians' and Americans' moral judgments. *Social Cognition*, *3*, 237-261.
- Montada, L., Schmitt, M., & Dalbert, C. (1986). Thinking about justice and dealing with one's privileges: A study on existential guilt. In H. W. Bierhoff, R. Cohen, & J. Greenberg (Eds.), *Justice in social relations* (pp. 125-144). New York: Plenum Press.
- Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social Psychology*, *67*, 949-971.
- Morrison, I., Lloyd, D., di Pellegrino, G., & Roberts, N. (2004). Vicarious responses to pain in anterior cingulate cortex: Is empathy a multisensory issue? *Cognitive, Affective, & Behavioral Neuroscience*, *4*, 270-278.
- Munro, D., Bore, M., & Powis, D. (2005). Personality factors in professional ethical behavior: Studies of empathy and narcissism. *Australian Journal of Psychology*, *57*, 49-60.

- Na, E. Y., & Loftus, E. F. (1998). Attitudes towards law and prisoners, conservative authoritarianism, attribution, and internal-external locus of control: Korean and American law students and undergraduates. *Journal of Cross-Cultural Psychology, 29*, 595-615.
- Nichols S. (2004). *Sentimental rules: On the natural foundations of moral judgment*. New York: Oxford University Press.
- Nowak, M. A., & Sigmund, K. (1998). Evolution of indirect reciprocity by image scoring. *Nature, 393*, 573-577.
- O'Connor, P. (1992). *Friendships between women: A critical review*. New York: Guilford.
- Ohbuchi, K., Fukushima, O., & Tedeschi, J. T. (1999). Cultural values in conflict management: Goal orientation, goal attainment, and tactical decision. *Journal of Cross-Cultural Psychology, 30*, 51-71.
- Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analysis. *Psychological Bulletin, 128*, 3-72.
- Park, H. S., & Levine, T. R. (1999). The theory of reasoned action and self-construal: Evidence from three cultures. *Communication Monographs, 66*, 199-218.
- Preston, S. D., & de Waal, F. B. M. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences, 25*, 1-72.
- Putnam, R. D. (2001). *Bowling alone*. New York: Simon & Schuster.

- Rasinski, K. (1987). What's fair is fair . . . or is it? Value differences underlying public views about social justice. *Journal of Personality and Social Psychology*, 53, 201-211.
- Rawls, J. A. (1971). *A theory of justice*. Cambridge, MA: Belnap Press of Harvard University Press.
- Rook, K. S. (1987). Reciprocity of social exchange and social satisfaction among older women. *Journal of Personality and Social Psychology*, 52, 145-154.
- Sacks, O. W. (1995). *An anthropologist from Mars*. New York: Knopf.
- Schultz, D. P. (1969). The human subject in psychological research. *Psychological Bulletin*, 72, 214-228.
- Shackelford, T. K., & Buss, D. M. (1996). Betrayal in mateships, friendships, and coalitions. *Personality and Social Psychology Bulletin*, 22, 1151-1164.
- Shinn, A. M., Jr. (1974). Relations between scales. In H. M. Blalock Jr. (Ed.), *Measurement in the social sciences* (pp. 121-158). Chicago: Aldine.
- Shultz, T. R., Schleifer, M., & Altman, I. (1981). Judgments of causation, responsibility, and punishment in cases of harm-doing. *Canadian Journal of Behavioural Science*, 13, 238-253.
- Silk, J. B. (2003). Cooperation without counting: The puzzle of friendship. In P. Hammerstein (Ed.), *Genetic and cultural evolution of cooperation* (pp. 37-54). Cambridge, MA: The MIT Press.
- Simpson, E. L. (1974). Moral development research: A case study of scientific cultural bias. *Human Development*, 17, 81-106.

- Singer, P. (1995). *How are we to live? Ethics in an age of self-interest*. New York: Prometheus Books.
- Singer, T., & Fehr, E. (2005). The neuroeconomics of mind reading and empathy. *American Economic Review*, *95*, 340-346.
- Singer, T., Seymour, B., O'Doherty, J. P., Kaube, H., Dolan, R. J., & Frith, C. D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science*, *303*, 1157-1162.
- Singer, T., Seymour, B., O'Doherty, J. P., Stephan, K. E., Dolan, R. J., & Frith, C. D. (2006). Empathic neural responses are modulated by the perceived fairness of others. *Nature*, *439*, 466-469.
- Skinner, B. F. (1957). *Verbal behavior*. New York: Appleton.
- Smith, A. (1759/1976). *The theory of moral sentiments*. Oxford, England: Clarendon Press.
- Solomon, R. C. (2004). *In defense of sentimentality*. New York: Oxford University Press.
- Spector, A. J. (1956). Expectations, fulfillment, and morale. *Journal of Abnormal and Social Psychology*, *52*, 51-56.
- Stotland, E. (1969). Exploratory investigations of empathy. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 4, pp. 271-314). New York: Academic Press.
- Stotland, E., Sherman, S. E., & Shaver, K. G. (1971). *Empathy and birth order*. Lincoln: University of Nebraska Press.

- Stouffer, S. A., Suchman, E. A., DeVinney, L. C., Starr, S. A., & Williams, R. M. (1949). *The American soldier: Adjustment during army life*. Princeton, NJ: Princeton University Press.
- Thibaut, J. (1950). An experimental study of the cohesiveness of underprivileged groups. *Human Relations, 3*, 251-278.
- Thompson, L., & Loewenstein, G. (1992). Egocentric interpretations of fairness in interpersonal conflict. *Organizational Behavior and Human Decision Processes, 51*, 176-197.
- Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic motivation. *Journal of Personality and Social Psychology, 43*, 281-292.
- Tomprowski, P. D., Simpson, R. G., & Hager, L. (1993). Method of recruiting subjects and performance on cognitive tests. *The American Journal of Psychology, 106*, 499-521.
- Torgerson, W. S. (1958). *Theory and methods of scaling*. New York: Wiley.
- Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46*, 35- 57.
- Trommsdorff, G. (1995). Person-context relations as developmental conditions and prosocial action: A cross-cultural analysis. In T. A. Kindermann & J. Valsiner (Eds.), *Development of person-context relations* (pp. 113-146). Hillsdale, NJ: Erlbaum.
- Tyler, T., & Blader, S. L. (2004). Justice and negotiation. In M. J. Gelfand & J. M. Brett (Eds.), *The handbook of negotiation and culture* (pp. 295-312). Stanford, CA: Stanford University Press.

- Tyler, T., Boeckmann, R. J., Smith, H. J., & Huo, Y. J. (1997). *Social justice in a diverse society*. Boulder, CO: Westview Press.
- van Dijk, F., Sonnemans, J., & van Winden, F. (1998). *Incentive systems in a real effort experiment*. Rotterdam: Tinbergen Institute.
- Walker, K. (1995). "Always there for me": Friendship patterns and expectations among middle- and working-class men and women. *Sociological Forum*, *10*, 273-296.
- Wallach, M. A., & Wallach, L. (1983). *Psychology's sanction for selfishness: The error of egoism in theory and therapy*. San Francisco: Freeman.
- Wang, R. R. (2003). The principled benevolence: A synthesis of Kantian and Confucian moral judgment. In B. Mou (Ed.), *Comparative approaches to Chinese philosophy* (pp. 122-143). Hampshire, England: Ashgate Publishing.
- Watson, P. J., Grisham, S. O., Trotter, M. V., & Biderman, M. D. (1984). Narcissism and empathy: Validity evidence for the Narcissistic Personality Inventory. *Journal of Personality Assessment*, *48*, 301-305.
- Wicker, B., Keysers, C., Plailly, J., Royet, J.-P., Gallese, V., & Rizzolatti, G. (2003). Both of us disgusted in my insula: The common neural basis of seeing and feeling disgust. *Neuron*, *40*, 655-664.
- Winn, K. I., Crawford, D. W., & Fischer, J. (1991). Equity and commitment in romance versus friendship. *Journal of Social Behavior and Personality*, *6*, 301-314.
- Yamagishi, T. (1988). The provision of a sanctioning system in the United States and Japan. *Social Psychology Quarterly*, *51*, 265-271.