

IS BUDDHA TOLERANT?

**EAST ASIAN RELIGIONS, PREJUDICE, AND
PROSOCIALITY**

IS BUDDHA TOLERANT?
EAST ASIAN RELIGIONS, PREJUDICE, AND
PROSOCIALITY

Magali Clobert

Promoteur

Vassilis Saroglou (UCL)

Thèse présentée en vue de
l'obtention du grade de Docteur
en sciences psychologiques et
de l'éducation

Président du jury

Bernard Rimé (UCL)

Membres du jury

Stéphanie Demoulin (UCL)

Paul Servais (UCL)

James Day (UCL)

Adam B. Cohen (Arizona State University)

Jeanne L. Tsai (Stanford University)

Photo de couverture: Benjamin Krause. Source: Wikimedia Commons (Url : <http://flickr.com/photo/15484060@N04/2466304123>)

Résumé

Depuis des décennies, les chercheurs ont établis que la religion était non seulement liée à des comportements prosociaux mais aussi, paradoxalement, à des attitudes négatives envers bon nombre d'exogroupes. Cependant, les études dans ce domaine ont pour la plupart été menées en Occident auprès de chrétiens. Ces résultats sont-ils dès lors généralisables aux cultures et religions asiatiques? A travers dix études, nous avons démontré que la relation paradoxale entre religion, comportement prosocial et attitude négative envers les exogroupes n'est pas universelle. En effet, la religiosité et les concepts religieux asiatiques (Bouddhisme, Taoïsme, ...) favorisent non seulement les comportements prosociaux mais aussi la tolérance envers les exogroupes ethnique et religieux. Une plus grande tolérance envers la contradiction ainsi qu'une compassion accrue semblent expliquer cet impact positif des religions asiatiques. Il nous semble que cette thèse contribue de manière significative à la recherche en psychologie interculturelle ainsi qu'en psychologie de la religion. Cela nous rappelle à quel point il est important de mieux comprendre comment préjugés et discrimination émergent à travers différents contextes religieux et culturels.

Abstract

The link between religion and prosociality but also, paradoxically, many kinds of prejudice has been established for decades. However, researchers in that field conducted their investigations only in Western cultural and religious contexts. Do these findings also hold for Eastern religions and Asian cultures? Across ten studies, we demonstrated that the paradoxical relation between religion and both prosociality and prejudice is not universal. We consistently found that East Asian religiosity and religious concepts promote not only prosociality but also tolerance (low prejudice) toward ethnic and religious outgroups. A greater tolerance of contradiction and compassion seem to explain the positive impact of East Asian religions. It is our impression that this dissertation contributes significantly to the body of research in cross-cultural psychology as well as in psychology of religion. It reminds us the importance of a better understanding of how prejudiced attitudes emerge across and between religious and cultural contexts.

Table of contents

Acknowledgements	13
Introduction	15
The light and dark side of religiosity: Correlational evidence	19
1. Religiosity and prosociality.....	19
2. Religiosity and prejudice.....	20
2.1. Racial prejudice	21
2.2. Inter-religious prejudice.....	22
2.3. Prejudice against homosexuals	22
2.4. Prejudice against atheists.....	22
2.5. Implicit and explicit prejudice	23
2.6. Possible mediational pathways	25
Religious concepts as a cause: Religious priming, prosociality, and prejudice	27
1. Religion and prosociality.....	28
2. Religion and prejudice.....	29
Are correlates and effects of religion universal?	31
1. East Asian religions.....	31
1.1. Buddhism.....	32
1.2. Taoism	33
1.3. Confucianism.....	34
1.4. Chinese folk religion.....	34
2. Cultural differences between East Asian and Western civilizations	35
2.1. Individualism versus collectivism.....	36
2.2. Independence versus interdependence	37
2.3. Analytic versus holistic thinking	37
2.4. Culture and intergroup attitudes	39

East Asian religions, prejudice, and prosociality

3. Theological differences between religions	40
3.1. Compassion and equanimity	41
3.2. Impermanence, no-self, and change.....	41
3.3. Dependent origination and harmony	42
4. Psychological differences between religious cultures	42
5. Disentangle religion and culture.....	43
The possible impact of East Asian religiosity and religious concepts on social attitudes and behaviors	47
1. Targets	47
2. Possible mediators	49
2.1. Tolerance of contradiction	49
2.2. Disgust	50
2.3. Distrust	50
2.4. Compassion	51
2.5. Oneness.....	51
3. Individual differences.....	52
4. Cultural contexts	53
Overview of the chapters.....	53
Chapter 1: East Asian religious tolerance: A myth or a reality? Empirical investigations of religious prejudice in East Asian societies	55
Abstract.....	57
Introduction.....	59
1. Religiosity and Prejudice across Religions	59
2. East Asia-West Religious and Cultural Differences.....	60
3. The present studies	62
Study 1	63
1. Method	63
1.1. Participants	63
1.2. Measures	64
2. Results	64

Table of contents

3. Discussion	68
Study 2	71
1. Method	71
1.1. Participants	71
1.2. Measures	72
2. Results	73
3. Discussion	74
Study 3	77
1. Method	78
1.1. Participants	78
1.2. Material and procedure	78
2. Results	79
2.1. Preliminary analyses	79
2.2. Religious measures, authoritarianism, and implicit prejudice	80
3. Discussion	81
General discussion	83
Chapter 2: Religion, Magical Thinking, and Distrust in Science: Comparing East versus West	87
Abstract.....	89
Introduction.....	91
1. Religion, magical thinking, and paranormal beliefs	91
2. Religion and science.....	92
3. Cross-cultural and cross-religious perspective	93
4. The present study	95
Method	97
1. Dataset	97
2. Measures	97
2.1. Magical thinking.....	97
2.2. Distrust in science.....	98
2.3. Religious identification.....	98

East Asian religions, prejudice, and prosociality

2.4. Religious practice	98
2.5. Religious beliefs	99
Results	101
Discussion	107
Chapter 3: East Asian religious tolerance vs. Western monotheist prejudice: Intolerance of contradiction as a common mechanism	111
Abstract.....	113
Introduction.....	115
1. Closed-minded ideologies, disgust sensitivity, and distrust.....	116
2. Cross-cultural and cross-religious perspective	117
3. Overview of the studies	118
Study 1	121
1. Method	121
1.1. Participants	121
1.2. Measures	121
2. Results	122
Study 2	129
1. Method	129
1.1. Participants	129
1.2. Measures	129
2. Results	130
Discussion	135
Chapter 4: Intercultural non-conscious influences: Prosocial effects of Buddhist priming on Westerners of Christian tradition	139
Abstract.....	141
Introduction.....	143
1. Consequences of hetero-religious priming	143
2. Intercultural implicit cognition.....	144
3. Two sides of prosociality: Generosity and tolerance.....	145
4. The moderating role of individual dispositions	146

Table of contents

5. The present study	147
Method	149
1. Participants	149
2. Material and procedure.....	149
2.1. Priming material	149
2.2. Implicit measure of prejudice	150
2.3. Prosocial behavior	151
2.4. Individual differences	151
Results	153
Discussion	157
Chapter 5: Buddha makes you tolerant: The role of Buddhist primes in reducing prejudice and increasing prosociality	161
Abstract.....	163
Introduction.....	165
1. Religious priming, prosociality, and prejudice.....	166
2. Cross-religious and cross-cultural perspective	167
3. How Buddhism May Impact Prosociality and Prejudice?	169
3.1. Mediators.....	169
3.2. Targets	169
3.3. Cultural context	170
3.4. Individual differences	171
4. Overview of the experiments.....	171
Experiment 1	173
1. Method	173
1.1. Participants	173
1.2. Material and procedure	173
2. Results	174
3. Discussion	176
Experiment 2	179
1. Method	179

East Asian religions, prejudice, and prosociality

1.1. Participants	179
1.2. Material and procedure	180
2. Results	181
3. Discussion	186
Experiment 3	187
1. Method	187
1.1. Participants	187
1.2. Material and procedure	188
2. Results	189
3. Discussion	192
General discussion	193
General Discussion	197
1. Summary of the findings	199
2. Discussion of the findings	202
3. Limitations and perspectives for future research.....	204
4. Practical implications for managers	209
References	213

Acknowledgments – Remerciements

Aujourd'hui, à travers ces quelques pages, je réalise un rêve et marque une étape importante vers la concrétisation d'un rêve plus fou encore : vivre de ma passion. Ce chemin, je ne l'ai pas arpenté seule; ce rêve, je ne l'ai ni fait ni réalisé seule. Même si on aime croire que toute réussite est de notre seul fait, dans toute belle quête il y a nombre d'intervenants, de dialogues, de situations, et de hasards. Derrière l'histoire que vous allez lire se cachent des personnages qui, à dessin ou non, ont rendu l'intrigue plausible et méritent tout au moins ces quelques mots ...

Tout d'abord, je tiens à adresser mes remerciements les plus sincères à mon promoteur, Vassilis Saroglou, pour son soutien, son expertise et sa confiance tout au long de ces 4 années. Il ne fait aucun doute que si aujourd'hui cette thèse voit le jour c'est d'abord et avant tout grâce à vous qui n'avez pas hésité à me soutenir et à me suivre dans la création de ce qui n'était alors qu'un projet de doctorat. Grâce à vos conseils et encouragements, j'ai pu concrétiser mon envie de faire un doctorat dans le confort d'un mandat FNRS. Au-delà de l'aspect professionnel de nos relations qui ont toujours été excellentes (même si je n'ai pas toujours été aussi consciencieuse que vous l'auriez espéré), j'ai particulièrement apprécié votre humour et votre goût pour la bonne cuisine dans nos moments plus informels. Il semblerait que nous étions faits pour nous entendre car je garde de nos nombreux dîners aux quatre coins du monde un souvenir plus qu'agréable. J'espère en tout cas que nous aurons encore l'occasion de déguster ensemble quelques bonnes spécialités au détour d'une conférence. Encore mille mercis pour tout.

Je tiens également à remercier les membres de mon comité d'accompagnement, Stéphanie Demoulin et Paul Servais. Stéphanie, un tout grand merci pour ton soutien, tes encouragements et tes conseils. Merci de m'avoir poussée à questionner mes résultats et mes modèles théoriques ce qui, je pense, n'a fait qu'enrichir cette thèse. Monsieur Servais, je vous remercie pour l'intérêt que vous avez porté à ma thèse et pour votre enthousiasme malgré les disciplines différentes dont nous sommes issus. Nos discussions ont toujours été pour moi très enrichissantes et source de réflexion.

Je voudrais également remercier tous mes collègues qui m'ont indéniablement aidé tout au long de mon parcours que ce soit grâce à leurs conseils, leur soutien ou toutes les soirées passées ensemble autour d'un verre ou d'un repas. Merci tout particulièrement à Caroline qui a souffert avec moi et a toujours été là pour moi. Merci à Evelynne avec qui j'ai partagé le stress d'une fin de thèse et des moments

mémorables. Une mention spéciale à Marianne et Jolanda pour leur participation investie dans de futurs projets communs. Merci aussi à tous les psyrelis mais plus largement aussi aux cécosiens pour leur amitié, leurs divers conseils et leur bonne humeur qui a toujours su égayer la pause de midi.

Merci également à tous les mémorants qui ont contribué à cette thèse à travers leurs récoltes de données comme Jie-Lin, Caroline et Laurie. N'oublions pas les différents centres bouddhistes qui m'ont ouvert leurs portes ainsi que l'Union Bouddhiste Belge qui m'a grandement aidé dans la recherche de participants. Merci aux étudiants en psychologie de Louvain-la-Neuve pour leur participation aux nombreuses études menées et merci également à l'UCL pour le matériel substantiel mis à disposition des doctorants.

J'en arrive à la famille et aux amis qui, dans l'ombre, ont toujours su me soutenir. Je pense tout particulièrement à Etienne qui a su me supporter durant ces 4 années de thèses ainsi qu'à Tequila pour son soutien inconditionnel. Merci à ma maman pour son aide et sa confiance ainsi qu'à ma belle famille pour leurs encouragements. Enfin, je n'en serais probablement pas là sans l'exemple et les bons conseils de mon papa qui a su éveiller et guider une passion que j'avais probablement déjà en moi depuis longtemps. Merci à tous ceux qui de près ou de loin ont contribué à cette étape importante de ma vie.

I would like to thank Kwang-Kuo Hwang and Wen-Li Soong who welcomed me in their departments at the National Taiwan University and the FuJen Catholic University. Professor Soong, I would like to thank you for your kindness and your help during my stay in Taipei. Professor Hwang, thank you again for your implication and for your valuable contribution to this dissertation. Without your help to collect data in Taiwan, this dissertation would not exist. Finally, I would like to thank the president and the members of the jury for their time and their investment. Bernard, it is a real honour to have you as a president and thank you again for your patience and your organization. James, I want to thank you for your smile and your kindness. Furthermore, I have always appreciated your comments and advices during our ARC meetings. Adam, I would like to thank you for your help, your questions, your kindness, and your pleasant company during many conferences. I am looking forward to collaborate and spend some time with you in other conferences. Finally, I want to warmly thank Jeanne Tsai for her interest and valuable advices. I hope we will get a chance to work together in the future.

INTRODUCTION

Throughout human history, religion has always been a central component of the self for many people and a strong motivator for a variety of human behaviors (Pargament, Exline, & Jones, 2013; Saroglou, 2014). Nowadays, around 80% of Americans and 75.5% of Europeans declare belonging to a religious tradition (Kosmin & Keysar, 2009; European Values Study, 2008). Very early on, psychologists realized the amazing power of religion, which drives people to behave both prosocially and aggressively. The role of religion regarding pro and anti-social attitudes is indeed paradoxical: religion may foster both prosociality and prejudice. We all have in mind examples of individuals who have behaved prosocially or aggressively in the name of religion. One that may come to mind is Mother Teresa and her Missionaries of Charity who helped the poorest of the poor throughout the world. Religions indeed emphasize prosocial values and ideals (Habito & Inaba, 2006) and preach love, forgiveness, and charitable acts. Religiosity is related to placing a high value on benevolence among Christians, Jews, and Muslims (Saroglou, Delpierre, & Dernelle, 2004, for a meta-analysis), as well as converted Buddhists (Saroglou & Dupuis, 2006). In very recent years, priming experiments have confirmed the hypothesized causal direction in which religious concepts, texts, and places activate prosocial concepts and behaviors—most often regardless of participants' individual religiosity (e.g., Preston, Ritter, & Hernandez, 2010; Sasaki, Kim, Mojaverian, Kelley, Park, & Janusonis, 2013).

However, when considering people who have acted in the name of religion, one may also think of violent and aggressive acts which were motivated by religion, such as the Crusades. Recent history is marked by terrorist acts such as those perpetrated on September 11, 2001, in America or everyday in Iraq or Afghanistan. In accordance, systematic research over the last 30 years has established that religiousness—certainly religious fundamentalism, but often even mere personal and intrinsic religiosity—also predicts prejudice toward outgroups and people who are perceived to threaten one's religious values. This is the case with people of other race, ethnicity, and religion, as well as atheists, homosexuals, single mothers, and feminists (Batson, Schoenrade, & Ventis, 1993; Blogowska & Saroglou, 2011; Hall, Matz, & Wood, 2010; Hunsberger & Jackson, 2005; Rowatt, Carpenter, & Haggard, 2013; Whitley, 2009). Priming experiments, by showing that the exposure to religious concepts increases various negative attitudes including intergroup prejudice (e.g., Johnson, Rowatt, & LaBouff, 2010), have established a causal relation between religious concepts and prejudice.

Nevertheless, the above knowledge is based on studies carried out essentially among Christians from North America and Europe. Few additional studies conducted with Muslims and Jews—and, exceptionally, Hindus—have provided similar results. For instance, religious attendance predicts the support of suicide attacks among Palestinian Muslims and Israeli Jews, and the support of martyrdom and out-group hostility among Indonesian Muslims, Israeli Jews, and Indian Hindus (Ginges, Hansen, & Norenzayan, 2009; Hewstone, Islam, & Judd, 1993;

Hunsberger, 1996). Canadian Muslim and Jewish, but also Hindu religious fundamentalists, tend, like Christian fundamentalists, to be authoritarian and to show hostility toward homosexuals (Hunsberger, 1996). In sum, the existing knowledge on religiosity and prejudice clearly applies to the three monotheistic religions; and possibly extends to Hinduism.

Surprisingly enough, it is unknown whether the above knowledge generalizes to people belonging to major East Asian religions and cultures, i.e. Eastern Buddhists, Taoists, and folk believers living in Asian countries. More generally, systematic empirical research on the psychological aspects of East Asian religions and religiousness is extremely rare (but see for recent exceptions: Sasaki & Kim, 2011; Sasaki, Kim, & Xu, 2011; Tsai, Miao, & Seppala, 2007). Is the paradoxical role of religion, promoting both prosociality and prejudice, universal? The aim of the present work was to investigate two independent but related issues: (1) the role of religiousness, as an individual disposition, and (2) religion, as a set of constructs, on pro- and anti-social attitudes and behaviors in East Asian religions. We hypothesized that Eastern religiousness relates mostly to prosociality and tolerance, or at least to a prejudice that is weaker in size and extent (number of targets), compared to West-originated Christianity. Second, we hypothesized that, regardless of the cultural context, priming East Asian religious concepts will increase prosocial behaviors and decrease prejudice. Below, we highlight the importance of this question for psychological research on religion and culture, and develop the rationale for the hypotheses.

This introductory chapter is organized in four main sections in which we 1) review the evidence for the connections between religiosity, prosociality, and prejudice coming from correlational studies, 2) present the effects of religious priming on prosociality and prejudice, 3) discuss whether the correlates and effects of religion may be seen as universal or not throughout cultures and religious faiths (specifically when comparing Western cultures and monotheistic religions versus East Asian cultures and religions), and 4) detail potential moderators and mediators that may interact and explain the relation between East Asian religions (religiosity and religious concepts) and prosociality as well as prejudice. Throughout this chapter, we refer to the term *religion* as broadly defined as a set of beliefs, practices, and rituals that implies notions of transcendence and the sacred. *Religiosity*, or *religiousness*, refers to the degree to which an individual perceives the self as religious or as committed to religious doctrines, community, values, and emotions. We use the term *prosociality* to refer to both attitudes and behaviors that reflect an intention to benefit another or the society as a whole, such as helping, sharing, donating, cooperating, or volunteering (Galen, 2012; Penner, Dovidio, Piliavin, & Schroeder, 2005). Finally, conceived as a distinct concept from stereotypes and discrimination, *prejudice* is defined as a generalized negative attitude and evaluation of a person or a group (Brewer & Brown, 1998; Brown, 2010).

The light and dark side of religion:

Corelational evidence

As previously said, the effects and correlates of religiosity are often paradoxical: religiosity or religiousness has indeed been linked to both positive and negative outcomes, often conflicting. For instance, whereas religiosity has been related to physical and mental health (Koenig, McCullough, & Larson, 2001; Miller & Kelley, 2005; Powell, Shahabi, & Thoresen, 2003), it has also been associated with neuroticism and anxiety (Batson et al., 1993). Within the domain of personality psychology, religiosity has been linked to both positive and negative personality traits such as humility (Rowatt et al., 2006), optimism (Koenig et al., 2001), and agreeableness (Saroglou, 2010) but also authoritarianism (Altemeyer & Hunsberger, 1992). Finally, religiosity has also been associated with positive attitudes and behaviors such as gratitude (McCullough, Emmons, & Tsang, 2002), less substance and alcohol abuse (Michalak, Trocki, & Bond, 2007; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998), as well as coping and self-esteem (Maynard, Goruch, & Bjork, 2001), but also to negative attitudes and behaviors such as prejudice (Batson et al., 1993; Hall et al., 2010; Whitley, 2009).

This dualistic relationship between religiosity and positive but also negative outcomes extends to the subfield of social psychology. Indeed, religiosity is frequently associated with both pro- and anti-social attitudes and behaviors such as prosociality and prejudice. In the next section, we describe how religiosity relates paradoxically to prosocial outcomes as well as prejudice against various targets.

1. Religiosity and prosociality

According Saroglou (2013), the associations between religious and prosocial measures are consistent even if typically modest in size. Indeed, religions emphasize prosocial values and ideals across various cultural contexts (Habito & Inaba, 2006), even if the latter are not purely altruistic (Neusner & Chilton, 2005). Religious people tend to report high altruistic behaviors and empathy and are indeed perceived as such by peers (Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005). Researchers have showed that traits and values typically related to prosocial tendencies, such as agreeableness (Saroglou, 2010), benevolence (Saroglou et al., 2004) and the moral principles of care and justice (Graham & Haidt, 2010) are particularly present among religious people. More broadly, religious people report

high feelings of empathy (e.g., Batson et al., 1993; Markstrom, Huey, Stiles, & Krause, 2010; Saroglou et al., 2005), compassion, and love (e.g., Smith, 2009).

Besides those broad prosocial traits, values, and emotions, religiosity has also been found to be positively associated with more focused traits or behavioral dispositions expressing prosocial tendencies. For instance, McCullough and colleagues (2002) consistently found through four correlational studies that gratitude, associated with prosocial behaviors such as dispositional empathy, was positively linked with religiousness and spirituality. Furthermore, religiosity also positively relates to other prosocial attitudes and behaviors such as honesty (Spilka, Hood, Hunsberger, & Gorsuch, 2003), forgiveness (McCullough & Worthington, 1999), generosity (Dillon, Wink, & Fay, 2003), and the willingness to help close people in need (Saroglou et al., 2005). Nevertheless, the prosocial tendencies of religious people are not unlimited, as suggested by the last quoted finding, and may be conditional to the target in need (see for instance Blogowska & Saroglou, 2011). Moreover, when conducting self-reported studies, one can be particularly suspicious about social desirability. Previous studies found that there is indeed a link between religiousness and social desirability (for a meta-analysis, see Sedikides & Gebauer, 2010). However, it is important to point out that, even though the relationship between religiosity and prosocial tendencies decreases when one controls for social desirability, the relationship still persists. Furthermore, as previously said, religious people not only report themselves as more prosocial, but they are perceived as such by peers (for a review, see Saroglou, 2010). The prosocial tendency to emphasize others' interests and needs seems thus to be a key and possibly universal characteristic shared by religious people. Other limitations of religious prosociality will be discussed later in the priming section.

2. Religiosity and prejudice

The relationships between religiosity and prejudice are somewhat complex and dependant on the target or the religious dimension measured. As Allport (1954) highlighted, religion may be able to make and unmake prejudice (p. 444). Nevertheless, several scholars have concluded from meta-analyses that most dimensions of religiosity consistently predict prejudice toward people of other race, ethnicity, and value-violating groups such as other religious groups, atheists, homosexuals, women, and single mothers (Batson et al., 1993; Hall et al., 2010; Hunsberger & Jackson, 2005; Whitley, 2009; see also Blogowska & Saroglou, 2011 for prejudice against feminists).

We review here research on religiosity and prejudice focusing on the four most common target types: racial outgroup members, religious outgroup members, homosexuals, and atheists. Although several authors argue that prejudice can be

generalized across targets, there are still specific components tapping the variance that is unique to specific targets of prejudice (Akrami, Ekehammar, & Bergh, 2011). Research has indeed shown that prejudice toward various targets is found to be significantly correlated and that a person who holds negative attitudes toward homosexuals is likely to be anti-Muslim, anti-Black, and so forth (Allport, 1954; Ekehammar & Akrami, 2003). Nevertheless, religiosity has been found to be differentially related to prejudice toward specific targets since religious teachings may, for instance, proscribe prejudice toward a specific kind of target (Black people) but not toward another (Batson et al., 1993). Furthermore, we will discuss the issue of explicit versus implicit measurements of prejudice as well as the issue of social norms and desirability. Finally, possible mechanisms explaining the association between religiosity and prejudice will also be addressed in this section.

2.1. Racial prejudice

As far as racial prejudice is concerned, religiosity sometimes relates to highly prejudiced attitudes and sometimes to tolerance (Hall et al., 2010). Actually, the effects of religiosity on racial prejudice seem to depend highly on which religious dimensions are taken into account. For instance, Hall and colleagues (2010) highlighted in their meta-analysis that whereas extrinsic religiosity and fundamentalism were positively correlated with racial prejudice, intrinsic religiosity and quest orientation correlated negatively. Nevertheless, the simple measure of religious identification (the rating of the subjective importance of religion in one's life or the self-reported degree of religiosity) was found to consistently predict racism across 55 studies (Hall et al., 2010). Furthermore, individuals high in devotional aspects of religion (intrinsic religiosity) reported lower racial prejudice on direct measures but not on indirect measures (Batson, Flink, Schoenrade, Fultz, & Pych, 1986). Finally, as many scholars consider quest to be a form of agnosticism (Donahue, 1985; Hall et al., 2010), it is still difficult to assume that some dimensions of religiosity truly predict racial tolerance. Indeed, even if the quest orientation posits the idea that a transcendent aspect of reality exists, quest orientated individuals have no clear and definitive beliefs about this transcendent reality (Batson et al., 1993). On the contrary, quest orientation favors doubts and questioning about transcendence. Quest orientation may thus measure a lack of religiosity as some data suggest by showing a weak or non-existent correlation between quest orientation and religious attendance (Altemeyer & Hunsberger, 1992) or belief in God (Jackson & Hunsberger, 1999).

2.2. Inter-religious prejudice

People holding different religious beliefs than those shared by ingroup members are often considered to be value-violating outgroup members since they violate the religious beliefs and values of the ingroup. Following Mavor's (2004) hypothesis regarding the moral component of the relationship between religiosity and prejudice, religious outgroups may experience prejudiced attitudes from dominant religious group since they endorse an alternative moral system. In this context, different studies have examined the relationship between religiosity and prejudice against people from other religious groups. In a qualitative literature review, Hunsberger and Jackson (2005) found that both extrinsic religiosity and intrinsic religiosity positively relate to self-reported prejudice against religious outgroups. In the same line of research, Christian religious beliefs were found to be positively associated with implicit preference for Christian names relative to Muslim names (Rowatt, Franklin, & Cotton, 2005). In a more recent study, researcher pointed out that self-identifying as religious was positively linked with negative attitudes toward Muslims relative to Christians (Johnson, Rowatt, & LaBouff, 2012).

2.3. Prejudice against homosexuals

The relationship between religiosity in general and prejudice against homosexuals is rather unequivocal: nearly all dimensions of religiosity are positively associated with negative attitudes toward gays and lesbians. Indeed, religious identification, Christian religious beliefs, extrinsic religiosity, religious fundamentalism but also intrinsic religiosity positively correlate with prejudice against homosexuals (for a meta-analysis, see Whitley, 2009). This strong and stable relationship between religiosity and prejudice against homosexuals, compared with the more complex racial prejudice, may be due to the differentiation between proscribed and non-proscribed prejudice (Batson et al., 1993; Whitley, 2009). More precisely, prejudice against gays and lesbians is socially and religiously permitted whereas racial prejudice is proscribed in religious discourse. Furthermore, homosexuals are perceived by religious people as an important moral outgroup since their sexual behavior is in opposition with the sexual morality praised by religion (Mavor & Gallois, 2008).

2.4. Prejudice against atheists

In several studies, different religious dimensions such as extrinsic religiosity, Christian religious beliefs, intrinsic religiosity, religious fundamentalism or the

general belief in God have shown a positive association with prejudice against atheists (Jackson & Hunsberger, 1999; Johnson et al., 2012). This is not surprising given the fact that, similar to people from other religious groups and homosexuals, atheists are perceived to be in violation with religious values and worldviews. Furthermore, while religious outgroup members may subscribe to several moral rules, even if those rules are different, atheist are perceived to be amoral since they do not subscribe to any religious moral system. In accordance, religious people also tend to report negative attitudes toward atheists, perceiving them as untrustworthy because they are assumed to cherish none of the common religious values (Gervais, Shariff, & Norenzayan, 2011).

2.5. Implicit and explicit prejudice

Given the fact that prejudiced attitudes are intrapsychic phenomena occurring within an individual, the appearance of such attitudes to other people and the level of awareness of the person who harbors such attitudes may vary (Dovidio & Gaertner, 2010). Indeed, individuals may fear being labeled as racist due to social norms against the expression of prejudice (Monin & Miller, 2001) or may even be unaware of their negative evaluations of outgroups, due to the possible automatic and unconscious nature of these evaluations (Gaertner & McLaughlin, 1983). In recent decades, pervasive and powerful social norms against prejudiced attitudes have emerged, encouraging people to avoid the expression of prejudice in the public sphere (Fiske, 1998; Dovidio & Gaertner, 2010). Furthermore, individuals have also internalized anti-prejudice norms and avoid behaving in ways that may contradict their egalitarian values (Plant & Devine, 1998). Nevertheless, while anti-prejudice social norms may undermine the overt expression of prejudice (Fazio & Olson, 2003), this does not mean that prejudiced attitudes and evaluations have disappeared, especially at the implicit level. Following this general assumption, perspectives on contemporary prejudice have changed suggesting that prejudice is less blatant than in the past (McConahay, 1986; Dovidio & Gaertner, 2004): individuals who appear nonbiased on explicit measures (whether they avoid to express prejudice attitudes or genuinely believe they are nonbiased) may still harbor unconscious negative attitudes against outgroups. This distinction between explicit and implicit prejudice is particularly important when we study the impact of religiosity on such attitudes. Since religion provides individuals with prosocial norms and proscribes some forms of prejudice (e.g., prejudice against other ethnic groups), religious people should avoid expressing overt prejudice (at least toward some targets) not only because of social norms and desirability but also because of religious norms. Similarly, religious people of Christian tradition tend to overestimate the quality of their social attitudes and may be wrong when they

perceive themselves as low in prejudice, high in altruism, and universalistic in their prosociality (Batson et al., 1993; Blogowska & Saroglou, 2011).

Researchers have thus turned to the use of implicit measurements of prejudice and developed a range of instruments such as indirect self-reported measures (for a review see Fazio & Olson, 2003), physiological measures (for a review see Ito & Cacioppo, 2007), and response latency measures (for a review see Correll, Judd, Park, & Wittenbrink, 2010; Dovidio & Gaertner, 2010). Among these measurement instruments, the Implicit Association Test (IAT) has become the most widely used measure of implicit prejudice (Greenwald, McGhee, & Schwartz, 1998) and shows adequate test-retest reliability (Nosek, Greenwald, & Banaji, 2007) as well as satisfactory predictive validity (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Nevertheless, the implicit association test, as with all implicit measures in general, faces several criticisms regarding its psychometric properties (Fielder, Messner, & Bluemke, 2006) and validity (Bargh, Chaiken, Govender, & Pratto, 1992; Devine, 1989; Karpinski and Hilton, 2001; Olson & Fazio, 2004).

Within the study of the psychology of religion, previous research has shown some mixed results regarding the relationship between religiosity among Christians and implicit prejudiced attitudes toward religious (Muslim; Rowatt, Franklin, & Cotton, 2005), ethnic (Rowatt & Franklin, 2004), and moral (homosexual) outgroups (Rowatt et al., 2006; Tsang & Rowatt, 2007). Furthermore, researchers have found several differences between predictors of prejudice depending on whether it was measured explicitly or implicitly. Rowatt and colleagues (2005) found that whereas right wing authoritarianism, religious fundamentalism, intrinsic religious orientation, and Christian orthodoxy were positively associated with explicit preference of Christians over Muslims, only Christian orthodoxy positively correlated with implicit prejudice against Muslims. In another experiment however, Rowatt and Franklin (2004) found that right wing authoritarianism was positively associated with implicit racial prejudice whereas Christian orthodoxy correlated negatively (controlling for religious fundamentalism and impression management). When investigating prejudice against homosexuals, Rowatt and colleagues (2006) found that whereas religious fundamentalism, Christian orthodoxy, and right wing authoritarianism positively correlated with explicit anti-gay prejudice, the strongest predictor of implicit anti-gay prejudice was religious fundamentalism. In the same vein, Tsang and Rowatt (2007) additionally found that the positive relationship between intrinsic religiosity and explicit anti-gay prejudice was fully explained by right wing authoritarianism but that intrinsic religiosity uniquely predicted implicit prejudice against homosexuals.

2.6. Possible mediational pathways

From the previous sections, we may conclude that the relationship between religiosity and prejudice seems to be clearer when one examines the role of coalitional rather than devotional aspects of religion (e.g., extrinsic vs. intrinsic religiosity) and when prejudice is not socially or religiously proscribed (e.g., Prejudice against Africans vs. homosexuals). Nevertheless, one can ask about the possible mechanisms explaining the observed relationship between religiosity and different types of prejudice. Which factors may explain that religious people tend to report more negative attitudes toward people from other race and value-violating groups? Researchers are beginning to address these questions by investigating the religiosity-prejudice relationship using mediation path analysis. Studies in this domain of research show that the effects of religiosity on prejudice are mediated by certain underlying dimensions of religiosity such as closed-minded ideologies. Indeed, religious people's (and more strongly, fundamentalists') tendencies for authoritarian social attitudes (Johnson et al., 2011; Johnson et al., 2012; Mavor, Macleod, Boal, & Louis, 2009), need for closure (Brandt & Reyna, 2010; Saroglou, 2002) and need for consistency (Hill, Cohen, Terrell, & Nagoshi, 2010) have been shown to mediate the relationship between religiosity and prejudice. Each of these constructs refers to a rigid mode of thinking rooted in traditional views of society, where the norms have to be stable. Because closed-minded persons do not easily tolerate alternative or disruptive viewpoints or customs, they are susceptible to prejudiced attitudes toward all kinds of outgroups.

Researchers have also pointed out other non socio-cognitive mechanisms that may explain the relationship between religiosity and specific targets of prejudice such as homosexuals or atheists. For instance, disgust sensitivity seems to be a key mechanism in promoting prejudice against homosexuals (Inbar, Pizarro, Knobe, & Bloom, 2009; Olatunji, 2008) and is also linked to the purity incorporated into the moral codes of many religions (Rozin, Lowery, Imada, & Haidt, 1999). Disgust sensitivity fulfills several functions, such as protecting the body from offensive products, protecting oneself from reminders of one's animal nature and thus mortality, and avoiding contagion of the body and soul (Rozin, Haidt, & McCauley, 2008). Over time, disgust evolved from a food-based protection system to become a culturally adapted emotion which enhanced the rejection of outgroups, especially when these groups elicit disgust for such things as gay sexual activity (Haidt, Rozin, McCauley, & Imada, 1997; Navarrete & Fessler, 2006). Disgust properties seem thus to be socially transmitted. Conservative ideologies and religious principles may play a key role in this transmission and drive the notion that gay sexual behavior is impure and sinful (Olatunji, 2008). Since disgust, among religious people, is associated with purity concerns, it functions as a protector of the soul from moral pollution and may also extend to all kinds of immoral behaviors or practices and beliefs that violate religious values (e.g., other religious beliefs, immoral sexual

practices, atheism, etc...). Research indeed has shown that disgust may foster not only negative attitudes toward homosexuals but also prejudiced attitudes against immigrants and foreigners (Hodson & Costello, 2007). Finally, in recent studies, Gervais and colleagues (2011) demonstrated that distrust was central for anti-atheists prejudice. Religious people tend to use the religious beliefs of other people as cues of trustworthiness, since they conceive religion as a unique and necessary source of morality (Norenzayan & Shariff, 2008; Sosis, 2005). Religious people believe that individuals behave better if they believe that a supernatural agent, such as God, is watching them. They believe this motivates individuals to inhibit immoral behavior and selfish tendencies (Gervais, 2013; Norenzayan & Shariff, 2008). Individuals belonging to a religious tradition may therefore dislike atheists primarily due to a moral distrust toward them (Gervais et al., 2011). Again, religiosity may promote moral distrust toward a variety of targets perceived as violating or threatening religious values. We think that, although moral distrust is a key mechanism in explaining anti-atheists prejudice, it may also partially explain prejudice against other value-violating targets.

Religious Concepts as a Cause: Religious Priming, Prosociality, and Prejudice

In the above sections, we described how religiosity relates to both prosocial tendencies and prejudice against various targets. Nevertheless, the previous mentioned studies did not investigate whether religious concepts can cause prosocial behaviors and prejudiced attitudes. One way to examine this question is to investigate the effect of religious concepts on such attitudes through priming. Currently, priming methodologies are flourishing since researchers are interested in the potential effects of religion on various outcomes. Until recently, studies in the field of religion and social attitudes and behavior were mainly correlational. Researchers who wanted to examine if religion can cause variations in social attitudes and behavior have now turned to priming methodologies. Scholars, such as Bargh (2006), have indeed quite well established that priming manipulations have the potential to influence social perceptions and behavior. Priming allows us to examine nonconscious effects of one's environment (Bargh & Chartrand, 2000). However, a recent and ongoing debate has highlighted some important criticisms and weaknesses of priming studies which are hard to replicate, not always reliable, sensitive to the experimenter's expectancies, and suffer from a major publication bias (e.g., Bower, 2012; Doyen, Klein, Pichon, & Cleermans, 2012; Kahneman, 2012).

The first focus of priming studies within the subfield of the psychology of religion was on the mere activation of religious concept and the understanding of how priming religiosity affected religious persons differently on the basis of their religious orientation (Wenger, 2004; Wenger, 2003). Priming religion has differential effects on various attitudes and behaviors depending on the intrinsic/extrinsic orientation (Carpenter & Marshall, 2009; Wenger, 2004), the fundamentalist orientation (Rothschild, Abdollahi, & Pyszczynski, 2009), the pre-existing images of God (Wiegand & Weiss, 2009), etc. Then, researchers interested in how priming religion could affect both believers and non-believers showed that priming religion indeed affects both religious and non-religious persons sometimes in a similar way (Randolph-Seng & Nielsen, 2007; Shariff & Norenzayan, 2007; Toburen & Meier, 2010) or in a different way (Inzlicht & Tullet, 2010) and concluded that the exposure to religious concepts may activate related constructs, attitudes, or stereotypical knowledge about religious people even among atheists as they were socialized in a similar Judeo-Christian culture. Finally, studies focused on the possible effect of religion on social behaviors and attitudes. In the next sections,

we discuss the priming literature examining how the exposure to religious concepts may influence pro- and anti-social attitudes and behaviors.

1. Religion and prosociality

The relationship between religion and prosociality has been found to exist not only at the correlational level. Religious priming has indeed been demonstrated to promote prosocial behavior. In two recent experiments, participants primed with positive religious words took more pamphlets in order to help a charitable organization and categorized more quickly prosocial-related words than those primed with neutral words (Pichon, Boccato, & Saroglou, 2007). In another experiment using an economic game, Shariff and Norenzayan (2007) showed that individuals primed with religious words allocated significantly more money to anonymous participants compared with individuals primed with neutral words. The same positive effect of religious priming has been observed on honesty. Randolph-Seng and Nielsen (2007) found that participants primed either subliminally or supraliminally with religious words cheated less on a game than those primed with neutral or sport-related words. Moreover, priming religion has also been found to increase other positive behaviors such as problem-solving effort (Uhlman, Poehlman, & Bargh, 2011), gratitude (Tsang, Schulwitz, & Carlisle, 2010), “virtuous” choices promoting health and social conscientiousness (e.g., organization promoting health and social responsibility, healthy food products; Newton & McIntosh, 2009), or cooperation (Ahmed & Salas, 2011; Preston & Ritter, 2012). Finally, other studies have demonstrated that priming religion also has the ability to decrease negative attitudes such as moral hypocrisy (Carpenter & Marshall, 2009).

Nevertheless, there is a recent and ongoing debate about whether the relationship between religion and prosociality is real (see Galen, 2012). On the basis of their research, scholars have agreed that religious prosociality exists but is minimal (common and low cost) and limited in extent. Saroglou and colleagues (2005) found for instance that religious prosociality applies to proximal targets but not to unknown people or to outgroup members (see also Blogowska & Saroglou, 2011; Pichon & Saroglou, 2009; Saroglou, 2006). Furthermore, it seems that religious prosociality is often motivated by egoistic rather than altruistic motivations (Batson et al., 1993). The prosocial attitudes and behaviors of religious people are indeed concerned with social reputation and divine control (Norenzayan & Shariff, 2008; Shariff & Norenzayan, 2007). Finally, the effect of religion on prosocial outcomes may vary depending on the specific religious aspects primed (coalitional vs. devotional; Ginges et al., 2009; Preston et al., 2010).

2. Religion and prejudice

Nevertheless, whereas priming religion can increase positive behaviors, it has also been found to promote negative outcomes. For instance, individuals who read a violent passage were more aggressive toward a loser in a mock game when they thought the passage came from the Bible rather than an ancient scroll (Bushman, Ridge, Das, Key, & Busath, 2007). In the same vein, Belgian participants who were encouraged by the experimenter to seek revenge displayed greater revenge after being subliminally primed with religious words (Saroglou, Corneille, & Van Cappellen, 2009). Those two studies showed that priming religious concepts increases the submission to authority (either religious or non religious) encouraging revenge and aggression toward others. Nevertheless, in the second study, the effects were limited to participants already scoring high on personal submissiveness. However, researchers have also asked whether religious priming really promotes more ecologically valid aggressive attitudes or behaviors, such as terrorism. In order to test the influence of religious concepts on attitudes toward terrorism, Ginges and colleagues (2009) ran a priming experiment among Israeli Jews living in the West Bank of Gaza. They found that, when asking about their synagogue attendance, primed individuals (relative to a no-prime condition), were more prone to report a terrorist act as significantly more heroic.

Current priming studies show that the activation of religious concepts may also affect prejudice against racial outgroups and value-violating groups such as people from other religious groups, atheists, and homosexuals. For instance, North Americans subliminally primed with Christian religious words reported higher level of subtle racism and general negative attitudes toward African Americans compared to participants primed with neutral words (Johnson et al., 2010). In the same vein, US adults subliminally primed with Christian concepts reported more negative attitudes toward atheists, Muslims, and gay men (Johnson et al., 2012). In two other experiments, Johnson (2012) found that US participants primed either subliminally using a LDT task (Study 1) or supraliminally with religious group membership (Study 2) gave fewer raffle tickets to atheists relative to Muslims and Christians. Finally, Northern Europeans reported significantly higher negative attitudes toward foreigners, gay men, and Muslims when they were interviewed in front of a church compared to a neutral city building (LaBouff, Rowatt, Johnson, & Finkle, 2012).

In the two previous sections, we presented a rather simple and clear pattern of religious priming effects on pro- and anti-social attitudes. Nevertheless, religion and religiosity are complex and multidimensional constructs. Even if priming religion as a general concept (e.g., God, religion, attendance) fosters both prosociality and prejudice (e.g., Johnson et al., 2010; Pichon et al., 2007), it is important to keep in mind that results may differ depending on the prime used. For instance, whereas Ginges and colleagues (2009) found that priming religious attendance increased

support for suicide attacks (in comparison with a control condition), participants primed with the frequency of prayer did not report greater support for such acts and showed even marginally significant lower scores of support relative to the control condition. In another experiment, participants primed with a benevolent image of God (as helping, forgiving, and protecting) reported more willingness to forgive whereas individuals primed with an authoritarian image of God (as controlling, commanding, and punishing) were less willing to forgive, volunteer, and help religious outgroups (Johnson, Li, Cohen, & Okun, 2013).

To sum up, both religiosity and religious priming (as general and broad concepts) are associated with prosocial outcomes as well as prejudiced attitudes toward a variety of targets. In all studies described using correlational or priming methodologies, participants were mainly Christians primed with concepts of their own religious tradition, with few additional studies being conducted with Muslims, Jews, and Hindus producing similar results (Ginges et al., 2009; Hunsberger, 1996; Rothschild et al., 2009). The present work aims to address a cross-culturally important question: Is there something universal in the way religion influences social behavior or is there something culturally/religiously-specific? Given that most studies using religious priming or correlational designs were carried out in monotheistic and Western contexts, one can ask about the impact of Eastern religions such as Buddhism on pro- and anti-social attitudes and behaviors. In the next section, we clarify these questions by investigating the role of culture as well as the differences between religious traditions.

Are correlates and effects of religious concepts universal?

Within the Western and Judeo-Christian world, research on religion and pro- as well as anti-social attitudes and behaviors, both correlational and experimental, has been mainly-if not exclusively-carried out within the three major monotheistic religions (i.e. Christianity, Islam, and Judaism) and in the Western world (i.e. United States and Europe). As a consequence, various cultural worlds and religions seem to be totally excluded from such research. Nevertheless, cultural regions such as East Asia have also developed organized and complex religious systems such as, for instance, Taoism and Buddhism. Are the correlates of East Asian religiosity and the effects of East Asian religions the same as those previously found for Christian religions? We argue that East Asian religiosity and religious concepts imply prosociality and, contrary to previous research on West-originated Christianity, promote tolerance. This broad hypothesis is based on a series of arguments that are detailed below.

In this section, we 1) present the major East Asian religions that will be investigated in this work, 2) discuss the psychological differences between East Asia and the West with respect to cognition, self-views, and morality (i.e., cultural, non-religious differences between broad zones of civilization), 4) present some important differences in the explicit teachings between East Asian religions (i.e. Buddhism, Taoism, and Confucianism) and Christianity (i.e. religious/theological differences), and 3) describe psychological differences between East Asian religiosity and West-originated Christian religiosity (i.e. psychological differences between broad religious cultures).

1. East Asian religions

Throughout this chapter, we refer to East Asia as a geographic and cultural sphere. Geographically, East Asia represents a sub-region of Asia covering about 12,000,000 km² and including China, Japan, North Korea, South Korea, Mongolia, and Taiwan. The cultural sphere of East Asia has been strongly influenced by the civilization of Northern China: people in that area share a Confucian ethical philosophy, a naturalist philosophy derived from Taoism, and Buddhist principles (Reischauer, 1974). Religions in East Asia have long been characterized by their interpenetrating and blending qualities. Societies and individuals readily incorporate

aspects of several different religions into their worldviews (Nisbett, Peng, Choi, & Norenzayan, 2001). In contrast, for Christians, there is a strong tendency toward insistence on doctrinal purity. This sometimes results in religious wars in the West, a rarity in East Asia. The major religions and schools of thought in East Asia (e.g., Buddhism, Taoism, and Confucianism) all revolve around issues on two levels of harmony: the harmony between individuals and the harmony between humanity and nature (Ji, Lee, & Guo, 2010). Contrary to Abrahamic religions, East Asian religions are impersonal (the supreme entities are conceived impersonally) and do not conceive the existence of a creator God, omnipotent and omniscient (Flanagan, 2013). They are philosophically extremely sophisticated and, as Abrahamic religions, warrant a moral and virtuous life.

1.1. Buddhism

The history of Buddhism spans almost two thousand and five hundred years since its origin in India with Siddharta Gautama. Nowadays, about half of the worldwide population lives in areas in which Buddhism is, or was, a preponderant cultural force, including East Asia (Harvey, 1990). Buddhism describes a religion characterized by a devotion to Buddha, Buddhas, or Buddhhood. Buddha is not a proper name but a descriptive title meaning “Awakened one” or “Enlightened one”. The Buddhist message is meant to be sent to mankind as a whole. It is based on the principle of the deliverance, through the awakening, from all suffering caused by ignorance, desire, attachment and greed (Obadia, 2007). Buddhism embraces the fundamental concept of impermanence, in which the universe is regarded as being in a state of constant flux and within it all phenomena are continuously changing their forms and properties (Ji et al., 2010). This suggests that phenomena arise and cease without necessarily following any consistent, predictable path. In Buddhism, the reality is transitory and the world we perceive is a snapshot of the ever-changing universe. The present is illusory and should be disregarded. An extension of the temporal purview also implies that two seemingly incompatible phenomena can both be true at the same time (Nisbett, 2003). The tolerance of multiple truths or paradoxical propositions is in stark contrast with the law of non-contradiction in Western philosophy.

In general, Buddhists recognize the spiritual authority of the Three Jewels: the Buddha, as an example of salvation reached, the Dharma, as a doctrine, and the Sangha as a community of practitioners (Harvey, 1990). In its long history, Buddhism has used a variety of teachings and means to help people develop a calmer, more integrated, and compassionate personality, in order to “wake up” from restrictive delusions. The Buddhist approach is characterized by adhering to a “middle way” that does not endorse the illusory pleasures of mundane life, or the austerity of an ascetic in the extreme. The paths to enlightenment encourage a

practice based on the development of perfections: charity, morality, patience, effort, meditation and wisdom (Obadia, 2007). In East Asia, the Buddhism that developed is Mahayana Buddhism, also called "the Great Vehicle". It focuses on the presence in each human being of a principle of Buddhahood. The figure of the bodhisattva, or "being in progress" associated with altruism and compassion, is central (Harvey, 1990).

1.2. Taoism

Taoism is an open religion in constant progress and evolution. It is not only difficult to date its appearance but also to identify its contours (Kohn, 1991). Taoism has never been a unified religion and has always been a combination of lessons based on various original revelations. The principles of Yin and Yang and the "Five Elements" give Taoism its theoretical substrate and language. According to the principles of Taoism, the universe is perpetually self-creating from the breath or energy (Qi) which is neither matter nor spirit but rather a potential, an immanent life force knowable only by the diverse and changing aspects it takes (Robinet, 1997). Similarly to Buddhism, Taoism also subscribes to the notion that objects, ideas, or phenomena are amorphous in their forms and properties (Ji et al., 2010). However, Taoism emphasizes the complex interaction of forces and the balanced exchange of these forces. The yin-yang symbol is perhaps the most perceptible signifier of Taoism. It represents the two forces that purportedly derive from the universe, yin and yang. The two ostensibly opposing but complementary forces are each in pursuit of the other's tail in a cyclical fashion, suggesting that a phenomenon will start regressing in the opposite direction once it reaches the extreme. The two dots in each of the two swirls symbolize the idea that things exist only in relation to the opposite form.

Propriety and ethics of Taoism may vary depending on the specific schools but all generally emphasize the *Tao* (the way), the principle of *wu-wei* (action through non-action), naturalness, and the Three Treasures (Robinet, 1997). The *Tao* is described in Taoism as The One, the origin of everything, spontaneous, eternal, nameless, and indescribable. The term *wu-wei* is difficult to translate: non-action, effortless action, or action without intention. It assumes the notion that the universe works in a naturally harmonious way. People that act according to their will disrupt this harmony. Naturalness represents the primordial state of all things and is central in Taoism. People that are in harmony and identify with the *Tao* may attain naturalness. Finally, the Three Treasures are the basic virtues in Taoism: compassion, moderation, and humility. They imply an abstention from aggressive behaviors, an absolute simplicity of living, and abstention to assert authority. In the course of History, Taoism had a deep influence on Chinese culture and East Asian

culture in general. Taoist philosophy indeed had a strong influence on Chinese alchemy, Chinese astrology, martial arts, traditional medicine, *fengshui*, or *qigong*.

1.3. Confucianism

Confucianism represents the mother tradition in East Asia and seems to lie in the blood and bones of its population (Nisbett, 2003). It is one of the most important ethical, philosophical, but also religious systems developed from the teachings of the Chinese philosopher Confucius. This system provides rather lucid interpretations of the law of nature as well as a set of important moral guidelines (Ji et al., 2010). The awareness that one's existence is defined by the interpersonal connection in one's social environment is central to the Confucian tradition. According to Hwang (1999), the basic ethical concepts and practices in Confucianism include benevolence (*ren*), righteousness (*yi*), and propriety (*li*). *Ren* points out an obligation of altruism and benevolence toward people with whom one has a close relationship. *Yi* points out the respect one needs to show in front of superiors. *Li* is a system of norms and propriety that determines how a person should properly act. In his analysis of Confucianism, Van Norden (2011) added to these three ethical concepts two more virtues: filial piety or elder respect (*xiao*) as well as discernment (*zhi*). In general, Confucianism encourages the *Golden Mean*, or the notion that attitudes or behaviors should never go to excess but should be kept moderate and indistinguishable from those of others in a group. People who want to align themselves with *Tian* (literally, heaven), in order to be a gentle and right person, should behave according to the *Golden Mean* as well as the Confucian virtues and ethics.

1.4. Chinese folk religion

Chinese folk religion, mainly present in East Asian countries (such as in mainland China or Taiwan), derive directly from the historic belief systems of the Han Chinese ethnic groups. It consists of a blend of deities and practices coming from Chinese mythology, Buddhism, Taoism, divination, Confucianism, and ancestor worship (Gries, Su, & Schak, 2012). The core of Chinese folk religion is the propitiation of death. This includes sacrifice to the ancestors, selecting auspicious burial sites, warding off "ghosts" or malevolent spirits, and worshipping a pantheon of gods (Ahern, 1981; Baity, 1975; Wolf, 1974). Deeply influenced by Confucianism, Chinese Buddhism, and Taoism, folk religion in East Asian countries strongly promotes virtues such as ritual propriety, filial piety, elder respect, and family partiality (Lopez, 1996; Van Norden, 2011).

2. Cultural differences between East Asian and Western civilizations

The cultural differences between East and West are numerous and deep (Henrich, Heine, & Norenzayan, 2010). According Peng, Ames, and Knowles (2001), the research tradition in cultural psychology has followed three main axes, mainly based on systematic cross-cultural comparisons between North American and East Asian populations. In the 1970s and 1980s, researchers were interested in the variations of norms and values across cultures and introduced the distinction between *individualism* and *collectivism* (Triandis, 1995). During the 1990s, scholars focused on self-construal and developed the constructs of *independence* and *interdependence* (Markus & Kitayama, 1991). More recently, researchers were interested in the cultural variation in cognition and developed the concepts of *analytic* and *holistic thinking* (Nisbett, 2003). These three pairs of constructs can be conceptualized as “cultural syndromes” (Triandis, 1995) that may help understand attitudes and behavior both across and within cultures (Nisbett, 2003; Triandis, 1995; see also Kashima, 2009; Oyserman & Sorensen, 2009). They indeed imply important differences between cultures in self-view, reasoning and attributions, emotions, social relations, as well as moral judgments (see Kitayama & Cohen, 2007). While these three cultural syndromes may interact in the way they impact thoughts and behaviors, they could also uniquely influence individuals in relevant domains (Kashima, 2009; Oyserman & Sorensen, 2009). Below, we detail these three axes of research as well as their implications. Finally, we discuss the potential impact of cultural syndromes on intergroup attitudes and behaviors.

Nevertheless, before going further, it is important to notice that the pertinence and stability of these cultural syndromes are subject to several criticisms. First, it would be an error to conceptualize cultural syndromes as static, stable, well defined, and completely separate from one another. Even if culture may persist for centuries, a pattern of culture may also transform itself over decades. Authors argue that, as a consequence of economic growth and industrialization, cultures are worldwide becoming more individualist, placing more importance on self-expression values (Hofstede, 1984; Inglehart & Baker, 2000; Inglehart & Welzel, 2005). Some indices (e.g., importance of personal success, labor specialization, and the evaluation of child independence) have indeed shown an increase in individualism over the past decades in the US and Japan, but other indices (e.g., respect for parents, trust, social harmony, and social obligations) have not shown a decrease in collectivism in Japan (Hamamura, 2012). Second, even if cultural syndromes may be useful to describe broad cross-national differences, one should keep in mind that individuals, as well as sub-groups within a same country, may vary in the way they endorse cultural syndromes such as individualism or collectivism (Oyserman, Coon, & Kemmelmeier, 2002). Recent priming studies in cultural psychology have indeed shown how the endorsement of individualism and collectivism can be affected by

experimental manipulations (for a review see Oyserman & Lee, 2008). Oyserman and colleagues (2008) purposefully concluded that we “need a situated model of culture in which cross-national differences are not static but dynamically consistent due to the chronic and moment-to-moment salience of collectivism and individualism” (p. 1).

2.1. Individualism versus collectivism

Individualism refers to a cultural system of norms and values in which the individual represents the basic unit of analyses. In these conceptions, societal structures are regarded as valuable to the extent that they support individual happiness, individual freedom, autonomy, personal fulfillment, and free choice (Oyserman & Lee, 2007; Triandis, 1995). Collectivism, on the other hand, characterizes a cultural system of norms and values in which the group is the basic unit of analyses. Social structures are valued to the extent that they emphasize the preservation and enhancement of group resources, community, duty, respect for authority, and the maintenance of group harmony (Oyserman & Lee, 2007; Triandis, 1995).

A basic self-goal of individualism is to feel unique and good about oneself. Individuals are described in terms of abstract traits, with unique and distinctive features. In terms of social relationships, individualism implies free chosen and voluntary relationships that can be worked on, improved, or left when the costs are more important than the benefits (Oyserman & Lee, 2007). With regards to cognition, judgment, or causal inference, individualism promotes a decontextualized reasoning style: the focus is oriented toward the person rather than the situational or social context. Indeed, individualism implies a decontextualized vision of the self, conceived as stable (Choi, Nisbett, & Norenzayan, 1999).

On the other hand, a basic self-goal of collectivism is to attain and maintain group membership. Individuals are described in terms of group membership and traits relevant for its preservation such as loyalty and obedience. Group memberships are therefore fixed and stable with relative impermeable boundaries (Oyserman & Lee, 2007). Within the ingroup, collectivism promotes exchanges between individuals based on equality and generosity (Morris & Leung, 2000). With regards to cognition, judgment, or causal inference, collectivism promotes a contextualized reasoning style: the focus is oriented toward the social context, situational constraints, and social roles rather than to individual predispositions (Morris & Peng, 1994). As a consequence, East Asians make fewer attributions about a person’s disposition and endorse rather contextual beliefs about individuals’ personalities (Miyamoto & Kitayama, 2002; Norenzayan, Choi, & Peng, 2007).

2.2. Independence versus interdependence

Independence, or the independent mode of being, refers to a culture-specific manner of defining the self as separate from others and bounded by the individual person. In this mode of being, the representations of the self are more emphasized, elaborated, and valued (Kitayama, Duffy, & Uchida, 2007; Markus & Kitayama, 1991). This mode of self-other representation may be qualified as egocentric or self-oriented (Parson & Shils, 1951; Shweder & Bourne, 1982). Interdependence, or the interdependent mode of being, characterizes a definition of the self that emphasizes interpersonal relationships and conceptualizes the self as inextricably linked with important ingroup members. More precisely, the self is defined in reference to social others. In consequence, the representation of others is at least as elaborate, complex, and valued as the representation of the self (Kitayama et al., 2007; Markus & Kitayama, 1991). This mode of self-other representation may be qualified as sociocentric or socially oriented (Parson & Shils, 1951; Shweder & Bourne, 1982).

This basic difference in self-constructs has several implication for attitudes and orientation of actions. For instance, Westerners tend to exaggerate their positive self-views and are more egocentric, whereas East Asians may demonstrate a self-effacing bias (Yamagishi et al., 2012). The predominant form of action linked to the independent mode of being tends to be the use of one's goals to change the environment, or what has been called "primary control" or "influence" (Kitayama et al., 2007; Morling, Kitayama, & Miyamoto, 2002). A good example of this form of action includes behaviors oriented toward personal achievement or the persuasion of others. On the contrary, the predominant form of action linked to the interdependent mode of being is the consideration of other goals and expectations to adjust oneself to the social environment, or what has been called "secondary control" or "adjustment" (Kitayama et al., 2007; Morling et al., 2002). Typical examples of such forms of action include behaviors oriented toward others' concerns or attempts to conform oneself to others. Nevertheless, interdependence does not inevitably mean conformity and obedience.

2.3. Analytic versus holistic thinking

The distinction between analytic and holistic thinking styles within the field of cultural psychology has been derived primarily from cross-cultural comparisons on perceptive and cognitive processes between Western and East Asian countries. The analytic thinking style, characterizing Western societies, implies a focus of attention on the object and the categories to which it belongs. Analytic individuals tend to use categorical rules, including formal logic, and attributes, to perceive, classify, and understand objects and behaviors (Nisbett, 2003; Nisbett et al., 2001). On the other

hand, the holistic thinking style, mainly characterizing East Asian cognition, implies an attention to the entire field and causality. Holistic thinkers tend to make relatively little use of categories and formal logic, and rely rather on dialectical reasoning (Nibett et al., 2001).

Analytic thinking style and lay beliefs are derived from Greek civilization; whereas holistic thinking style is thought to derive from East Asian Taoist, Confucian, and Buddhist philosophical traditions (Nisbett, 2003; Nibett et al., 2001; Spencer-Rodgers, Williams, & Peng, 2010). To better depict those two concepts and their implications, two philosophical principles or theories may be taken as examples: the Aristotelian logic and the yin/yang symbol.

Nowadays, Western thought is still deeply influenced by the Aristotelian logic that may be described according to its three most important principles: the law of identity, the law of noncontradiction, and the “excluded middle” (Peng & Nisbett, 1999). The law of identity posits that *A* equals *A*, or in other words that everything must be identical to itself. Following this law, objects and beings are assumed to be cross-situationally consistent and non changing. According to the law of noncontradiction, *A* cannot equal *non-A*, implying that two contradictory statements cannot both be true and that a single thing cannot be both true and false at the same time. As a consequence, contradictory elements are not accepted, and are not even conceivable, to be both valid. Finally, the law of the “excluded middle” posits that *A* is either *B* or *non-B*, or that any element must belong to one of two contradictory categories. According to this last law, there is no middle term or compromise between two members of a contradiction.

In the pictorial representation of the yin/yang symbol, every element may be understood as illustrating an aspect of holistic thinking (Spencer-Rodgers et al., 2010). The outer circle represents the concept of context, referring to the strong emphasis on the “big picture” rather than the focal object in holistic thinking. The inner elements of the circle are depicted as inextricably linked to one another. They may be taken to represent the holistic view that all aspects of the world are interconnected (Hansen, 1992; Peng & Nisbett, 1999; Peng, Spencer-Rodgers, & Zhong, 2006). Furthermore, the concept of perpetual change, central to holistic thinkers, is symbolized by this “turning” aspect of the symbol. According to holistic views, the universe, as well as things and beings living in this universe, are perpetually changing (Maddux & Yuki, 2006). Finally, the black dot and white dot represent the concept of contradiction as they represent the “seeds of their opposite” (Peng & Nisbett, 1999; Peng et al., 2006).

To summarize, holistic thinkers, compared with analytic thinkers, perceive the universe as context dependent (East Asians emphasize the broader context vs. a focal object; Abel & Hsu, 1949; Masuda & Nisbett, 2001), inextricably interconnected (East Asians tend to regard all people, objects, and events in the

universe as related; Ji, 2008; Ji, Peng, & Nisbett, 2000), constantly changing (East Asians tend to expect greater change and more cyclical patterns of change, Spencer-Rodgers et al., 2010), and inevitably contradictory (East Asians are more tolerant of contradiction and show weaker motivation for consistency; Choi, Koo, & Choi, 2007; Kanagawa, Cross, & Markus, 2001, Nisbett, 2003; Nisbett et al., 2001; Norenzayan, 2006; Peng & Nisbett, 1999; Suh, 2002).

2.4. Culture and intergroup attitudes

There is no, at least to our knowledge, systematic, comparative research on prosociality and prejudice between East Asians and Western cultures. Actually, it seems that East Asians have been studied more extensively as targets than as subjects of prejudice. Of course, pro- and anti-social attitudes and behaviors exist worldwide and one can reasonably suspect similar processes in both Western and East Asian cultural contexts. However, some differences may exist: for instance, supporting democracy seems to lead to a high versus low acceptance of homosexuality, respectively in Western countries vs. East Asia (Bomhoff & Gu, 2012). It has been argued that individual-level interdependence (but not group-level interdependence when groups are in competition) draws attention to another person's attributes and reduces stereotypical thoughts and evaluations (Fiske, 2000).

The above mentioned East-West cultural differences may contribute to some extent of attenuation of prejudice in East Asian cultures, at least toward some kinds of targets. Of course, collectivism may be responsible for strong intergroup prejudice toward outgroups who are perceived to be very distant from the collectivity (Fujimoto & Härtel, 2004; the authors also argued that, on the contrary, individualists should display interpersonal prejudice). However, we can suspect that within the frontiers of a large community, holistic thinking, interdependence, low egocentrism, emphasis on similarity relations in categorizations, and a low need for consistency should result in a weakened perception of others as being totally different, and thus soften prejudice. Furthermore, collectivist and interdependent orientations, as previously said, orient action toward others' concerns and promote exchanges based on equality and generosity at least within the ingroup (Kitayama et al., 2007; Morris & Leung, 2000). In a recent study, Ma-Kellams, Spencer-Rodgers, and Peng (2011) found that Chinese people show less ingroup favoritism than European Americans. This is very likely due to the dialectical vision of self, which allows for more contradictions and an integration of contradictory elements and changes (Peng & Nisbett, 1999; Spencer-Rodgers et al., 2010). Dialectical thinkers are supposed to be less vulnerable to essentialist thinking about social groups, more open to stereotype change, and more open to intercultural adaptations (Spencer-Rodgers, Williams, & Peng, 2012).

All the above mentioned cultural, non-religious, differences underline how differently East Asians perceive, categorize, think, and interact compared with Westerners. As discussed, these differences may particularly impact prosociality as well as intergroup bias and prejudice. In the next section, we detail the important theological differences between Abrahamic religions (i.e. Christianity, Islam, and Judaism) and East Asian religions (i.e. Taoism, Buddhism, Confucianism, and folk religion), that may impact both prosociality and prejudice.

3. Theological differences between religions

The above mentioned psychological differences between cultural groups as a function of religiosity may, of course, be due to non-religious cultural factors (i.e. individualism/collectivism, independence/interdependence, and analytic/holistic thinking), but also due to the distinct theological teachings of each religion (Saroglou & Cohen, 2013). Indeed, philosophers, religious scholars, and cultural psychologists have argued that Eastern religions, especially Buddhism and Taoism (but also Confucianism), may escape the temptation of Abrahamic religions, in particular Christianity, to tend toward dogmatism, rigidity, and the subsequent intolerance and prejudice (e.g., Flanagan, 2013; Harvey, 1990; Ji et al., 2010; Nisbett et al., 2001). These religious/convictional systems are less marked by doctrinal purity and the need for a systematic integration of all beliefs into a coherent whole of theological ideas, as it is the case with Abrahamic religions. They are less interested in developing very specific and abstract ideas about gods' qualities and do not posit the existence of a creator God, omnipotent and omniscient, who rewards people that follow his precepts and punishes others (Flanagan, 2013). Historically, East Asian religions have also been much more open to reciprocal interpenetrations and subsequent blending, compared to a certain exclusiveness within each monotheistic religion.

Buddhism, Taoism, and Confucianism favor a more holistic and dialectical, thus probably less essentialist, thinking about the world, humans, and transcendence than Catholicism and Protestantism. The yin-yang symbol in Taoism emphasizes the notions of interdependence and complementarity; and for Buddhism, two seemingly incompatible phenomena can both be true at the same time. East Asian religions are also known for having practiced the proselytizing of non-believers or of believers of other religions in a much less marked and coercive way than Christianity and Islam. According to Jayatilke (1966/1975), an internationally recognized specialist in Buddhist philosophy, "Not a drop of blood has been shed throughout the ages in the propagation and dissemination of Buddhism". Furthermore, Buddhist ethics prohibit a Buddhist monk from teaching Buddhist principles unless he is asked three times (Harvey, 1990). Several East Asian religions also seem less concerned with obedience to religious authorities: these religions dispose of many temples but few

priests (Yang, 1961). Moreover, these religions emphasize, presumably in a stronger way than in Abrahamic religions, the ideals of harmony, compassion, and non-violence (Davidson & Harrington, 2002; Ji et al., 2010) as well as moral achievement and after-death-oriented perfection (Hwang, 2012). Within the next paragraphs, we highlight three major characteristics of East Asian religions, compared to Abrahamic religions, which may impact prejudice/tolerance.

3.1. Compassion and equanimity

East Asian religions emphasize ideals of compassion as well as tolerance (Davidson & Harrington, 2002; Flanagan, 2011; Jayatilleke, 1966/1975) and have used a variety of teachings and means to help people develop a calm, integrated, and compassionate personality (Harvey, 1990). For instance, Buddhist believers are urged to feel compassion not only toward humans but also toward all beings in general. The Buddhist virtue of equanimity indeed posits that all beings are equally worthy of not suffering. In this context, universal compassion and tolerance are strongly emphasized. The Buddhist ethic of compassion goes even further to require adherents to do nothing that may increase suffering (Flanagan, 2013). This includes, for instance, that Buddhists should not work for institutions that in any way support violence, both psychological and physical (e.g., making weapons or components that may serve for weapons, butchering, making pesticides).

3.2. Impermanence, no-self, and change

According to East Asian religions, the universe is impermanent and constantly changing. Nothing is constantly identical, possesses intrinsic qualities, or has an essence (Flanagan, 2013). As part of this impermanent universe, we are no-selves; we do not possess any essence or immutable self. As people are all part of the impermanent universe and have no essence, the difference between the self and others is a matter of degree and not kind. These theoretical assumptions present in all major East Asian religions imply conceptions of the self, others, and the world that are very different from those shared by Christians, Jew, or Muslims. East Asian religions thus favor a more holistic and dialectical, and probably less essentialist, thinking about the world than Abrahamic religions. As everything is impermanent, possesses no intrinsic qualities or essence, and as differences are just a matter of degree or circumstance, Buddhists or Taoists easily tolerate seemingly contradictory elements and alternative knowledge systems that may contradict their religious views such as science or other religions. It is therefore not surprising that religions

in the East Asian context are frequently blended without any difficulties or tensions under the same temple roof (Gries et al., 2012).

3.3. Dependent origination and harmony

The concerns for harmony and interdependence between all life forms are particularly present in East Asian religions (i.e. Buddhism, Taoism, and Confucianism) at different levels: between individuals, between groups, and between human and nature (Ji et al., 2010). According to East Asian religions, no things or beings stand alone: everything is connected to everything else and everything is what it is because of the field of its relationships with everything else (Flanagan, 2013). Regardless of religious affiliation, ethnicity, or race, all beings are seen as interconnected and necessary for one another. In this context, all beings are equal and need to be respected.

The above mentioned specific characteristics of East Asian religions provide arguments in favor of the broad hypothesis of the present work. East Asian religions, compared with Abrahamic religions, strongly emphasize compassion, tolerance of contradictions, and the feelings of interdependence and oneness. These characteristics make us think that East Asian religiosity and religious concepts should consistently enhance prosociality and tolerance even toward outgroup members. Besides cultural and religious differences, we will discuss in the last section important differences in the way East Asians are religious compared to Westerners, as well as differences in the functions of religion between these two cultural worlds.

4. Psychological differences between religious cultures

Additional arguments in favor of our hypothesis come from previous psychological research suggesting that religion and religiosity function differently in Abrahamic (especially Christian) religions and Western cultural contexts versus East Asian religions (especially Buddhism) and cultural contexts. Recent studies have shown that whereas religion provides a way to maintain a sense of control among Christians (European Americans), contributing to their well-being, this does not seem to be the case within the context of Eastern religion among Asian Americans and East Asians (Sasaki & Kim, 2011). In addition, Stark (2001) found that the belief in a personal moral God is strongly related to morality in Western monotheistic societies, whereas it is unrelated to morality among Easterners (China, India, and Japan). Furthermore, Saroglou (2011) pointed out that the different

dimensions of religion (beliefs, emotions, moral norms, and group identity) are interconnected to a much lesser degree in East Asian religions compared with Christianity. Finally, among Western Catholics converted to Buddhism, Buddhist beliefs and practice were found to be related to the value of universalism and unrelated to the epistemic need for closure (Saroglou & Dupuis, 2006), whereas exactly the opposite is the case for religiosity among Christians (Brandt & Renya, 2010; Duriez, 2003; Saroglou, 2002).

To summarize, we may conclude that, given the underlying psychological pattern of low(er) need for cognitive closure, low(er) need for control, and a low(er) motivation to integrate the various religious aspects, including morality, into a single unifying set, East Asian religiosity can be expected to lead to tolerance, or at least to weaker prejudice than Christian religiosity. All of the above psychological patterns are indeed known to fuel inter-religious prejudice. This issue is of theoretical importance since it presupposes that the paradoxical role of religion to promote both prosociality and prejudice may not be universal. It would suggest that religions do not only differ in their theology but also in their psychological aspects and susceptibilities to predict specific outcomes (Saroglou & Cohen, 2013). The question of the existence of psychological “universals” of religion is particularly important for a better understanding and conceptualization of the functioning of religious people. In this context, we consider that a cross-cultural or cross-religious approach may contribute greatly to our understanding of the religious phenomenon. In the three last sections, we described separately the potential cultural and religious factors that may differently impact the relationship between religion/religiosity and prosociality as well as prejudice. Nevertheless, several cultural and religious concepts overlap and it is sometimes difficult to disentangle cultural from religious factors. The hypothesized positive relationship between religiosity/religion and prosociality/tolerance may indeed be due to both religious and cultural factors. Throughout this section, it appears that cultural constructs, such as the tolerance of contradictory elements or the concern for harmony, are also part of the East Asian religious beliefs system. These cultural constructs may then be actualized and made more salient for people through religious principles and adherence. The complex relationships between religion and culture are discussed in the following paragraphs.

5. Disentangle religion and culture

In order to illustrate the tight links between religion and culture, one may consider the definition of culture provided by Fiske (p.85; 2002) “A culture is a socially transmitted or socially constructed constellation consisting of such things as practices, competencies, ideas, schemas, symbols, values, norms, institutions, goals, constitutive rules, artifacts, and modifications of the physical environment.” By simply adding the notions of transcendence and the sacred, this sentence becomes a

perfectly suitable definition of religion. It seems therefore unfortunate to simply oppose religion and culture as well as their corresponding influences. Religions indeed often function as systems, i.e. as “cultures” (Cohen, 2009).

According to Saroglou and Cohen (2013), there are at least three ways of thinking about how culture and religion relate to each other. First, religion and culture can be perceived as confounded and inseparable (i.e. isomorphism between religion and ethnic culture). Religion is indeed often an element that significantly contributes to define a cultural entity in combination with other features such as language or common history. Furthermore, we may also conceive that religion constitutes itself as a form of culture, (Cohen, 2009) just as ethnicity may also define a distinct cultural system. For instance, an individual may be part of the American culture and at the same time adhere to the Buddhist cultural system. Furthermore, religion also includes cultural elements even if religion has its own psychological dynamics, especially regarding an individual’s reference to a transcendent reality (Saroglou & Cohen, 2011).

Second, one might also conceive a bidirectional influence between religion and culture. Culture and religion are indeed often perceived as intertwined probably for one main reason: religion can strongly influence or be responsible for cultural syndromes (Norris & Inglehard, 2004). Two classical examples of this are the notion that the Protestant religion caused the United States to become an individualistic culture (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; de Tocqueville, 1835/1969) or that holistic thinking, characterizing East Asian cognition, mainly derives from Taoism, Buddhism, and Confucianism (Nisbett, 2003; Nisbett et al., 2001; Spencer-Rodgers et al., 2010). Religious factors can thus be considered as cultural factors, in addition to many other, non-religious, cultural factors such as ethnicity, language, and related psychological characteristics (Johnson & Cohen, 2013; Saroglou & Cohen, 2013). Religions may also result from cultural influences, allowing for that possibility that a country-level culture can cause a religion to develop in a particular way. For instance, Buddhism absorbed numerous cultural and intellectual elements indigenous to China to become a specific form of Buddhism called Chinese Buddhism (Ji et al., 2010).

Third, one may also conceive religion and culture as orthogonal domains that may interact to affect various psychological domains such as cognition, emotions, morality, intergroup relations, and even behavior. For instance, conservative politics is not necessarily associated with Christian religiousness among Blacks and Latinos contrary to Whites and Asians (Cohen et al., 2009). Furthermore, Vauclair & Fisher (2011) found that culture orientation (hierarchy/harmony versus egalitarianism/mastery) and religiosity interacted to predict lenient moral attitudes regarding personal and sexual issues (Vauclair & Fischer, 2011). More precisely, whereas in cultures valuing egalitarianism (all individuals have equal rights) and mastery (active control of the social and natural environment) religiosity is strongly negatively associated with the acceptance of morally sensitive personal and sexual

issues (i.e. euthanasia, prostitution, homosexuality, divorce, and abortion), in cultures valuing hierarchy (hierarchical social order) and harmony (fitting harmoniously in the social and natural environment) this association is weaker.

In our research, we have adopted a “religious cultural perspective” (see Cohen, 2009). In other words, we conceive religions as cultural systems since they include historically derived and socially transmitted ideas, rituals, practices, and products (Cohen, 2009; Saroglou & Cohen, 2013). National cultures and religious cultures are somewhat similar but do not equate to each other. Indeed, even if religious and national cultures function similarly in many ways, religious cultures include additional beliefs about the supernatural, the sacred, and the divine (McCullough & Willoughby, 2009). Furthermore, the national and dominant religious culture often share similar notions and concepts. For instance, we mentioned earlier the tolerance of contradiction which may be encountered both in holistic thinking and in Taoist or Buddhist principles in East Asia. Because of both religious and non-religious cultural factors, we therefore hypothesized that East Asian religions and religiosity should predict prosociality *and* tolerance toward various outgroups. This will differ from what is known from previous research on monotheistic religiosity. As is often the case with the relationships between religious and other cultural influences, it is very likely that the links here are bidirectional: cultural specifics favoring tolerance may influence religious specifics favoring tolerance, and vice versa. Finally, given that religious and cultural influences interact, East Asian religions and religiosity may differently impact attitudes and behaviors in the West and in the East. This issue will be discussed later. In the next section, we detail how East Asian religiosity and religious concepts may impact prosociality and prejudice as well as the possible role.

The Possible Impact of East Asian Religiosity and Religious Concepts on Social Attitudes and Behaviors

In this last section, we specify our general hypothesis regarding East Asian religions' tolerance. First, we discuss whether the positive impact of East Asian religiosity and religious concepts should extend to all targets of prejudice (e.g., ethnic, religious, moral outgroups). Second, we present potential mediators capable of explaining how East Asian religiosity and religious concepts may impact prosociality and prejudice. Third, the potential role of individual differences is discussed (e.g., authoritarianism, universalism). Finally, we argue the influence of the cultural context in which religiosity is measured and religious concepts are primed.

1. Targets

Besides the general hypothesis of East Asian religions' tolerance, we did not exclude that East Asian religious concepts and religiosity may not promote tolerance universally, regardless of the target. One may indeed ask whether East Asian religions would foster tolerance universally or only toward limited targets such as people from other religious groups. In other words, is the East Asian religions' tolerance limited or unlimited? We then investigate whether the main hypothesis regarding low prejudice applies to various kinds of outgroups, i.e. religious, convictional (atheists), ethnic, and moral (homosexuals). Even if recent studies suggest the existence of a common global tendency for high versus low prejudice across a variety of targets (e.g., Akrami et al., 2011), distinct psychological processes may be involved in different kinds of prejudice toward specific targets. There are well-established and well-known theories, such as the Instrumental Model of Group Conflict (Esses, Dovidio, Jackson, et al., 2001) or the Integrated Threat Theory of Prejudice (Stephan & Stephan, 2000), focused on situational and target-relevant factors which may lead to prejudiced attitudes. In both models, the perception of scarcity of resources or threat, either realistic (e.g., economic power, limited employment opportunities) or symbolic (e.g., values, status), is central in predicting prejudice against outgroups. Along the same line, research has found that prejudice can differ depending on whether the target is dangerous (socially threatening but not subordinate; e.g., a terrorist), derogated (socially subordinate but

not threatening; e.g., housewives), or dissident (directly competing with the ingroup; e.g., feminists; see Duckitt & Sibley, 2007; Asbrock, Sibley, & Duckitt, 2010), and whether the outgroup is perceived as socially threatening or economically competitive (Duckitt & Sibley, 2010). Similarly, Mavor and Gallois (2008) argued on the basis of one study that moral outgroups can be distinguished from “simple” (e.g., ethnic) outgroups: mere religiosity typically implies prejudice toward the former, whereas fundamentalism results in prejudice toward both kinds of targets (see also Leak & Finken, 2011).

Overall, the general hypothesis (East Asian religions and religiosity should increase prosociality and tolerance) was expected to apply to various targets of prejudice. Nevertheless, the possibility that East Asian religions still promote, or do not reduce, prejudice against some kinds of targets, i.e. homosexuals or atheists, was not excluded. Both homosexuals and atheists are indeed important moral outgroup since they are assumed to share none of the common religious moral principles concerning either sexual attitudes or moral behavior in general. These two groups may thus be perceived as threatening religious and moral values of believers. Furthermore, homosexuals and atheists constitute a common minority in East Asian societies compared with Muslims or Africans that are not really salient since there is not a great immigration rate of these populations in East Asia. As homosexuals and atheists are more “common”, East Asian believers may feel more threatened by these outgroups while they are not really concerned with Black people or Muslims, for instance.

Moreover, homonegativity is partly a consequence of social conformity to traditional societal morality, and higher religiousness across all religions, including East Asian religions, is typically positively related to conformity and traditionalism (Norris & Inglehart, 2004; Saroglou et al., 2004; Saroglou & Dupuis, 2006). East Asian religions, as almost all religions, are also concerned with sexual purity and abstinence (Ramsey, Pang, Johnson, & Rowatt, 2013), even if they do not explicitly condemn homosexuality (Vilaythong, Linder, & Nosek, 2010). Indeed, researchers have found that antigay prejudice, although lower among Buddhists than Christians, was still positively related to individual religiousness (Detenber et al., 2007). Furthermore, two recent priming studies showed that priming of Buddhist concepts increases explicit antigay prejudice among Buddhists in Singapore (Ramsay et al., 2013) and Christians in the US (Vilaythong et al., 2010). Finally, as all religions are concerned with morality, atheists who ostensibly chose to reject religion may be perceived as a-moral (they do not even subscribe to another moral system as do people from other religions) even among adherents of East Asian religions. Furthermore, according to recent polls, atheists are currently the least liked group in America (Edgell, Gerteis & Hartmann, 2006). It appeared that people were less likely to vote for, and had a lesser desire for their children to marry an atheist than a homosexual or a Muslim. Finally, according to Gervais (2005), prejudice against atheists is the most prevalent prejudice among religious believers. In consequence,

East Asian religions and religiosity may not foster tolerance toward atheists, and may even promote prejudice against them.

2. Possible mediators

In the present work, we aim not only to test the main hypothesis of East Asian religions' prosociality and tolerance but also to understand what could be the underlying mechanisms. Since the relationships between social attitudes (i.e. prosociality and prejudice) and religiosity, on one hand, as well as religious concepts, on the other hand, are two related but independent issues, the potential mediators might be different and will be presented separately. Nevertheless, based on the main characteristics of East Asian religious concepts as well as on the literature regarding religiosity and prejudice, we hypothesized that a common mechanism would be capable of explaining the relationship between East Asian religiosity and low prejudice as well as the impact of East Asian religious concepts on prejudice in general: the tolerance of contradiction.

2.1. Tolerance of contradiction

As explained in the previous sections, East Asian religiosity seems to be less concerned with closed-minded ideologies, contrary to Christian religiosity. Whereas Christian religiosity was indeed found to relate positively with the need for cognitive closure (Brandt & Renya, 2010; Saroglou, 2002), no relation was found between this construct and Buddhist religiosity (Saroglou & Dupuis, 2006). One can identify several elements within East Asian cultural and religious systems indicating lower closed-minded ideologies such as the ability to tolerate alternative or disruptive viewpoints. East Asian religions indeed favor more holistic and dialectical thinking styles than Abrahamic religions, such as Christianity. As a consequence, East Asian believers are more prone to tolerate seemingly contradictory elements, such as alternative ideologies, and less susceptible to the need of consistency and coherence. The dialectical concept of tolerance of contradiction considerably impacts attitudes toward ingroup and outgroup members (Spencer-Rodgers et al., 2010). People that easily tolerate contradictory elements do not systematically attribute stereotypical positive or negative qualities to the ingroup or the outgroup (Spencer-Rodgers et al., 2012). As a consequence, they are less susceptible to ingroup favoritism and are even susceptible to ingroup derogation (Bond & Hewstone, 1988; Cuddy et al., 2009; Ma-Kellams et al., 2011; Snibbe, Kitayama, Markus, & Suzuki, 2003). Since the tolerance of contradiction is both a central concept in East Asian religions and an indicator of low closed-mindedness

typical of East Asian religiousness, we think that this concept might be a key mediator explaining the influence of religiosity as well as religious concepts on social attitudes and behaviors.

Nevertheless, since it was not clear from the targets' section whether the main hypothesis also hold for homosexuals and atheists, disgust and distrust were included as two potential mechanisms that may universally explain the relationship between religiosity and prejudice against homosexuals and atheists. Based on the literature regarding religiosity and prejudice, disgust and distrust were indeed underlined as valuable mechanisms explaining the positive relationship between religiosity and, respectively, prejudice against homosexuals as well as atheists. As we had no clues that East Asian religious concepts may directly activate such concepts, we only investigated disgust and distrust as potential mediators of the religiosity-prejudice relation.

2.2. Disgust

Researchers have pointed out that disgust sensitivity is a key mechanism in promoting prejudice against homosexuals (Inbar et al., 2009; Olatunji, 2008) and is linked to the purity factor incorporated into the moral codes of many religions (Rozin et al., 1999). Disgust functions as a protector of the soul from moral pollution among religious people and may thus foster prejudice against individuals who perpetrate immoral sexual behaviors but also against individuals who commit all kinds of immoral behaviors or practices that violate religious values (e.g., other religious beliefs, atheism). Nevertheless, whereas the concern for sexual purity and abstinence is clearly present in East Asian religions (Ramsey et al., 2013), there seems not to be a concern for the doctrinal purity as is present in Abrahamic religions. In accordance, disgust may probably explain why adherents of East Asian religions do not easily tolerate homosexuals but should not be related with prejudice against people from other ethnic or religious groups.

2.3. Distrust

As previously said, distrust is central for anti-atheist prejudice (Gervais et al., 2011). Religious people indeed conceive that a unique and necessary source of morality is religion. Religious people then consider that atheists have no reason to be moral and cannot be trusted (Flanagan, 2013; Gervais et al., 2011). Morality is indeed a central concern for many religions, including East Asian religions. Furthermore, religiosity may promote moral distrust toward a variety of targets perceived to violate or threaten religious values. Nevertheless, whereas Abrahamic

religions consider that there is only one true morality created by God (Flanagan, 2013), East Asian religions do not posit the existence of a perfect, omnipotent, and omniscient creator God who possesses the truth. In accordance, distrust may possibly explain why adherents of East Asian religions do not easily tolerate atheists (as they seems to disregard moral concerns) but do not distrust people from other ethnic or religious groups (as they may endorse moral values, even if they are different from the dominant religious group).

Finally, based on the main characteristics of East Asian religious concepts, two potential mediators capable of explaining the positive impact of East Asian religious concepts were hypothesized: (1) the emotion of compassion and (2) the feeling of oneness. These two constructs may indeed, at least partially, explain how East Asian religious concepts may impact prosociality and prejudice. More precisely, as compassion and oneness are central constructs in East Asian religions, we hypothesize that priming East Asian religious concepts activates these related constructs, which in turn might increase prosociality and decrease prejudice.

2.4. Compassion

As previously mentioned, compassion is a core virtue emphasized in East Asian religions (Davidson & Harrington, 2002; Flanagan, 2011). Even if the Golden Rule within Abrahamic religions is also a command to compassion (e.g., One should treat others as one would like others to treat oneself), compassion and prosociality are often limited to proximal targets and members of the ingroup in Abrahamic religions (Galen, 2012) while they are universal and directed toward all living beings in East Asian religions. In accordance, Saroglou and Dupuis (2006) found that Western Buddhists' religiosity was related with the value of universalism (e.g., equality and equal chances for everyone, unity with nature, social justice) contrary to Christians (Saroglou et al., 2004). As a distinct emotion, compassion is a determinant of prosocial behavior (Batson & Shaw, 1991) and orients individuals to a social approach (Goetz, Keltner, & Simon-Thomas, 2010). This strong emphasis on compassion may thus explain why East Asian religions and religiosity foster prosociality and tolerance.

2.5. Oneness

For evolutionary reasons, individuals show altruistic and prosocial behavior toward people considered to be genetically proximal, such as family members, but also toward people who are ingroup members for social normative reasons (Batson, 1983; Sober & Wilson, 1998). Individuals who are considered as non-proximal do

not benefit from these altruistic and cooperative behaviors (Bernhard, Fischbacher, & Fehr, 2006). Therefore, the feeling of closeness or oneness with another person or group may facilitate enlarged prosocial behavior and undermine prejudice (Wright, Aron, & Tropp, 2002). In East Asian religions and cultures, the self and the world are conceived as strongly interdependent and all beings are perceived as parts of the greater whole. The emphasis on this feeling of oneness with others and the universe may thus explain, at least partially, how East Asian religions lead to prosocial behaviors and tolerance toward various kinds of outgroups.

3. Individual differences

Series of studies have shown that religious priming and individual religiosity, though not necessarily, may interact with individual predispositions. For instance, priming religious words may be more or only effective among participants who place some or high importance on the activated construct or behavior in their life in terms of personal dispositions and values (e.g., Meier, Robinson, & Wilkowski, 2006; Verplanken & Holland, 2002). Religious priming has indeed been found to activate submission to the experimenter, conformity to informational influence, and rigid deontological morality only among participants who are high in dispositional submissiveness and/or authoritarianism (Saroglou et al., 2009; Van Cappellen, Corneille, Cols, & Saroglou, 2011; Van Pachterbeke, Freyer, & Saroglou, 2011). Accordingly, we expected that the hypothesized positive impact of East Asian religious concepts and religiosity on prosociality and decreased prejudice may be stronger among people with high levels of extended prosocial values (i.e. universalism) and/or low levels of closed-minded social attitudes (i.e. authoritarianism). Furthermore, we do not exclude the possibility that authoritarianism and universalism may moderate the hypothesized relationship between religiosity and tolerance in the context of East Asian religions (i.e. attenuate or accentuate tolerance as a function of religiosity).

Finally, when researchers are interested in priming religious concepts, individual religiosity may also be a relevant potential moderator. Although several studies on religious priming indicate no moderating role of religiosity (Galen, 2012), other evidence suggests that religiosity may interact with a religious prime. For instance, the prosocial effects of Sunday vs. weekdays (Malhotra, 2010) and of the induction of self-transcendent positive emotions (Van Cappellen & Saroglou, 2012), as well as the antisocial effects of religious texts legitimizing violence (Blogowska & Saroglou, 2013; Bushman et al., 2007), were observed more, or only, among religious participants. We thus expected that, if anything, high religiosity may strengthen the positive effects of religious concepts on prosociality and tolerance, in the context of East Asian religions.

4. Cultural contexts

In the present work, we were additionally interested in investigating whether the hypothesized positive relationship between religious concepts/religiosity and prosociality as well as tolerance in the context of East Asian religions applies to different cultural contexts and distinct populations, i.e. (1) East Asians of Buddhist/Taoist/Confucian tradition, (2) Westerners converted to East Asian religions (e.g., Buddhism), and (3) Westerners of Christian tradition. Since the three groups diverge in the way people conceptualize, approach, and invest in East Asian religions, the impact of religious concepts (priming) and religiosity may differ.

For instance, independent of the fact that Buddhism or Taoism are typically seen in the West as exotic, attractive, and tolerant (such a positive perception could strengthen its prosocial effects), they are two of the major established religions in East Asia. East Asians are indeed raised and socialized within a Buddhist/Taoist/Confucian tradition. Internalization of East Asian religious values may thus be weaker overall among East Asians compared to converts. Also, since East Asian religious traditions often define religious ingroups, the positive impact of religious concepts and religiosity on prosociality and decreased prejudice may be less evident. Among converted Buddhists in the West, Buddhism has an extremely positive connotation and is very actively internalized; there is thus a stronger chance that our hypothesis would be confirmed. On the other hand, as both East Asian religious and cultural factors may somehow soften prejudiced attitudes, they may also interact. In other words, the association between East Asian religiosity/religion and low prejudice may be even stronger in East Asian cultural contexts since cultural factors may boost religious factors. Finally, it could also be very intriguing to test whether East Asian religious concepts, such as Buddhist concepts, also positively impact Westerners of Christian tradition. Indeed, even if Buddhism is quite popular in the West (Goldberg, 2006), it represents a religious outgroup, and it is still unclear how hetero-religious priming functions (Saroglou, 2014). Interestingly, Western students are clearly more open to the idea of having, for instance, a Buddhist as a neighbor, political representative or husband/wife than they are to having a Muslim in one of these positions (Van Pachterbeke & Saroglou, personal communication).

Overview of the chapters

Within the next chapters, we attempt to answer this main question: Do East Asian religions enhance both prosociality and tolerance, contrary to Christian religions? The present work is divided into two main parts. In the first three chapters, we investigate the relationship between religiosity, prosociality, and

prejudice in the context of East Asian religions using correlational studies. In the following two chapters, we investigate the causal relationships between East Asian religious concepts, prosociality, and prejudice through priming studies. Finally, we discuss the possible implications and limitations of our findings. Details regarding the chapters' content are provided here below.

In the first chapter, we examine the relationships between religiosity, prosocial behavior, and prejudice against various targets (i.e. religious outgroups, ethnic outgroups, homosexuals, single mothers, and atheists) in three East Asian countries (i.e. Japan, South-Korea, and Taiwan). Moreover, we compare Christians and East Asian believers living in these countries. In the second chapter, we ask about the possible mediators explaining the relationships between religiosity and tolerance in the context of East Asian religions. As we hypothesized that the ability of Easterners to tolerate seemingly contradictory elements may be a valuable mediator, we first examine whether East Asian religiosity really relates to the acceptance of a contradictory (compared with religion) system of knowledge such as science. In the third chapter, we examine three potential explaining mechanisms (i.e. tolerance of contradiction, disgust, and trust) of the religiosity-tolerance link in the context of East Asian religions and compare Christians (in Belgium) to East Asian believers (in Taiwan). The fourth chapter investigates the causality issue. We then examine whether priming Buddhist concepts really causes an increase in prosocial behavior as well as a decrease in prejudiced attitudes among Westerners. Finally, in the last chapter, we test the effects of priming Buddhist concepts on prosociality and prejudice among different populations (i.e. East Asians and Westerners) and examine the explaining mechanisms (i.e. tolerance of contradiction, compassion, and oneness).

Across the studies presented throughout these five chapters we (1) used both implicit (IAT) and explicit measures of prejudice, (2) measured prejudice against a variety of targets from religious, ethnic, and moral outgroups, (3) ran similar studies in different cultural and religious samples, (4) compared religious groups within the same cultural context, (5) compared the effects of the same religion across cultures, (6) used both correlational and experimental (priming) designs, (7) used both superluminal and supraliminal priming methodologies, and (8) tested several potential mediators.

Chapter 1
East Asian religious tolerance: A myth or a reality?
Empirical investigations of religious prejudice in East Asian societies

Magali Clobert

Vassilis Saroglou

Université catholique de Louvain

Kwang-Kuo Hwang

National Taiwan University

Wen-Li Soong

Fu Jen Catholic University

Under third revision for the *Journal of Cross-Cultural Psychology*

Abstract

Is East Asian religious tolerance, as opposed to Western monotheistic prejudice, a myth or a reality? Based on theoretical and empirical evidence, we hypothesized weak or low prejudice in the context of several East Asian religions. We examined whether this holds true for inter-religious, anti-atheist, ethnic, and antigay prejudice. In Study 1, analysis of ISSP 2008 data from Eastern religious and Christian samples in Japan, South Korea, and Taiwan (total $N = 3,555$) showed, contrarily to Christians, high inter-religious tolerance and weaker if no antigay prejudice as a function of Eastern religiosity. In Study 2, Eastern religiosity among Taiwanese ($N = 222$) was negatively related to prejudice against various religious outgroups (except atheists), especially among those low in authoritarianism. In Study 3, Eastern religiosity among Taiwanese ($N = 102$) was negatively related to implicit inter-religious (Muslims) and ethnic (Africans) prejudice; prosociality mediated the former association. Eastern religious tolerance seems to be true, but not unlimited.

Keywords: religiosity, East Asian religions, prejudice, prosociality, implicit association test

Introduction

1. Religiosity and Prejudice across Religions

Systematic research over the last 30 years has established that religiousness--certainly religious fundamentalism, but often even mere personal and intrinsic religiosity--predicts prejudice toward outgroups and people who are perceived to threaten one's religious values. This is the case with people of other race, ethnicity, and religion, as well as atheists, homosexuals, single mothers, and feminists (see for reviews: Hall, Matz, & Wood, 2010; Hunsberger & Jackson, 2005; Whitley, 2009). The effects are clearer when the prejudice is not socially proscribed and when one examines the role of coalitional, rather than devotional, aspects of religion. They are mediated by religious persons' and, even more so, by fundamentalists' authoritarian social attitudes (Rowatt, Johnson, LaBouff, & Gonzalez, 2013), and epistemic needs for closure (Brandt & Reyna, 2010) and consistency (Hill, Cohen, Terrell, & Nagoshi, 2010).

However, the above knowledge is based on many dozens of studies carried out essentially among Christians from North America and Europe. Few additional studies having been conducted with Muslims and Jews—and, exceptionally, Hindus—have provided similar results (e.g., Ginges, Hansen, & Norenzayan, 2009; Hunsberger, 1996). In sum, the existing knowledge on religiosity and prejudice clearly applies to the three monotheistic religions; and possibly extends to Hinduism.

Surprisingly enough, it is unknown whether the above knowledge generalizes to people belonging to major East Asian religions and cultures, i.e. Eastern Buddhists, Taoists, and folk believers living in Asian countries. More generally, systematic empirical research on the psychological aspects of East Asian religions and religiousness is extremely rare (see Saroglou & Cohen, 2013, for review). The aim of the present work was to investigate the role of religiousness on prejudice in the context of East Asian religions. We hypothesized that Eastern religiousness relates mostly to tolerance, or at least to a prejudice that is weaker in size and extent (targets), compared to West-originated Christianity. Below, we develop the rationale for the hypothesis.

2. East Asia-West Religious and Cultural Differences

Philosophers, religious scholars, and cultural psychologists have argued that Eastern religions, especially Buddhism and Taoism, may escape the temptation of monotheistic religions, in particular Christianity, to tend toward dogmatism, rigidity, and the subsequent intolerance and prejudice (e.g., Harvey, 1990; Ji, Lee, & Guo, 2010; Nisbett, Peng, Choi, & Norenzayan, 2001). These religious/convictional systems are less marked by doctrinal purity and the need for a systematic integration of all beliefs into a coherent whole of theological ideas, as it is the case with Christianity. Thus, historically, East Asian religions have also been much more open to reciprocal interpenetration and subsequent blending, compared to certain exclusiveness within each monotheistic religion. Buddhism and Taoism favor a more holistic and dialectical thinking about the world, humans, and transcendence than Catholicism and Protestantism. The yin-yang symbol in Taoism emphasizes interdependence and complementarity; and for Buddhism, two seemingly incompatible phenomena can both be true at the same time. Several East Asian religions seem also less concerned with obedience to religious authorities: these religions dispose of many temples but few priests (Yang, 1961).

Moreover, these religions emphasize, presumably in a stronger way than in the so-called Abrahamic religions, ideals of harmony, compassion, and non-violence (Davidson & Harrington, 2002; Ji et al., 2010). The concern for harmony is particularly present in East Asian religions at different levels: between individuals, between groups, and between human and nature. In this context, universal compassion and tolerance are strongly emphasized especially in Buddhism, possibly in a clearer way than in the three monotheisms. The latter suffer from an accentuated distinction between the ingroup and outgroups, thus limiting prosociality mainly to the ingroup (Galen, 2012; Saroglou, 2013).

There is indirect evidence from psychological research in favor of the above differences between East Asian religions/religiosity and West-originated monotheisms, in particular Christianity and Christian religiosity. For instance, whereas religion is a means to maintain control among Christians (European Americans), which contributes to their well-being, this does not seem to be relevant in the context of Eastern religion among Asian Americans and East Asians (Sasaki & Kim, 2011). Moreover, the belief in a personal moral God is strongly related to morality in Western monotheistic societies, but it is unrelated to morality among Easterners (China, India, and Japan) (Stark, 2001). Finally, among Western (Belgian) Catholics converted to Buddhism, high scores on Buddhist beliefs and practice are unrelated to the epistemic need for closure (Saroglou & Dupuis, 2006), whereas the opposite is true for religiosity among Catholics in the same country (Duriez, 2003; Saroglou, 2002) and Christians in the US (Brandt & Renya, 2010).

Thus, East Asian religiosity can be expected to lead to weaker, no, or even low prejudice compared to Christian religiosity. This may be due to the underlying psychological pattern of lower need for cognitive closure, lower need for control, and lower motivation to integrate all beliefs and norms into a coherent whole, as well as lower theological exclusivism and higher emphasis on compassion, non-violence, and harmony.

Note that religions can legitimately be seen as cultural systems themselves, or at least as subcultures within broader cultures (Cohen, 2009). When there is correspondence (probably bi-directional influences) between religious characteristics and other ethnic cultural characteristics (e.g., Jews living in Israel), such “isomorphism” may consolidate psychological differences between religious groups (e.g., Israeli Jews vs. Muslim Turks) (Saroglou & Cohen, 2013). On the contrary, when there is “non-isomorphism” between religious and other ethnic cultural characteristics (e.g., Muslims living in France), it is unclear whether it is the religious elements or the ethnic cultural elements that become preponderant.

In the present case, it is historically evident that East Asian vs. Christian (and monotheistic in general) religion and religiosity have been embedded in different geographies and corresponding cultures (East Asia vs. the West). These religions are even considered as having contributed to the respective East Asian vs. Western cultural psychological differences (e.g., Nisbett, 2003). A brief inspection of key cultural differences between East and the West consolidates our hypothesis.

East Asians differ from Westerners in that they are more, respectively, interdependent versus independent or, similarly, collectivistic versus individualistic (Henrich, Heine, & Norenzayan, 2010; Kitayama & Cohen, 2007). Westerners exaggerate their positive self-views and are more egocentric, whereas East Asians may demonstrate a self-effacing bias (Yamagishi et al., 2012). Whereas Westerners tend to focus on categorical rules and attributes when perceiving objects and use analytic reasoning, East Asians use more holistic, context-based thinking and similarity relations when classifying objects (Nisbett, 2003; Nisbett et al., 2001) and show weaker motivation for consistency (Kanagawa, Cross, & Markus, 2001; Suh, 2002). Interestingly, Chinese people show less ingroup valorization than European Americans (Ma-Kellams, Spencer-Rodgers, & Peng, 2011), what is very likely due to the dialectical vision of self, allowing thus for integration of contradictory elements and changes (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010). Moreover, dialectical thinkers are supposed to be less vulnerable to essentialist thinking about social groups and more open to stereotype change (Spencer-Rodgers, Williams, & Peng, 2012).

To the extent that (other than religious) cultural elements impact religion and between-religion differences, we can suspect that, within the context of East Asian religions, compared to West-originated Christian religions, holistic thinking, interdependence, low egocentrism, emphasis on similarity relations in

categorizations, and a low need for consistency should result in a weakened perception of others as being totally different, and thus soften prejudice if not favor tolerance.

3. The Present Studies

To fully investigate the question of weak or low prejudice as a function of East Asian religiousness we measured, across the present studies, prejudice against a variety of kinds of outgroups that are known to be relevant in terms of previous research on religion and prejudice, i.e. religious, convictional (atheists), ethnic, and moral (homosexuals). Although there exists a common global tendency for high versus low prejudice across a variety of targets (e.g., Akrami, Ekehammar, & Bergh, 2011), distinct psychological processes may be involved in different kinds of prejudice toward specific targets (Asbrock, Sibley, & Duckitt, 2010; Duckitt & Sibley, 2010). Previous research on religion and prejudice suggests, for instance, some “hierarchy” between various kinds of targets, with atheists and homosexuals, or moral outgroups in general, being the typical targets of prejudice as a function not only of Christian fundamentalism, but also of mere Christian religiosity (Leak & Finken, 2011; Mavor & Gallois, 2008; Rowatt, LaBouff, Johnson, Froese, & Tsang, 2009). Nevertheless, on the basis of the many arguments in favor of our main hypothesis, we expected East Asian religious tolerance (or weaker, compared to Christians, prejudice) to apply to all the above mentioned kinds of targets.

To clearly focus on culture-based East Asian religiousness and its social outcomes, i.e. attitudes toward outgroups, three studies were carried out specifically in East Asian societies (adults from Japan, South Korea, and Taiwan in Study 1; young adults from Taiwan in Studies 2 and 3). Across the studies, Buddhists, Taoists, folk believers, but also, for comparative reasons, non-believers (atheists), were included. In interpreting the results, comparisons were made to previous knowledge from research on monotheistic, especially Christian, religions, and, in Study 1, with Christian (Catholic and Protestant) Asians living in the same Eastern countries. Across the studies, ethnic, religious, convictional (anti-atheist), and moral (antigay) prejudice was investigated; both explicit and implicit measures of prejudice were adopted; and various measures of religiousness (affiliation, global religiosity, religious practice, and fundamentalism) were used. Additionally, we investigated authoritarianism as a possible moderator of the religiousness-prejudice link (Studies 2 and 3), and prosociality as a mediator of the religiousness-(low) prejudice link (Study 3).

Study 1

In Study 1, the hypothesis of low prejudice as a function of Eastern religiousness was tested in a set of three East Asian countries (Japan, South Korea, and Taiwan). To show cross-religious differences while keeping the ethnic cultural background constant, we compared East Asian religious groups (Buddhists and Taoists) with Catholic and Protestant Christians from the same countries. The study focused on *inter-religious prejudice* toward people from other religions or with different religious convictions and *moral*, i.e. *antigay, prejudice*.

We expected lower prejudice, if not tolerance, among East Asian religious samples, both in terms of group comparisons with Asian Catholics and Protestants and as a function of high religiousness. Of particular interest was antigay prejudice, since all world religions are suspected to explicitly support antigay prejudice (Siker, 2007) and all religions imply an overall conservatism and traditionalism in values and a low consideration of hedonistic values (Norris & Inglehart, 2004; Saroglou, 2014; Saroglou & Dupuis, 2006).

1. Method

1.1. Participants

Data for this study were retrieved from the International Social Survey Program (ISSP) 2008 module on religion. The ISSP is a program of yearly international surveys covering a large variety of topics (<http://www.issp.org>), with an additional module each year addressing specific questions on a given topic (e.g., in 2008, religion). We used the pooled dataset from the three East Asian countries that are included in the ISSP 2008: South-Korea ($N = 1,482$), Taiwan ($N = 1,800$), and Japan ($N = 1,131$). All three countries have been marked by the presence and influence of East Asian religions; and South Korea presents the advantage of a strong presence of Christians. On the basis of the ISSP item asking for participants' religious affiliation, we retained those belonging to any one of the five major convictional groups present in these countries: Buddhists ($N = 1,081$), Catholics ($N = 163$), Protestants ($N = 469$), Taoists ($N = 260$), and atheists ($N = 1,582$). The few remaining respondents belonged to very small and marginal religious groups. The study thus included 3,555 participants in total (48% male, 52% female) ranging in age from 16 to 94 ($M = 46.5$, $SD = 17.3$). Buddhists were numerous in each of the three countries (24% in South-Korea, 18% in Taiwan, and 35% in Japan); the large

majority of Christians hailed from South-Korea (83%) and all Taoists came from Taiwan.

1.2. Measures

Prejudice. *Antigay prejudice* was measured through the single ISSP item assessing perceived immorality of homosexuality: “Are sexual relations between two adults of the same sex wrong or not?” (Likert scale ranging from 1 = *always wrong* to 4 = *not wrong at all*). For the analyses, scores were reversed. *Inter-religious prejudice* was measured through two ISSP items: “Would you accept a person from a different religion or with a very different religious view from yours ... (1) marrying a relative of yours and (2) being a candidate of the political party you prefer?” (4-point scales ranging from 1 = *definitely accept* to 4 = *definitely not accept*). The two items were importantly inter-related ($r = .61, p < .01$) and thus were averaged to form an index of inter-religious prejudice (r s across samples: .49-.68).

Religiousness. *General religiosity* was measured through the ISSP 2008 item: “Would you describe yourself as...?” (responses ranged from 1 = *extremely religious* to 7 = *extremely non-religious*). For the analyses, scores were reversed. *Religious practice* was measured through three ISSP 2008 items assessing frequency of prayer, religious attendance, and visitation to holy places (responses ranged from 1 = *never* to 11 = *once a day*; $\alpha = .61$; α s across samples: .43-.64)¹.

2. Results

Means and standard deviations of all measures are detailed in Table 1, for each convictional group. One-way analyses of variance (ANOVAs) and post-hoc comparisons (Tukey’s HSD) showed significant differences between groups (see Table 1; $p < .05$). All religious groups scored higher than atheists on religious

¹ Measures of personal, traditional religiosity (positive attitudes toward religion), religious practice, religious beliefs, and self-identification as religious or as belonging to a religious group, although in principle aim to tap specific *aspects* of global religiousness (Voas, 2007), usually overlap, especially when they are administered to samples from the general population of average religiosity (Tsang & McCullough, 2003). We thus had no specific hypotheses on the ISSP religiosity index vs. the ISSP religious practice measure. On the contrary, differences in psychological outcomes usually result as a function of distinct religious *forms* that differ in major underlying psychological processes such as fundamentalism vs. religion-as-quest orientation or modern spirituality vs. traditional religiosity (all these are forms of the broad construct “religiousness”; Saroglou, 2014).

Chapter 1 - East Asian religious tolerance

measures, but also on antigay prejudice. This was not the case with inter-religious prejudice (atheists possibly do not highly appreciate religious groups in general). As hypothesized, the two East Asian religious groups displayed lower antigay prejudice (and lower religiousness) than the two Christian groups. However, Taoists and Catholics displayed less inter-religious prejudice compared with Buddhists, atheists, and Protestants.

Table 1
Descriptive Statistics for Study Variables and Comparisons between Groups
(Study 1)

Variables	Atheists (a)	Buddhists (b)	Taoists (c)	Catholics (d)	Protestants (e)	Comparisons
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i> <i>df</i>
Inter-religious prejudice	1.99 (0.82) cd	2.00 (0.83) cd	1.53 (0.70) abe	1.69 (0.68) abe	2.01 (0.80) cd	48.59** 4,3262
Antigay prejudice	2.97 (1.09) bde	3.29 (1.01) ade	3.13 (1.24) de	3.53 (0.87) abc	3.64 (0.91) abc	33.02** 4,3211
Restrictive sexual morality	2.88 (0.71) bcde	3.12 (0.72) acde	3.28 (0.71) ab	3.27 (0.77) a	3.29 (0.69) ab	51.67** 4,3501
Traditional gender roles	2.66 (1.27) be	3.02 (1.32) a	2.81 (1.23)	2.81 (1.18)	2.88 (1.31) a	13.72** 4,3520
Religiosity	2.81 (1.46) bcde	4.73 (1.22) ace	4.99 (0.95) abe	5.02 (1.13) ae	5.36 (1.22) abcd	597.08** 4,3468
Religious practice	1.94 (1.17) bcde	3.55 (1.62) ade	3.31 (1.58) ade	4.25 (1.85) abce	5.27 (2.01) abcd	426.12** 4,2924

Note. Different subscripts along rows indicate significant ($p < .05$) differences between the groups a-e.

* $p < .05$. ** $p < .01$.

Bivariate correlations between religious measures (general religiosity and religious practice) and the two types of prejudice (i.e. inter-religious and antigay) were conducted distinctly for each of the four religious groups (see Table 2). Inter-religious prejudice was positively associated with both measures of religiousness among Christians (both Catholics and Protestants); however, the same associations were negative (for religiosity) or nonexistent (for religious practice) among Buddhists and Taoists. Antigay prejudice was positively associated with religiosity among all religious groups (but not significantly among Taoists).

Table 2

Coefficients of Correlations between Indicators of Religiousness and Inter-religious and Antigay Prejudice, Distinctly by Religious Group (Study 1)

	Buddhists (<i>N</i> = 1,081)	Taoists (<i>N</i> = 260)	Catholics (<i>N</i> = 163)	Protestants (<i>N</i> = 469)
Inter-religious prejudice				
Religiosity	-.12**	-.13*	.13+	.24**
Religious practice	.07	.06	.16*	.26**
Antigay prejudice				
Religiosity	.07*	.00	.15+	.17**
Religious practice	-.02	.10	.11	.22**

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

To test the significance of differences in the associations between the religious groups, the two kinds of prejudice were regressed on religiosity (centered), the contrast (centered) between the two East Asian religious groups (coded 1) and the two Christian groups (coded -1), and the interaction between the two. To control for possible between-group socio-demographic differences, age, gender, and education were also entered as predictors. As shown in Table 3, an interaction was found between religiosity and being of East Asian versus Christian religion for inter-religious prejudice but not for antigay prejudice. Simple slope analyses showed that religiosity among Christians predicted both inter-religious and antigay prejudice (β s = .25, .14; p < .01) as opposed to East Asian religiosity which implied low inter-religious prejudice (β = -.17, p < .01) and no antigay prejudice (β = .03, p = .32).

Table 3
Regressions of Inter-religious Prejudice and Antigay Prejudice on Religiosity, Religious Group (Eastern vs. Christian), and their Interaction (Study 1)

	Inter-religious prejudice			Anti-gay prejudice		
	<i>B</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>t</i>	<i>p</i>
Religiosity	.02	0.74	.457	.06	2.58	.010
Religious group: Eastern vs. Christian	-.01	-0.21	.835	-.21	-9.22	.000
Religiosity × Religious group	-.18	-7.44	.000	-.03	-1.34	.181
Gender	.06	2.82	.005	-.10	-4.26	.000
Age	.14	5.15	.000	.24	9.13	.000
Education	.03	1.03	.301	-.07	-2.89	.004
$R^2 = .05, .12$						

3. Discussion

Study 1 provided partial confirmation of the main hypothesis. Using ISSP 2008 data from three East Asian countries, we found that as a function of high religiousness, Buddhist and Taoist samples exhibit high inter-religious tolerance and weaker or no antigay prejudice. The present findings are not due to a general religion-low prejudice effect in these societies since a contrasting pattern, i.e. low inter-religious tolerance and stronger antigay prejudice, was found among highly religious Catholics and Protestants living in the same countries. The present findings clearly thus indicate cross-religious differences, since the ethnic cultural context was held constant.

It seems important to distinguish between different targets of (religious) prejudice. Inter-religious prejudice may be different in nature from moral prejudice against targets perceived to threaten values. Although to a much lesser extent than among Christians, Buddhists' religiosity was still positively related to antigay prejudice—though this relation seemed to mainly be due to socio-demographic variables. However, Taoist religiosity was totally unrelated to antigay prejudice, Taoism having historically been more tolerant toward homosexuality (Siker, 2007). Nevertheless, both Buddhists and Taoists showed higher antigay prejudice compared to atheists.

Mean level comparisons between religious groups showed only partial correspondence with what was found as a function of individual religiousness. Mean differences on antigay prejudice confirmed the East Asian religions-weaker prejudice hypothesis. However, inter-religious prejudice was lower among Taoists than among Buddhists (as well as Protestants and even atheists), probably because Taoism possesses fewer traits of a religion even compared to Buddhism. Indeed, Taoism looks like a (naturalistic) philosophical system rather than a religion, especially a unified one (Kohn, 1991). Note however that, in the present study, all Taoists came from the same country. Future research should investigate whether this difference was limited to the data of the present study or can be more broadly generalized.

Study 2

In Study 2 we further investigated the link between East Asian religiousness and inter-religious prejudice and addressed additional questions. An important limitation of Study 1 was that no specific religion was mentioned in the measure of inter-religious prejudice. This may have facilitated an overall positive evaluation of tolerance of “people from a different religion” in general rather than providing specific information on prejudice against distinct, well-identified religious outgroups. Thus, in Study 2, we investigated whether East Asian religiousness relates to low inter-religious prejudice, again measured explicitly, but this time in reference to specific religious outgroups, possibly varying on familiarity and valence: Christians, Jews, Muslims, and even an unknown, in fact fictitious religious group we called “Yxto”.

Moreover, in Study 2, alternative measures of religiousness were introduced, i.e. a more extended scale of religiosity and a measure of religious fundamentalism. On the basis of previous studies in other religions (Rowatt et al., 2013) as well as on theory and conceptualization of fundamentalism as implying rigidity, conservatism, and an emphasis on the ingroup/outgroup distinction (Brandt & Renya, 2010; Hunsberger & Jackson, 2005; Rowatt et al., 2013), one could expect fundamentalism not to show low prejudice, and to even reflect high prejudice, especially inter-religious prejudice.

Finally, a measure of right-wing authoritarianism was included. Authoritarianism is the major explanatory factor of the religion-prejudice link in studies in Western monotheistic religions (Hall et al., 2010; Rowatt et al., 2013; Whitley, 2009). Low prejudice as a function of East Asian religiosity may be due to an independence of Eastern religiosity from authoritarianism, the latter being thus unable to contribute to religious prejudice. Nevertheless, its presence might weaken, if not oppose the tolerant role of Eastern religiosity. In other words, authoritarianism should moderate the religiousness-prejudice link.

1. Method

1.1. Participants

Participants were 222 Taiwanese students (64% female) from Fu Jen Catholic University and National Taiwan University. The average age was 21 years ($SD = 5.67$). Participants self-identified as Buddhists (24%), folk believers² (22%), agnostics

(13%), and atheists (25%), whereas 16% reported “other”. They took part in this study in exchange for course credit and completed the questionnaire in the classroom within 30 minutes.

1.2. Measures

Inter-religious prejudice was measured distinctly in reference to five specific targets: Christians, Jews, Muslims, Yxto (a fictive religious group), and atheists. For each of the five targets, participants answered three questions commonly used in international surveys: “Would you like to have this person as (1) neighbor, (2) political representative, and (3) husband/wife?” (Likert scales ranging from 1 = *totally dislike* to 7 = *totally like*). Cronbach’s alphas were satisfactory, ranging from .76 through .86. The scores on the three items were averaged, after being reversed, to provide a unique score of prejudice for each target.

Participants were also administered a religiosity scale (12-item Four Basic Dimensions of Religiosity scale; see Saroglou et al., 2012) and a religious fundamentalism scale (12-item short version; Altemeyer & Hunsberger, 2004). The former measures religiosity as a composite of four basic dimensions (emotions-experience, affiliation-identity, meaning-beliefs, and values-morality) and has been validated in 14 countries of various religious traditions. The latter has been extensively used in many studies with participants from the major religious traditions. Finally, participants were administered a 12-item Right Wing Authoritarianism Scale (Funke’s, 2005, version of Altemeyer’s, 1996, scale, adapted to the international context by Van Pachterbeke, Freyer, & Saroglou, 2011). All three measures of religiosity, fundamentalism, and authoritarianism used scales on a 7-point Likert format ranging from *totally disagree* to *totally agree* (α s: .88, .74, and .65)³.

² In 2010, about 35% of the Taiwanese population self-identified as folk believer, 22% as Buddhist, 17% as Taoist, 5% as Christian, and 21% as non-religious (Gries, Su, & Schak, 2012). Taiwan is mostly polytheistic and has a long history of coexisting religions. Folk religion consists of a blend of deities and practices coming from Buddhism, Taoism, divination, and ancestor worship. The main focus of folk religion is the propitiation of death including sacrifice to the ancestors, selecting auspicious burial sites, warding off “ghosts” or malevolent spirits, and worshipping a pantheon of gods (Ahern, 1981; Wolf, 1978).

³ The measures were translated and adapted to traditional Chinese by a team of bilingual experts. Using principal component analysis, we found an equivalent one-factor structure between our Taiwanese sample and a US sample (Saroglou et al., 2012) for fundamentalism ($\phi = .98$), religiosity ($\phi = .99$), and authoritarianism ($\phi = .91$). The Tucker’s Phi equivalence indices were thus satisfactory ($>.90$; Van de Vijver & Leung, 1997).

2. Results

Bivariate correlations were computed between (1) the distinct indicators of prejudice against the various convictional targets and (2) religiosity, fundamentalism, and authoritarianism (see Table 4). Negative associations were found between the two religious measures and prejudice toward Christians, Jews, and Muslims, but also the fictitious religious group (Yxtos). However, this was not extended to atheists; the association between religiosity and anti-atheist prejudice actually turned out to be positive.

Right-wing authoritarianism, although related to fundamentalism ($r = .25, p < .01$), was unrelated to inter-religious prejudice (see Table 4) and religiosity ($r = .10, ns$). However, we explored the possible moderating role of authoritarianism on the religiosity-low prejudice link by conducting a moderated multiple regression. The predicted variable was inter-religious prejudice as an aggregate measure of prejudice toward the four religious targets (Christians, Jews, Muslims, and Yxtos, $\alpha = .83$; an exploratory factor analysis with varimax rotation also indicated the existence of one factor). Religiosity (centered), authoritarianism (centered), and the product of their interaction were entered as predicting variables. There was a main effect of religiosity, $\beta = -.29, t(3,199) = -4.48, p < .01$, but not of authoritarianism, $\beta = .06, t(3,199) = 0.99, ns.$, on inter-religious prejudice, and the interaction of authoritarianism and religiosity turned out to be significant, $\beta = -.13, t(3,199) = -1.99, p < .05$. The regression explained 11% of the total variance, $F(1,199) = 9.15, p < .01$. A simple slope analysis revealed that the negative link between religiosity and inter-religious prejudice was much stronger among those low (one *SD* below the mean) ($\beta = -.41, p < .01$) than among those high (one *SD* above the mean) on authoritarianism ($\beta = -.17, p = .07$)⁴.

⁴ By interchanging the moderator and the independent variable, another simple slope analysis showed that authoritarianism was related to inter-religious prejudice among the highly religious participants (one *SD* above the mean), $\beta = .18, p < .05$, but not among those low (one *SD* below the mean) in religiosity, $\beta = -.05, ns$.

Table 4
Coefficients of Correlations of Religiosity, Fundamentalism, and Authoritarianism with Explicit (Study 2) and Implicit Prejudice and Prosociality (Study 3)

Social attitudes	Religiosity	Fundamentalism	Authoritarianism
Study 2			
Targets of prejudice			
Christians	-.32***	-.12	-.05
Jews	-.25***	-.02	-.01
Muslims	-.22**	.01	-.07
“Yxtos”	-.25***	.04	.05
Atheists	.14*	.11	.10
Study 3			
Targets of prejudice			
Muslims	-.32***	-.29**	-.09
Africans	-.17*	-.02	.02
Prosociality	.36***	.22*	-.02

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

3. Discussion

Study 2 replicated and extended the findings of Study 1 relative to inter-religious prejudice. Compared to Study 1, it included a more homogenous sample (Taiwanese students) rather than adults of various ages from different Asian countries, as well as more extended and specific measures of religiosity and prejudice. It turned out that the more religious the participants were (in beliefs, emotions, values, and belonging to East Asian religions), the less they showed explicit indirect prejudice measured as an unwillingness to have people from specific other religions as neighbors, political representatives, or marriage partners. This inter-religious tolerance applied to all different religious groups regardless of their possible different status (e.g., valence and familiarity) among Taiwanese. However, such tolerance was not extended to atheists, people that possibly constitute the believers’ typical outgroup (see Gervais, Shariff, & Norenzayan, 2011).

As suspected, religious fundamentalism, a religious tendency characterized by rigidity, conservatism, and emphasis on the ingroup/outgroup distinction, was unable to show the same tolerant tendency of general, personal religiosity. Nevertheless, it was not related to high inter-religious prejudice. Finally, authoritarianism was only modestly related to fundamentalism and was unrelated to religiosity. These findings suggest that, contrary to the case of prejudice in monotheistic religions, authoritarianism may be unable to lead to religious prejudice in Eastern religions. However, authoritarianism moderated the religiosity-low prejudice link in a meaningful way: the tolerant “role” of religiosity toward religious outgroups was weakened among participants high in authoritarianism. Thus, the findings of Study 2 suggest that, whereas in monotheistic contexts authoritarianism nourishes and strengthens religious prejudice, in Eastern religious contexts it inhibits religious tolerance⁵.

⁵ Although this was beyond the main objectives of this work, following a reviewer’s suggestion, we also examined whether the results regarding authoritarianism were due to all or some of the three main components of authoritarianism (i.e. conventionalism, authoritarian submission, and authoritarian aggression), since recent research suggests that the relation of religiosity or fundamentalism with prejudice may depend on specific components of authoritarianism (Rowatt et al., 2013). We first failed to replicate the three-factor structure of the authoritarianism scale as in Funke (2005) or Mavor et al. (2009). Second, we computed three indexes of the three components following Funke (2005). Re-computing the analyses of Study 2 with the three distinct authoritarian components showed that conventionalism ($r_s = .15, .17, p_s < .05, .01$) and submission ($r_s = .08, n.s.,$ and $.28, p_s < .01$), but not aggression ($r_s = .00, .09, n.s.$), were the dimensions related to, respectively, religiosity and/or fundamentalism. Moreover, overall, the three authoritarian components were unrelated to the various kinds of prejudice, with the exception of one positive association found between conventionalism and prejudice against atheists ($r = .18, p < .01$). Finally, re-computing the interaction of religiosity with each authoritarian component in predicting overall prejudice confirmed Study 2’s interaction results for conventionalism and submission but not aggression: $\beta_s = .12, .11,$ and $.02$; $t_s(3,199) = 1.84, 1.69,$ and 0.29 ; $p_s = .06, .09,$ and $.77$. This pattern of results is confirmed even after gender and age are entered in the regression.

Study 3

The main aim of Study 3 was to further extend and consolidate the findings of Studies 1 and 2 by testing whether East Asian religiousness implies low prejudice also at the implicit level. Self-reported measures of attitudes toward outgroups are subject to social desirability bias (Fazio & Olson, 2003). Similarly, religious people of Christian tradition tend to overestimate the quality of their social attitudes and may be wrong when they perceive themselves as low in prejudice, high in altruism, and universalistic in their prosociality (Batson, Schoenrade, & Ventis, 1993; Blogowska & Saroglou, 2011). It thus became critical to our main hypothesis to test whether Eastern religiousness predicts low prejudice not only at the explicit level but also at the implicit level. This is particularly important if one assumes that tolerance of outgroups is highly valued in East Asian religions. The more tolerance is socially and explicitly valued, the greater the discrepancy between explicit and implicit attitudes may be if, for instance, tolerance is not internalized as a value.

Three additional questions were investigated. First, Studies 1 and 2 tested the religion-low prejudice hypothesis by focusing on inter-religious and moral prejudice. In Study 3, we also studied inter-religious prejudice—against Muslims, a key target for the Taiwanese—but we also included for the first time ethnic/racial prejudice against a typical Taiwanese outgroup, i.e. African people. Second, one could counter-argue that religious explicit outgroup tolerance found in Studies 1 and 2 simply reflects politeness, social conformity, or a need to inhibit hostility, rather than real proactive compassionate concerns for others. The latter are however considered to be strongly valued in the context of East Asian religions. We thus included in Study 3 a measure of prosocial behavioral intentions (found previously to be sensitive to Buddhist primes among Westerners; Clobert & Saroglou, 2013) as a possible mediator of the religiousness-low prejudice link.

Finally, as in Study 2, we included here measures of fundamentalism and authoritarianism to again test whether these two constructs function differently from religiosity regarding prejudice. We also investigated an additional question. Previous research has shown that fundamentalism can be conceived as a blend of religiosity with authoritarianism (Hunsberger & Jackson, 2005), the former implying prosocial tendencies like ingroup helping, the latter implying antisocial tendencies such as outgroup prejudice (e.g., Blogowska & Saroglou, 2011). In case fundamentalism proved, as in Study 2, to be unrelated to prejudice, we would investigate the unique outcomes of its underlying components, i.e. religiosity and authoritarianism.

1. Method

1.1. Participants

Undergraduate students ($N = 102$; 53.9% female) from Fu Jen Catholic University and National Taiwan University took part to this study voluntarily or in exchange of course credit. Mean age was 21.1 ($SD = 1.54$). Participants self-identified as follows: folk believers (45.1%), Buddhists (19.6 %), Taoists (1%), atheists (26.5%), and “other” (7.8%). The researcher contacted students directly in classrooms and invited them to take part to the study. Participants entered the lab in small groups (3-10 people) and completed the task on a computer. The study was presented as a recognition and categorization task.

1.2. Material and procedure

Implicit prejudice. Upon entering the lab, participants were asked to complete a computer task. This included two Implicit Association Tests (IAT) intended to measure implicit prejudice toward Muslims and African people. Each of the two IATs consisted of five blocks (total: 10 blocks). For the IAT measuring prejudice against Muslims, the target categories were *Buddhist* and *Muslim* (10 words each), whereas the attribute categories were *positive* and *negative words* (respectively, 10 and 10). The Buddhism-related words were: Nirvana (涅槃), Buddha (佛陀), monk (僧), Sutra (佛經), Bodhisattva (菩薩), Sangha (僧尼), reincarnation (生死輪迴), awakening (覺悟者), Buddhist temple (佛寺), and Dharma (佛法). The Islam-related words were: Koran (古蘭經), Mahomet (穆罕默德), imam (阿訇), mosque (清真寺), Sharia (伊斯蘭法), Allah (真主), Islam (伊斯蘭教), Ramadan (齋戒), Mecca (麥加), and Muslims (穆斯林). These words were selected after a pre-test conducted in another group of 27 Taiwanese undergraduate students who rated 15 Buddhist and 15 Muslim words on their relevance to, respectively, Buddhism and Islam and their valence (7-point scales). The 20 selected words were all very religious (scores ≥ 6) and neutral in valence (scores between 3 and 5). All stimuli were presented in traditional Chinese.

For prejudice against Africans, the target categories used were *Asian* and *African*, and the attribute categories were *positive* and *negative words*. The associated stimuli for targets were 10 Asian and 10 African male faces and the attribute stimuli were 10 positive and 10 negative words. African and Asian male faces were generated for this experiment using FaceGen Modeller 3.5 which also enabled us to control for facial expressions of emotions. We chose to generate neutral faces in order to avoid emotional priming.

Each of the discrimination tasks (Blocks 1, 2, 4, 6, 7, and 9) consisted of a total of 20 trials. Each of the combined tasks (Blocks 3, 5, 8, and 10) comprised 40 trials, with targets and attributes presented in a random order. For each trial, the participant had to focus on a blank screen for 395 ms, at which point a target or an attribute appeared on the screen for 10,000 ms, during which participants had to press the key corresponding to the correct category. Feedback followed the response, indicating the participants' accuracy and response times. The order of presentation between the two IATs was selected randomly.

The critical comparisons between the prejudice-congruent sorting task (Block 3: Buddhist words + positive words / Muslim words + negative words; Block 8: Asian faces + positive words / African faces + negative words) and the prejudice-incongruent sorting task (Block 5: Buddhist words + negative words / Muslim words + positive words; Block 10: Asian faces + negative words / African faces + positive words) provided a measure of prejudice against Muslims and African people. As a measure of prejudice we used the incompatible task response time minus the compatible task response time divided by its associated pooled-trial standard deviation. Each block started with short instructions that described the assignment of the two response keys (i.e., "s" and "l") for the stimulus categories. Participants were asked to respond as quickly and as accurately as possible.

Prosocial behavior. After completing the IAT, participants were asked to write down what they would do if they won 100,000 euros, specifying the percentage of money they would allocate to each expenditure. The percentage of money participants spontaneously allocated to others (e.g., family, friends, charities) and not to themselves was coded as a measure of prosociality (see also Clobert & Saroglou, 2013).

Post-experimental measures. Authoritarianism and fundamentalism were measured as in Study 2 ($\alpha = .61$ and $.69$). Participants also filled in a 3-item index of religiosity (Saroglou & Muñoz-García, 2008) assessing the frequency of prayer and the importance of God and religion in life ($\alpha = .72$; 7-point Likert scales).

2. Results

2.1. Preliminary analyses

For the IAT results, we followed the typical data reduction procedure (Greenwald, Nosek, & Banaji, 2003). After checking for subjects with more than 10% of trial latencies below 300 ms (0 subjects), we replaced the inaccurate trials (6%) with the respective block mean plus 600 ms. Means (and standard deviations) for the (1) Muslims IAT-Compatible task, (2) Muslims IAT-Incompatible task, (3)

Africans IAT-Compatible task, and (4) Africans IAT-Incompatible task were respectively 624 ms (129), 697 (189), 648 (48), and 762 (65). Repeated-measures ANOVA analyses confirmed the classic discrimination effect of the IAT for the implicit prejudice against Muslims, $F(1, 101) = 45.54, p < .01$, partial $h^2 = .31$, and for the implicit prejudice against Africans, $F(1, 101) = 271.21, p < .01$, partial $h^2 = .73$. Indeed, participants needed more time to classify religious words and faces in a prejudice inconsistent manner (non-compatible task) than in a prejudice consistent manner (compatible task).

Means and standard deviations of prosociality were 24.67 and 24.07. Comparisons between convictional groups revealed less prosociality among atheists, $M = 11.48, SD = 14.35$, compared to the religious groups, $F(3,96) = 3.98, p = .01$, i.e. Buddhists, folk believers, and other religious believers, respective M s = 29.84, 25.66, 37.32, SD s = 28.61, 22.81, 33.59.

2.1. Religious Measures, Authoritarianism, and Implicit Prejudice

We first computed bivariate correlations between the three “predictors” (religiosity, fundamentalism, and authoritarianism) and the three “outcome” variables (prejudice against Muslims, prejudice against Africans, and prosociality) (see Table 4). Religiosity correlated negatively with both kinds of implicit prejudice, and even fundamentalism was found to correlate negatively with prejudice against Muslims. Moreover, both religious measures were positively correlated with prosocial behavior (sharing of hypothetical gains). Authoritarianism, which was modestly although nonsignificantly related to religiosity and fundamentalism (r s = .13, .15, p = .18, .12), was unrelated to either prosociality or prejudice⁶.

Second, to disentangle the effects of authoritarianism and religiosity as underlying components of fundamentalism, we carried out a hierarchical multiple regression on prejudice against Muslims. In step 1, only fundamentalism was entered as predictor, $F(1,99) = 6.36, p = .01, R^2 = .06$. In step 2, we added religiosity and authoritarianism as predictors, $F(3,97) = 3.89, p = .01, R^2 = .11$. In this step, fundamentalism was no longer a significant predictor (the regression coefficient dropped from $\beta = -.25, p = .01$, to $\beta = -.08$, n.s.); only religiosity ($\beta = -.26, p = .03$) but not authoritarianism ($\beta = -.04$, ns) predicted low prejudice against Muslims.

⁶ Note that the modest positive associations of authoritarianism with religiosity and fundamentalism were mainly due to the components of conventionalism (r s = .28 and .32; p s < .01) and authoritarian submission (r s = .22 and .29, p s < .05), whereas authoritarian aggression was negatively related to the religious variables (r s = -.17, $p = .09$, and -.25, $p < .05$). The three constructs were computed as in Study 2 (see footnote 5).

Finally, given that prosociality was related to both religiosity ($r = .36, p < .001$) and prejudice against Muslims ($r = -.29, p < .05$), but not Africans ($r = -.05$), we investigated whether prosociality mediates the link between religiosity and low prejudice toward Muslims. We carried out a simple mediation analysis following Preacher and Hayes (2008). The results (see Figure 1) confirmed the hypothesized mediation, with prosocial behavioral intentions partially mediating the religiosity-low prejudice link.

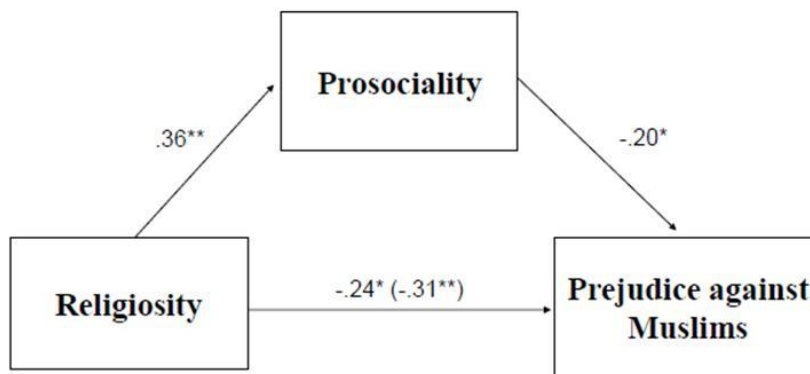


Figure 1. Prosociality as a mediator of the relationship between East Asian religiosity and low inter-religious implicit prejudice (Study 3).
Indirect effect = $-.07$, $SE = .04$, BCa 95% $CI = [-.16, -.02]$

3. Discussion

Study 3 consolidated and extended the findings of Studies 1 and 2 through implicit measures of both inter-religious and ethnic prejudice toward key outgroups, i.e. respectively Muslims and Africans. Religious tolerance toward these outgroups seems rather solid in the context of East Asian religions (in the present sample: mostly folk believing and Buddhism). Taken also into account the fact that prosociality mediated the religiosity-low inter-religious prejudice link, one can suspect Eastern religious tolerance to result from some internalization of prosocial values and not to be an artifact of impression management or social conformity concerns. Nevertheless, this religious tolerance seemed to be somehow weaker (in correlation coefficients) when the outgroup was racial/ethnic (Africans) than religious (Muslims). Similarly, the mean level of implicit prejudice was higher for the former than the latter target (note also the failure of prosociality to mediate the religiosity-ethnic tolerance link).

Religious fundamentalism was unrelated to ethnic prejudice and even negatively related to inter-religious prejudice. As shown by a multiple regression that added fundamentalism's two major components (religiosity and authoritarianism) as predictors, this was due to the underlying component of religiosity. Thus, in line with Study 2, fundamentalism, although including some authoritarian tendencies, did not reflect, unlike many studies in Western Christian contexts, high prejudice. The tolerant nature of the underlying Eastern religiosity seems to be responsible of low prejudice.

Finally, it appears that East Asian religiosity, at least in the country of the study, clearly functions differently from social attitudes typical of closed-mindedness (authoritarianism). Religiosity reflects general prosocial orientation and tolerance toward religious and ethnic outgroups. Authoritarianism may share with religiosity some traditionalism and respect for authority, but it does not share religiosity's tolerant attitudes toward outgroups. Nevertheless, in both Studies 2 and 3 which used respectively explicit and implicit measures of prejudice, authoritarianism failed to show the opposite tendencies, i.e. high inter-religious and ethnic prejudice. These findings may suggest that the high tolerance of East Asian religiosity is already based on (or goes a step further than) a secular East Asian authoritarianism that does not necessarily fuel religious and ethnic prejudice.

General discussion

Across three studies, all carried out in East Asian countries (Taiwan in all three studies; Japan and South Korea in Study 1), among samples of Buddhists, Taoists, and/or folk believers, as well as non-believers, evidence was provided in favor of the idea that low prejudice is present in the context of East Asian religions; this is an empirical reality, although with certain limitations, mostly depending on the nature (target) of prejudice.

East Asian religiosity was, consistently across the studies, related to low prejudice against people from other religions, whether this was measured as a global attitude (Study 1), willingness to have as neighbors, political representatives, or marriage partners believers from specific other religions (Christians, Jews, Muslims, and even an unknown, fictitious religious group; Study 2), or low implicit discrimination (IAT) of Muslims comparatively to Buddhists (Study 3). Study 1 provided additional, comparative information in favor of the East Asia-West contrast: among Catholics and Protestants—endorsing a West-originated religion—, coming from the same Asian countries, religiosity was indicative of the opposite tendency, i.e. high inter-religious prejudice toward people from other religions.

Taken as a whole, these findings confirm the main hypothesis. Religiousness in the context of major East Asian religions, contrary to what research has shown for Western monotheistic religions, and in particular Christianity, implies tolerance of people holding other religious beliefs and affiliations. This is likely due to the lower levels of dogmatism, rigidity, and need for consistency, and the greater emphasis on interdependence and holistic thinking that are typical, comparatively to the West, of both East Asian religions and cultures. An additional explanation is the strong emphasis on compassion and prosocial values within East Asian religions, especially Buddhism. Study 3 provided initial evidence for this point, with prosociality mediating the relation between religiosity and low implicit inter-religious prejudice. A similar tendency for tolerance was observed when the target was an ethnic (racial) outgroup in Study 3, although prosociality failed to mediate this link in that study.

Nevertheless, East Asian religious tolerance was not unlimited. East Asian religiosity was, modestly but positively, related to prejudice against atheists (Study 2) and homosexuals (the latter among Buddhists, but not Taoists) (Study 1). Interestingly, atheists and homosexuals are known to constitute the strongest targets of prejudice in studies with Christian participants in the West (Gervais et al., 2011; Leak & Finken, 2011; Rowatt et al., 2009). Atheists may be seen by believers, apparently of all religions, including those of East Asia, as the outgroup per excellence. They not only differ from believers in some or many beliefs and

convictions but, in principle, they preach exactly the opposite. Homosexuals are known to be the target of homonegativity, in various degrees and forms, across all religions (Siker, 2007), and previous initial evidence suggests the influence of Buddhist religion and religiosity on homonegativity (Detenber et al., 2007; Ramsay, Pang, Johnson Shen, & Rowatt, 2013). Nevertheless, in line with the weaker, if not low, prejudice hypothesis, antigay prejudice was overall absent among the two East Asian religious groups when compared to the two Christian ones and when controlling for sociodemographic factors.

The present work was primarily exploratory—the main goal was to identify specifics of East Asian religions in the link between religiousness and prejudice against various targets. However, the inclusion of one mediator (prosociality in Study 3) and two additional variables (fundamentalism and authoritarianism) in Studies 2 and 3 provided some initial information about the underlying psychological processes that may be different when one compares Western and Eastern religions. First, fundamentalism, contrary to what is most often the case in studies on Western Christian religiosity, did not lead to high prejudice. Due to underlying religiosity, it was even related to implicit tolerance of a religious outgroup (Muslims) in Study 3. Second, East Asian religiosity seems to escape the authoritarian tendencies of Western Christian religions (especially in fundamentalism) which typically lead to religious prejudice; authoritarianism only moderated, by decreasing, the East Asian religiosity-low prejudice link (Study 2). Third, ethnic and inter-religious prejudices seem not to apply to believers belonging to Eastern religions. These religions even tend to imply ethnic and inter-religious tolerance, the latter being explained by internalized prosocial values. Nevertheless, Western and Eastern believers seem to have a common, clear outgroup, i.e. atheists. It is not excluded that, for some believers, ethnic and religious outgroups may be conceived as being part of a large ingroup if qualified as members of a common super-ordinate category (“believers of all religions”), but this is much more difficult to do with non-believers and atheists.

The present work has several limitations. Beyond remarkable consistencies across the studies, there were notable differences in the age and religion of participants, the study country, the target and level of prejudice, and the measures of religiousness used. To give an example, there were differences between Buddhism and Taoism; and as mentioned in the Introduction, other studies with Hindus seem to provide results that emphasize the similarities with monotheistic religions on prejudice. It is thus premature to make generalizations to all Eastern religions or cultures from the present findings. Moreover, it is important, with respect to previous research on religious prejudice (Batson et al., 1993; Hunsberger & Jackson, 2005), to focus on the specific role of distinct religious dimensions.

Finally, both theoretically and empirically, it is extremely difficult to identify whether, beyond the observed cross-religious differences, the causal factors are relative to religions themselves (theology, history, contemporary religious

teachings) or to other, non-religious, cultural factors (socio-economic or socio-cultural) (see for a discussion, Saroglou & Cohen, 2013). The differences found in Study 1 between participants belonging to East Asian religions and those belonging to Christian denominations, all coming from the same East Asian countries, do not necessarily suggest that the differences are strictly religious and not ethnic-cultural. They may rather suggest that among participants of East Asian religions, the isomorphism between religious specifics (in this case, characteristics of Buddhism and Taoism as depicted in the Introduction) and other non-religious cultural specifics (in this case, cultural characteristics of East Asians regarding self-views, cognition, moral reasoning; see the Introduction) makes the effects (tolerance or weaker prejudice) clearer in comparison to the Christian East Asian participants who are characterized by non-isomorphism. The East Asian Christians are in fact in a position of cultural mixing, with the religious-cultural elements from the West-originated Christian culture countering those of their ethnic culture.

Future research should identify the cognitive moral, and social mechanisms (in addition to prosociality and lack of authoritarian influences) explaining tolerance and weak prejudice against religious and ethnic outgroups among East Asian believers. Indirect evidence reviewed in the Introduction suggests several possible explanatory factors related to (social) cognition and self-perception: a low need for closure and consistency, high interdependence, low egocentrism, similarity perception, holistic thinking, and tolerance of contradictions. These factors may attenuate in- vs. outgroup distinction among East Asian believers and increase the perceived similarity between various beliefs and value systems.

An additional set of mechanisms worth investigating in future research which possibly explains religious differences in prejudice is the role of underlying emotions as a function of religion and culture. Existing research suggests promising pathways for future investigation. In fact, collectivists (like East Asians) feel especially good when their emotional experience lead them to connect with others, whereas individualists (like Americans) feel especially good when dwelling on emotional experiences that distinguish them from others (Kitayama, Mesquita, & Karasawa, 2006). Also, the ideal positive affect valued in East Asian and Buddhist contexts, compared to the ideal positive affect valued in European American and Christian Protestant contexts, is characterized by low arousal (e.g., calm) rather than high arousal (e.g., excitement) (Tsai, Knutson, & Fung 2006; Tsai, Miao, & Seppala, 2007). Therefore, if we take into consideration the fact that prejudice is often fueled by emotions like fear or anger (Cottrell & Neuberg, 2005) which imply high arousal and disturbance in interpersonal relations, it is reasonable to hypothesize that East Asian religiosity, compared to the religiosity in Western monotheism, is less favorable of these kinds of emotions. This in turn may lead to greater tolerance and/or weaker prejudice.

To conclude, it is our impression that this work has the merit to provide consistent and replicated evidence in favor of the idea that some East Asian

East Asian religions, prejudice, and prosociality

religions, embodied in East Asian cultures, may, at least in part and under certain conditions, escape, or at least attenuate, antisocial tendencies that have been evidenced in the context of Western monotheism. The observed differences between East Asian Buddhists, Taoists, and folk believers, on the one hand, and East Asian Christians, on the other hand, suggest that “local” religious cultures may intensify broad cultural characteristics (e.g., interdependence and holistic thinking), whereas “foreign” religious cultures seem to counter the same broad cultural influences.

Chapter 2
Religion, Magical Thinking, and Distrust
in Science:
Comparing East versus West

Magali Clobert

Vassilis Saroglou

Université catholique de Louvain

Under second revision in *Psychology of Religion and Spirituality*

Abstract

Previous studies in Western contexts suggest that religiosity, as it often relates to magical thinking and distrust in science, is in conflict with rationality. In contrast, East Asian cultures, known to be holistic and tolerant toward contradictions, may not experience this conflict. We hypothesize that religiosity, although linked to magical thinking, should correlate negatively with distrust in science among Asian cultures. Using the religion module III (2008) of the International Social Survey Program, we analyzed data from Buddhists, Protestants, and Catholics in South Korea ($Ns = 358; 391; 135$), as well as Catholics and Protestants in predominantly Catholic and Protestant countries (Austria and Denmark; $Ns = 715; 1,545$). Results confirmed a positive association between religiosity and magical thinking across all groups, with the exception of a negative association among Korean Christians. Moreover, whereas religiosity in the West correlated positively with distrust in science, the opposite held for all religious Korean groups. Religiosity mediated the relationship between magical thinking and distrust in science among all dominant religious groups. These findings bring a new cross-cultural perspective on the tumultuous relationship between religion and rationality.

Keywords: Magical thinking, paranormal beliefs, science, religion, East, West, culture

Introduction

In popular views, especially those existing since the 19th century, religion is seen as irrational and relating to paranormal, non-scientific, and even anti-scientific beliefs. In this framework, authors have argued that scientific and religious worldviews are fundamentally incompatible and in opposition with one another (Harris, 2004; Mooney, 2005). Although this opposition between religion and rationality is regularly challenged (Stark, 2008; Stark, Iannaccone, & Finke, 1996), it has been investigated only in Western societies and has mainly concerned Christianity. In sum, the existing scientific knowledge on the conflict between religion and rationality only applies to Western Christian contexts. Would this debate be regarded as a burning issue in East Asian societies as well? The main aim of the present work is to examine the connections between religiosity and rationality (i.e., magical thinking and distrust in science) among East Asians (Buddhists in South-Korea) and to compare Easterners with Westerners as well as Christians in Eastern versus Western cultural contexts. We argue that, as East Asian cultures and religions are characterized by holism and tolerance toward contradiction, religiosity and rationality will not be in conflict among Buddhists in South-Korea, or would be in conflict to a lesser extent when compared to Christians in Western countries (i.e., Austria and Denmark). As far as Christians in South-Korea are concerned, we expect more complex results. The rationale supporting our hypothesis is developed below.

1. Religion, Magical Thinking, and Paranormal Beliefs

Although the relationships between religion and magical thinking have been questioned and investigated for quite some time (Durkheim, 1915/1964; Frazer, 1922/1963; Malinowski, 1948/1984; Mauss, 1950/2001), scientific literature in this field remains quite contradictory. Two major opposing views can be found in the literature regarding this issue. The first view assumes that paranormal beliefs and religious beliefs are closely linked. In this line of research, scholars found that a person inclined towards religious beliefs is also susceptible to paranormal beliefs (Glendinning, 2006; Goode, 2000; Orenstein, 2002; Rudski, 2003; Sjöberg & Wahlberg, 2002). Furthermore, it seems that religious and magical thinking have some characteristics in common. For instance, religious and paranormal beliefs are both used in response to frightening situations and crises (Keinan, 1994; Pargament, 2002). According to Goode (2000), we encounter a similar neglect of modern scientific views in religion and paranormal beliefs which have more in common

with each other than they do with science. Finally, both religious and paranormal believers can be distinguished from skeptics by their high levels of intuitive thinking (Aarnio & Lindemans, 2007).

The second view found in the literature assumes that religious and paranormal beliefs are negatively correlated, or at least independent from each other (Donahue, 1993; MacDonald, 2000; Rice, 2003). Sjodin (2002) as well as Emmons and Sobal (1981) showed that religiosity and paranormal beliefs were significantly negatively related. Moreover, Aarnio and Lindemans (2007) found that religious people placed more value on conservation and self-transcendence compared to paranormal believers. There are two major possible explanations endorsed by scholars for this negative relationship, or absence of connection between religion and magical thinking. The first is the incongruity of paranormal beliefs with teachings of traditional Christianity (Emmons & Sobal, 1981; Goode, 2000; Rice, 2003). The second is deeply rooted in a theoretical assumption: magical, religious, and scientific thinking demonstrate different developmental levels of thinking and do not coexist at the same levels across lifespan. According to this explanation, magical thinking is conceived as the most primitive mode of thinking followed, in the course of human phylogeny, by religious thinking and finally by scientific thinking (Frazer, 1922/1963; Mauss, 1950/2001). Nevertheless, this developmental conception of thinking has been criticized due to the fact that each of these modes of thinking coexist in modern society (Nemeroff & Rozin, 2000).

In order to explain these contradictory results, some authors have proposed a new conception of a curvilinear relationship between religion and magical thinking (Bainbridge, 2004; Baker & Draper, 2010; Orenstein, 2002). Bainbridge (2004) found the highest levels of belief in telepathy among those claiming to be “somewhat religious” or “neither religious nor nonreligious,” and lower levels of belief in telepathy at the “extremely religious” and “extremely nonreligious” ends of the spectrum. Orenstein (2002) reported similar findings, showing that high and low levels of church attendance were associated with lower levels of paranormal belief. Furthermore, Aarnio and Lindemans (2007) found that the relationship between religiosity and paranormal beliefs can vary from positive to negative among different subpopulations, being negative among atheists and highly religious people but positive among others. In other words, only religious people whose beliefs strictly follow the official doctrine abandon paranormal beliefs (Goode, 2000).

2. Religion and science

The relationship between religion and science is known to have been tumultuous throughout history in Western societies. As far as this issue is concerned, the scientific literature has been a bit more congruent and homogenous. Authors seem to agree that religion and science are two inherently opposed ideologies (Dawkins,

2006; Zukav, 2001), although Collins (2006) suggests that science and religion could be reconciled as compatible systems of beliefs. In this perspective of opposition between religion and science, the belief in one necessarily undermines the belief in the other. Furthermore, religious believers endorse an intuitive way of thinking whereas science is characterized by an analytic thinking style (Aarnio & Lindemans, 2007). More recently, Gervais and Norenzayan (2012) highlighted the role of analytic processing in promoting religious disbelief.

Three main explanations accounting for this negative association between science and religion can be identified throughout the literature. First, as science and religion offer competing explanations for many of the same phenomena (e.g., the origin of life), people have to choose between these explanations and cannot support both at the same time (Preston & Epley, 2005; Thagard, 2006). Indeed, alternative explanations for the same effect are negatively associated with one another and the availability of one plausible explanation may diminish the perceived value of another (Thagard, 2006). In the same direction, Evans (2011) found that Protestants and Catholics do not accept the validity of scientific facts for which a religious explanation exists. According to Preston and Epley (2009), this process is automatic. Indeed, they found that when scientific theories were described to participants as poor explanations, automatic evaluations of science and God respectively decreased and increased. Religion and science are thus in competition for exploratory space and this creates an automatic opposition in one's evaluation of the two.

Second, as has been found for magical thinking, Frazer's theory assumes that religious and scientific thinking demonstrate different developmental levels of thinking (Frazer, 1922/1963; Mauss, 1950/2001). Third, another possible source of conflict between science and religion could derive from an opposition between religious morality and moral considerations in science (Evans, 2011). Even if some religious people recognize the great achievements of science, questions about the moral applications of the latter remain (Heft, 2002). Indeed, conservative Protestants were found to be opposed to the influence of scientists in public affairs due to the moral agenda of the latter (Evans, 2011).

3. Cross-cultural and Cross-religious Perspective

The main limitation of the relevant literature is the lack of a cross-religious and a cross-cultural perspective. Research in this field has been carried out among Westerners, from Europe or the US, and with Christian believers, such as Catholics or Protestants. Currently, we know next to nothing about whether this knowledge also applies to East Asian cultures and religions. Indeed, an increasing number of cultural and cross-cultural studies have shown that differences between East Asian and Western cultures are substantial and deeply-rooted (Henrich, Heine, & Norenzayan, 2010). These differences touch very basic processes involved in

cognition, reasoning, perception, or social relations (for a review, see Kitayama & Cohen, 2007). Therefore, we argue that the conception of religion and rationality, as well as the possible conflict between the two, significantly differs in East Asian cultures.

Indeed, East Asians and Westerners have acquired different cognitive strategies. Whereas Westerners, such as Americans, respond to everyday life situations in analytic fashion, Easterners, such as the Chinese, respond with a holistic approach (Nisbett, 2003). Westerners tend to focus on categorical rules and attributes when perceiving objects (analytic reasoning) whereas East Asians use holistic, context-based thinking and similarity relations when they classify objects (Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). Similarly, Easterners, compared to Westerners, show a lesser degree of motivation for consistency (Kanagawa, Cross, & Markus, 2001; Suh, 2002). East Asians, in contrast to Western Aristotelian linear logic, demonstrate a dialectical and holistic view of the self, allowing more contradictions and integration of seemingly opposed elements and changes (Ma-Kellams, Spencer-Rodgers, & Peng, 2011; Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010). In the same line of research, Peng and Nisbett (1999) found that when Chinese participants were presented with contradictory propositions, they moderately accepted both. In contrast, American participants tended to polarize their views by rating one of the propositions as more plausible. This analytic versus holistic approach and tolerance toward contradictory elements becomes particularly interesting when one thinks about the apparent paradox between religion and rationality, at least that experienced in the West.

To the extent that religion parallels, and is part of, culture (Cohen, 2009; Saroglou & Cohen, 2011), basic cultural differences can be extended to religion. East Asian religions, such as Buddhism or Taoism, are mainly concerned with harmony at two levels: harmony between individuals and harmony between humanity and nature (Ji, Lee, & Guo, 2010). These religions are characterized by a holistic approach and a tolerance to change and contradictions. Even in collectivist societies such as Taiwan, Buddhists reveal a stronger global-precedence effect (characterized by a holistic cognitive style) than atheists (Colzato, Hommel, & van den Wildenberg, 2010). Initial empirical evidence suggests, for instance, that religiosity in Buddhism is positively correlated to Universalism but negatively related to the need for cognitive closure (Saroglou & Dupuis, 2006), contrary to Christians (Saroglou, 2002; Saroglou, Delpierre, & Dernelle, 2004), and that religion in Asian cultural contexts does not function as a control mechanism (Sasaki & Kim, 2011). Finally, a last point suggesting this capacity of East Asian religions to tolerate and integrate contradictory elements and doctrines is apparent in the relative tolerance of Eastern believers towards other religions (Clobert, Saroglou, Hwang & Soong, 2013).

It is also interesting to point out that science and religion have been historically linked in Asia. As East Asian religions allow contradictions, competing explanations

and changes, it could be that scientific thinking, magical thinking and religious beliefs are not opposed but integrated. This assumption becomes even more likely when considering Ayurveda in Hinduism, Acupuncture or Tai Chi in Taoism, or Tibetan medicine in Buddhism. Moreover, Buddhism is generally seen as consonant with science because the essential teachings of Buddhism seem not to be in contradiction with scientific findings (Lopez, 2008; McMahan, 2004; Wallace, 2003). Indeed, Buddhism dispenses with the notion of a personal God and explains the origins and mechanisms of the universe in terms of cause and effects. More importantly, Buddhism utilizes rigorous methods to experientially investigate phenomena of the natural world. Buddha even urged his followers to not blindly believe him but rather to question, examine, inquire, and rely on their own experience. In line with this association between Buddhism and science, Buddha's teachings have often been compared and assimilated to Einstein's theories as, for instance, in Thomas J. McFarland's book, *Einstein and the Buddha: Parallel sayings* (2002). Thereby, one of the most widely quoted statements about Buddhism and science is attributed to Albert Einstein, although this has been questioned:

The religion of the future will be a cosmic religion. It should transcend a personal God and avoid dogmas and theology. Covering both natural and spiritual, it should be based on a religious sense arising from the experience of all things, natural and spiritual, and a meaningful unity. Buddhism answers this description. If there is any religion that would cope with modern scientific needs it would be Buddhism (Lopez, 2008, p. 1).

The religion of the future will be a cosmic religion. It should transcend a personal God and avoid dogmas and theology. Covering both natural and spiritual, it should be based on a religious sense arising from the experience of all things, natural and spiritual, and a meaningful unity. Buddhism answers this description. If there is any religion that would cope with modern scientific needs it would be Buddhism (Lopez, 2008, p. 1).

4. The present study

This study aims to investigate relationships between religion, magical thinking, and distrust in science across different religious groups and among similar religious groups across cultural contexts. We will mainly compare Western (Catholicism and Protestantism) to an East Asian religions (Buddhism) as well as Christians (Catholics and Protestants) in Western (Austria and Denmark) and Eastern (South-Korea) cultural contexts. Thus, the main aim of this paper is to provide the first step in a cross-religious, but also cross-cultural, understanding of the complex relationship between religion, magical thinking, and science.

East Asian religions, prejudice, and prosociality

We first hypothesized that, in line with the literature, religiosity among dominant religious groups (i.e. Buddhists in South Korea and Christians in the West) will be positively related with magical thinking. Second, as science and religion are not historically opposed, but rather linked, in East Asian societies, and given the tolerance of antagonist explanations in such societies, we expected the relationship between religiosity and distrust in science to be negative (or at least absent) for Buddhists. Finally, we also included Christians from South-Korea to investigate whether they display similarities with Western Christians, in reference to their religious affiliation, or with other Eastern religious groups, in reference to their cultural background.

1. Dataset

Data for this study were retrieved from the International Social Survey Program (ISSP) 2008 module on religion¹. The ISSP is a continuing annual program of cross-national collaboration covering important topics for social sciences research. Each year the ISSP creates a module containing questions that are relevant to all countries and expressed in an equivalent vocabulary in all languages. For the current study, the analysis included three national samples, one from an East Asian country and two from Western countries: South-Korea ($N = 1,482$), Austria ($N = 923$), and Denmark ($N = 1,895$). Among these countries, different religious groups were represented: Buddhists ($N = 358$), Catholics ($N = 135$), Protestants ($N = 391$), and atheists ($N = 598$) in South-Korea; Catholics ($N = 747$) and atheists ($N = 176$) in Austria; Protestants ($N = 1,617$) and atheists ($N = 278$) in Denmark. After removing individuals who were not part of any of these convictional groups (minor and “other” religions), the final sample included 4,300 participants (53.6% women). Participants were adults ($M = 46.5$, $SD = 16.58$).

Among the three East Asian countries available in the ISSP database, we retained South-Korea considering the fact that (1) the magical thinking items were present (these are optional items that were not asked in all countries) and (2) the four major convictional groups investigated in this study were represented. This enabled us to compare different religious groups (Buddhists versus Christians) but also similar religious groups across the East and West (Christians in different cultural contexts).

2. Measures

2.1. Magical thinking

¹ The ISSP is a self-funding annual program that coordinates cross-national surveys on social scientific themes. The data from the ISSP are merged and archived by the Zentralarchiv für Empirische Sozialforschung, University of Cologne. Detailed information on this program and access to the datasets can be found at <http://www.issp.org/>.

Magical thinking was measured with four items assessing belief in fortune tellers, good luck charms, horoscopes, and faith healers (Likert scale ranging from 1 = *definitely true* to 4 = *definitely false*). The scores were reversed so that a higher score reflects stronger beliefs. Reliability was satisfactory across countries and religious groups ranging from $\alpha = .69$ to $\alpha = .88$. In order to ensure the comparability of this measure across religious groups, a bottom-up equivalence analysis was conducted (Welkenhuysen-Gybels & Van de Vijver, 2001). Satisfactory Tucker's Phi equivalence indices were found to range from $\phi = .97$ to $\phi = .99$ (above .95, see Van de Vijver & Poortinga, 1994).

2.2. Distrust in science

Distrust in science was measured by the item "We trust too much in science" (Likert scale ranging from 1 = *strongly agree* to 5 = *strongly disagree*). The item was reversed so that a higher score on this item revealed a stronger negative attitude toward science.

2.3. Religious identification

The ISSP 2008 included a measure of self-identification as religious through this single item: "Would you describe yourself as ...?" (responses ranged from 1 = *extremely religious* to 7 = *extremely non-religious*). For the analysis, scores were reversed.

2.4. Religious practice

Three items respectively addressing three facets of religious practices were used; i.e. frequency of prayer, office attendance, and visit of holy places (Likert scale ranging from 1 = *never* to 11 = *once a day*). Since these items addressed different facets of religious practice, mainly personal and collective practice, the reliability of this measure was modest. Indeed, all reliability indices ranged from $\alpha = .55$ to $\alpha = .64$, except for Buddhists in South-Korea ($\alpha = .47$). A structural equivalence analysis, using the bottom-up method, showed satisfactory equivalence indices ranging from $\phi = .98$ to $\phi = .99$ across religious groups.

2.4. Religious beliefs

For Christians, four items measured beliefs in life after death, heaven, hell, and religious miracles (α s ranged from .84 to .92 across countries and religious groups). For Buddhists, three items measured beliefs in reincarnation, Nirvana, and the supernatural powers of ancestors (α s ranged from .73 to .80 across religious groups). Participants were asked to rate their beliefs from 1 = *Yes, I definitely believe* to 7 = *No, I definitely do not believe*. The scale was reversed so that a higher score on religious beliefs represented a higher level of beliefs.

Results

Means and standard deviations for all measures are detailed in Table 1 distinctly by convictional group, as are the between-groups comparisons (one-way ANOVA). Not surprisingly, atheists in all countries reported lower scores on religious measures, except on religious beliefs in Austria. As far as magical thinking is concerned, no differences were found between Catholics and atheists in Austria and South-Korea. However, Protestants in Denmark and Buddhists in South-Korea reported higher scores on magical thinking than atheists, whereas Protestants in South-Korea showed lower scores than atheists. Finally, regarding distrust in science, no differences were found between convictional groups in Austria and South-Korea (except slightly lower scores for Catholics) whereas Protestants in Denmark reported higher scores on distrust in science than atheists.

Correlations of religious variables and magical thinking (see Table 2) and distrust in science (see Table 3) were computed distinctly by religious group and country. Positive correlations were found between magical thinking and all measures of religiosity for Catholics in Austria, Protestants in Denmark, and Buddhists in South-Korea (r s from .16, $p < .01$ to .45, $p < .01$). However, for Christians (Catholics and Protestants) in South-Korea, negative correlations were found (except one non significant coefficient) between magical thinking and measures of religiosity (r s from -.12, $p < .05$ to -.23, $p < .01$). As far as distrust in science is concerned, we observed two different patterns of results according to cultural groups (East Asian versus Western countries). Distrust in science was negatively related to religious measures for Buddhists and Catholics (ranging from $r = -.12$, $p < .05$ to $r = -.27$, $p < .01$) in South-Korea but positively related (ranging from $r = .28$, $p < .001$ to $r = .33$, $p < .01$) for Christians (Catholics and Protestants) in Western countries (Austria and Denmark).

To test for possible curvilinear relationships, curve estimation analyses were run distinctly by group for the relationship between religiosity and (1) magical thinking and (2) distrust in science. For all groups, both quadratic and linear curves were significant. The percentage of variance explained by the quadratic curve was either equal or slightly higher than the variance explained by the linear curve, suggesting that the relationships between our variables can be conceived as linear.

Table 1
Means, Standard Deviations, and Between-Groups Comparisons for All
Variables Distinctly by Religious Group and Country

Countries	Buddhists ^a	Catholics ^b	Protestants ^c	Atheists ^d	ANOVA	
Measures	M(SD)	M(SD)	M(SD)	M(SD)	F	df
South-Korea						
Religious identification	4.51(1.18) ^{bcd}	4.91(1.14) ^{acd}	5.26(1.21) ^{abd}	2.46(1.40) ^{abc}	459.26**	3,1467
Religious practice	2.90(1.28) ^{bcd}	3.91(1.66) ^{acd}	4.90(1.76) ^{abd}	1.90(1.02) ^{abc}	394.08**	3,1477
Religious beliefs	2.36(0.69) ^{cd}	2.82(0.79) ^{cd}	3.20(0.82) ^{abd}	1.88(0.69) ^{abc}	52.50**	3,1473
Magical thinking	2.16(0.6) ^{bcd}	1.73(0.60) ^{ac}	1.55(0.58) ^{abd}	1.78(0.62) ^{ac}	65.41**	3,1469
Distrust in science	3.29(1.02) ^b	2.89(1.08) ^{acd}	3.24(1.14) ^b	3.37(1.01) ^b	7.43**	3,1455
Austria						
Religious identification		4.07(1.59)		3.69(1.74)	7.37**	1,882
Religious practice		2.86(1.37)		2.65(1.31)	3.56+	1,921
Religious beliefs		2.51(0.86)		2.50(0.79)	0.03	1,863
Magical thinking		2.08(0.82)		2.10(0.78)	0.08	1,882
Distrust in science		2.49(1.14)		2.36(1.01)	1.75	1,866
Denmark						
Religious identification			3.70(1.19)	2.64(1.53)	167.19**	1,1832
Religious practice			2.50(1.24)	2.04(1.17)	32.35**	1,1885
Religious beliefs			1.89(0.84)	1.65(0.92)	17.45**	1,1793
Magical thinking			1.88(0.75)	1.64(0.77)	23.55**	1,1828
Distrust in science			2.02(1.25)	1.75(1.25)	10.65**	1,1801

Note. The letter symbols indicate the statistically significant (Tukey's HSD post hoc test, $p < .05$) differences between the groups a-d.

+ $p < .10$. * $p < .05$. ** $p < .01$.

Table 2
Coefficients of Correlation Between Indicators of Religiosity and Magical Thinking

Countries	Religious groups		
	Buddhists	Catholics	Protestants
South-Korea			
Religious identification	.20** (.22**)	-.12 (-.02)	-.23** (-.23**)
Religious practice	.16** (.17**)	-.20* (-.15+)	-.23** (-.23**)
Religious beliefs	.40** (.39**)	.06 (.09)	-.14** (-.15**)
Austria			
Religious identification		.19** (.21**)	
Religious practice		.19** (.23**)	
Religious beliefs		.34** (.35**)	
Denmark			
Religious identification			.33** (.33**)
Religious practice			.20** (.18**)
Religious beliefs			.45** (.45**)

Note. Partial correlation coefficients controlled for age and gender are in brackets.

+ $p < .10$. * $p < .05$. ** $p < .01$.

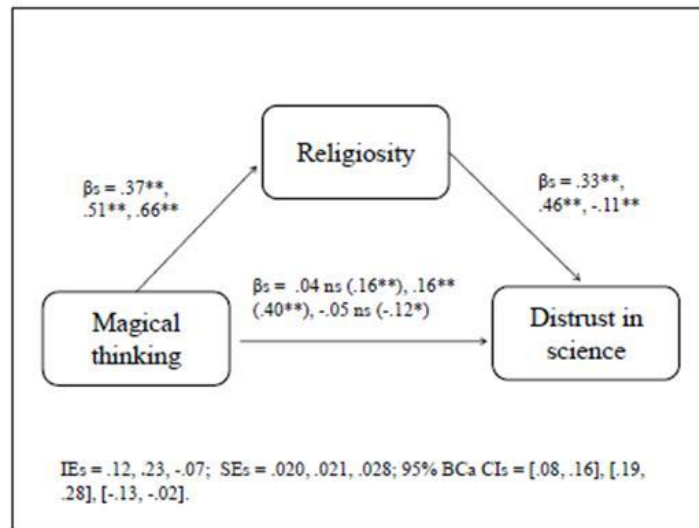
Table 3
Coefficients of Correlation Between Indicators of Religiosity and Distrust in Science

Countries	Religious groups		
	Buddhists	Catholics	Protestants
South-Korea			
Religious identification	-.10+ (-.08)	-.31** (-.30**)	-.04 (-.05)
Religious practice	-.07 (-.04)	-.16+ (-.14+)	-.05 (-.05)
Religious beliefs	-.14* (-.17**)	-.27** (-.28**)	.00 (.00)
Austria			
Religious identification		.33** (.31**)	
Religious practice		.28** (.27**)	
Religious beliefs		.28** (.29**)	
Denmark			
Religious identification			.32** (.30**)
Religious practice			.31** (.27**)
Religious beliefs			.32** (.31**)

Note. Partial correlation coefficients controlled for age and gender are in brackets.

+ $p < .10$. * $p < .05$. ** $p < .01$.

Finally, magical thinking and distrust in science, both related to measures of religiosity, were also found to be associated in all dominant religious groups (Catholics in Austria, Protestants in Denmark, and Buddhists in South-Korea). Magical thinking was indeed positively related to distrust in science in Austria and Denmark ($r = .12, .24; p < .01$) but negatively related in South-Korea ($r = -.08, p < .05$). The conditions were thus present to conduct a mediation analysis distinctly by country. As the causality was rather uncertain, we performed two mediation analyses for each country in order to determine whether magical thinking was mediating the religiosity-distrust in science link (Model 1) or whether religiosity was the mediator of the magical thinking-distrust in science relationship (Model 2). Prior to the analysis, we combined all measures of religiosity (identification, practice, and beliefs) in a single indicator of religiosity. The reliability for these three measures was satisfactory (α s ranging from .55 to .80). Bootstrap analyses were used to test for the significance of the mediation. This is one of the most powerful methods available for testing indirect effects (see Preacher & Hayes, 2004). The results obtained showed significant indirect effects and offered more explanatory power using Model 2, with points estimate of $IE_{Austria} = .12, SE = .020, IC = [.08, .16]$; $IE_{Denmark} = .23, SE = .021, IC = [.19, .28]$; and $IE_{South-Korea} = -.07, SE = .028, IC = [-.13, -.02]$, compared to Model 1, with points estimate of $IE_{Austria} = .01, SE = .013, IC = [-.02, .03]$; $IE_{Denmark} = .06, SE = .017, IC = [.02, .09]$; and $IE_{South-Korea} = -.02, SE = .019, IC = [-.05, .02]$ (respectively for Austria, Denmark, and South-Korea). The regression coefficients corresponding to Model 2 are illustrated in Figure 1 for each country.



Note. For each result, three numbers are provided respectively for Austria, Denmark, and South-Korea.

* $p < .05$. ** $p < .01$.

Figure 1. Mediation of the effect of magical thinking on distrust in science through religiosity (Model 2).

Discussion

In the present study, we examined how religiosity relates to rationality across different religious groups and cultures. The associations between religiosity and (1) magical thinking as well as (2) attitudes towards science (distrust) were investigated as representing two aspects of the conflict opposing religion and rationality. First, magical thinking was found to relate positively to religiosity in all cultural contexts (East and West). This positive association was restrained to dominant religious groups, namely Christians in the West and Buddhists in the East. As far as minority religious groups are concerned, at least in East Asia, the inverse association occurred, with religious people being less inclined toward magical thinking. Second, the relationship between religion and science turned out to be culture-dependent. Whereas in South-Korea, for both Buddhists and Christians, religiosity was related to a positive attitude toward science, it was exactly the contrary in Austria and Denmark (for Christians). Finally, the complex relationships between religion and rationality were explained by the same mechanism across cultures, although the effects were different in valence. In the West, magical thinking was related to higher religiosity which in turn was associated with a higher distrust in science. In the East, magical thinking was also related to higher religiosity but the latter was associated with a lower distrust in science.

Taken together, these results confirm (a) the hypothesis of a positive and cross-culturally valid relationship between religiosity and magical thinking, at least for dominant religious groups, and (b) the hypothesis of a culture-dependent association (East versus West) between religiosity and attitudes toward science. Similarly to other convictional groups in the East, Christians in South-Korea displayed a negative association between religiosity and distrust in science. Nevertheless, contrary to dominant religious groups, religiosity was negatively related to magical thinking among Korean Christians. This difference may be explained by a higher religiosity among Christians in South-Korea, representing a minority religious group. According to Aarnio and Lindemans (2007), the association between religiosity and paranormal beliefs should be negative among extremely religious and nonreligious people. Furthermore, it is quite common to find higher levels of religiosity among minority religious groups. Indeed, when comparing Christians and Buddhists in South-Korea, we noticed that the former are significantly more religious (higher self-identification, higher frequency of practice, and stronger beliefs) than the latter.

The absence of conflict between religion and science in South-Korea is probably due to cultural, rather than religious, variables. Since Buddhist and Christian religiosity in South-Korea are not in conflict with science (and are even compatible

with science), it seems unlikely that religious dogmas and orientations explain this perceived compatibility. Even though the specific principles of each religion may foster positive attitudes toward science, cultural context seems to have a greater impact. Future research should focus on which specific cultural variables may be involved in promoting positive attitudes towards science. We suggest, as developed in the introduction, that the holistic approach of the world promoted in East Asian cultures and philosophies may play a leading role in this perceived compatibility of religion and science. In this conception of the world, opposites merely seem to be contradictory but are in fact complementary and mutually necessary. East Asian cultures are thus particularly tolerant toward contradictory elements and changes, an attitude that could explain the compatibility between religion and science.

The mediation path found across all countries suggests that the relationships between religiosity and magical thinking are identically conceived across cultures, whereas this is not the case for relationships between religiosity and science. This finding may imply a different conception of the perceived conflict between religion and science, as explained earlier, but may also result from different conceptions of religiosity and/or science among cultures. For instance, East Asian religions such as Buddhism or Taoism are more focused on practices (e.g., meditation, Tai Chi, specific diet) than on the possible explanation and meaning of human life (Harvey, 1990; Robinet, 1997). Furthermore it seems that religiosity responds to different concerns, and functions differently, across cultures. The explanations given by Christian religiosity, for instance, provide Christian believers with a greater sense of secondary control compared to Buddhists (Sasaki & Kim, 2010). When these explanations are contradicted by scientific findings, Christians, contrary to Buddhists, may feel a loss of control and, in turn, adopt negative attitudes toward science. Science may also be thought of differently in East Asia compared to the West. In Chinese medicine, the holistic approach prevails in patient care (Maciocia, 2005). This medical approach considers that a multitude of imbalances in diverse domains (i.e. personal life, emotions, or diet) may lead to a single symptom, and that we should identify the whole picture to deal effectively with the disease. This conception of medicine is a far cry from the Western analytic notion of science, and may be experienced as conflicting to a lesser degree with magical thinking.

Future research in this field should thus focus on three complementary aspects: (a) identifying the possible mechanisms explaining the lack of conflict between religion and science in East Asian countries (e.g., tolerance toward contradiction), (b) clarifying the conception and the function of religiosity across cultures, and (c) specifying the status and conceptions of science in East Asia compared to the West. It seems that informative results which may substantially clarify this intriguing question may indeed be found at these three levels.

The present study is clearly exploratory and has some limitations. Although it includes several measures of religiosity, the ISSP module does not contain more specific scales measuring different religious orientations (e.g., fundamentalism,

quest) and dimensions (e.g., emotional, relational religiosity). Further studies should thus measure various aspects of religiosity to identify which orientation or dimension of religiosity is valued across cultures or is involved in the observed relationships. Similarly, trust in science was measured through a single item. Future research should use more complex and varying measures of attitudes toward science in general to broaden the present findings. Furthermore, the effect size regarding the mediational model for South-Korea was lower than for Austria and Denmark, suggesting that religiosity explained a rather small part of the relationship between magical thinking and low distrust in science in South-Korea.

Nevertheless, it seems particularly important to investigate this topic not only for theoretical reasons, but also for applied purposes. The conflict between religiosity and rationality experienced in the West indeed has a considerable impact on various areas such as health practices, patient compliance, or educational practice. Although, in general, religiosity and religious coping are associated with positive health outcomes such as well-being, low anxiety, less risky behavior, or lower mortality (Koenig, King, & Carson, 2012; Oman & Thoresen, 2005; Powell, Shahabi, & Thoresen, 2003), several studies have revealed how religious beliefs and/or distrust in science may negatively impact patient compliance (Meredith et al., 2001; Subach & Abul-Ezz, 1999), the use and dispense of contraception (Davidson et al, 2010; Nonnemaker, McNeely, & Blum, 2003), or patient recovery (King, Speck, & Thomas, 1999; Pargament et al., 2001). Furthermore, religion and distrust in science raise other concerns in the public sphere, especially regarding education. Science instruction in schools, and especially the teaching of theories such as evolutionism, may be compromised among highly religious learners because of the perceived conflict between their beliefs and the scientific teachings (Poole, 2008; Wald, 2003). Therefore, it may be particularly interesting to understand why religiosity is not in conflict with science in East Asian societies in order to identify what kind of approach may attenuate the conflict experienced in the West.

Chapter 3
East Asian religious tolerance vs. Western
monotheist prejudice:
Intolerance of contradiction as a common
mechanism

Magali Clobert

Vassilis Saroglou

Université catholique de Louvain

Kwang-Kuo Hwang

National Taiwan University

Abstract

Is East Asian religious tolerance, as opposed to prejudice in Western monotheism, a reality? If East Asian religious tolerance exists, are the underlying mechanisms which link religiosity to prejudice comparable across religious and cultural contexts? Based on theoretical and empirical standpoints, we argue that similar mechanisms may explain the religiosity-prejudice link. In Study 1, ($N = 295$) the intolerance of contradiction, disgust, and distrust were found to explain the relationship between religiosity and high prejudice against, respectively, religious and ethnic groups, homosexuals, and atheists (using SEM analysis) among Westerners of Christian tradition. In Study 2, ($N = 196$) the intolerance of contradiction, but not disgust or distrust, mediated the relationship between religiosity and low prejudice against other religious and ethnic groups as well as homosexuals among Taiwanese people from a Buddhist/Taoist/Confucian tradition. Contrary to Study 1, religiosity in Study 2 was found to decrease intolerance of contradiction which, in turn, softens prejudice. Closed-minded ideologies seem to mediate the religiosity-prejudice relationship across religious and cultural contexts, being positively related with religiosity in Christian contexts and negatively in East Asian religious contexts.

Keywords: Religion, East Asia, prejudice, closed-minded ideologies, intolerance of contradiction, disgust, distrust

Introduction

Whereas religiosity has been associated with various positive outcomes, most dimensions of religiosity have been shown to relate positively with prejudiced attitudes against various outgroups such as people from other religious or ethnic groups, atheists, and homosexuals (Batson, Schoenrade, & Ventis, 1993; Hall, Matz, & Wood, 2010; Hunsberger & Jackson, 2005; Whitley, 2009). The relationship between religiosity and prejudice is clearer when prejudice is not socially or religiously proscribed (Batson et al., 1993), is clearer when coalitional rather than devotional aspects of religion are investigated (Hall et al., 2010), and seems to be mediated by religious people's tendencies for authoritarian attitudes (conventionalism and authoritarian submission and aggression; Johnson et al., 2011; Johnson, Rowatt, & LaBouff, 2012; Mavor, Macleod, Boal, & Louis, 2009), and epistemic needs for closure (Brandt & Reyna, 2010; Saroglou, 2002) and consistency (Hill, Cohen, Terrell, & Nagoshi, 2010). Furthermore, specific constructs may mediate the effect of religiosity on prejudice against particular targets. Disgust sensitivity and distrust are central constructs in the understanding of prejudice against homosexuals (Olatunji, 2008) and atheists (Gervais, Shariff, & Norenzayan, 2011), respectively.

However, even if similar results have been found among the major religious groups (i.e. Christians, Jews, Muslims, and Hindus; see Ginges, Hansen, & Norenzayan, 2009; Hunsberger, 1996), several studies suggest that religion may not universally predict prejudice, especially in the context of East Asian culture and religions (Clobert, Saroglou, Hwang, & Soong, 2013). East Asian religiosity (Buddhism/Taoism/Confucianism) was indeed found to relate negatively with prejudice against religious and ethnic outgroups. Nevertheless, we do not really know much about the mechanisms involved in this reversed association. In other words, are the mechanisms explaining the relationship between religiosity and prejudice the same (but just reversed) across religious and cultural groups or are they completely different? This is the main question that will be addressed in this paper. We hypothesize that similar mechanisms may explain the relationship between religiosity and prejudice across cultural and religious contexts. More specifically, we hypothesize that East Asian religiosity predicts higher tolerance for contradiction (as opposed to closed minded ideologies), whereas Christian religiosity predicts a lower tolerance of contradiction, which in turn decreases or increases prejudice against religious and ethnic outgroups. Regarding prejudice against homosexuals and atheists, due to the fact that both East Asian and Christian religiosity seems to predict prejudice against these targets (Clobert et al., 2013), we hypothesize that disgust and distrust respectively mediate the relationship between religiosity and, respectively, prejudice against homosexuals and atheists across

cultural and religious contexts.

1. Closed-Minded Ideologies, Disgust sensitivity, and Distrust

The influence of religiosity on prejudiced attitudes has been studied for a while but researchers have begun to address the questions of the underlying mechanisms only recently by investigating the religiosity-prejudice relationship using mediation path analysis. Indeed, one can ask about the possible mechanisms explaining the observed relationship between religiosity and different types of prejudice. Studies in this area of research have shown that the effects of religiosity on prejudice are mediated by certain underlying dimensions of religiosity such as closed-minded ideologies like authoritarian social attitudes (Johnson et al., 2011; Mavor et al., 2009), need for closure (Brandt & Reyna, 2010; Saroglou, 2002) or need for consistency (Hill et al., 2010). Since closed-minded persons do not easily tolerate alternative or disruptive viewpoints or customs, they are susceptible to prejudiced attitudes towards all kinds of outgroups that may be perceived as disruptive, threatening, and in violation of social and religious norms.

Nevertheless, whereas closed-minded ideologies may mediate the relationship between religiosity and prejudice against all kinds of targets (i.e. religious, ethnic, and moral outgroups), researchers have also pointed out other mechanisms that may explain the relationship between religiosity and specific targets of prejudice such as homosexuals or atheists. More specifically, disgust sensitivity is a key mechanism in promoting prejudice against homosexuals (Inbar, Pizarro, Knobe, & Bloom, 2009; Olatunji, 2008). Moreover, disgust sensitivity is linked to the purity value incorporated into the moral codes of many religions (Rozin, Lowery, Imada, & Haidt, 1999). Disgust sensitivity fulfills several functions such as protecting the body and soul from offensive products, reminding one of his/her animal nature and mortality, and contagion (Rozin, Haidt, & McCauley, 2008). Over time, disgust evolved from a food-based protection system to become a culturally adapted emotion which enhances the rejection of outgroups, especially when these groups elicit disgust such as gay sexual activity (Haidt, Rozin, McCauley, & Imada, 1997; Navarrete & Fessler, 2006). Conservative ideologies and religious principles may play a key role in this transmission by driving the notion that gay sexual behavior is impure and sinful (Olatunji, 2008). Furthermore, previous studies have shown that disgust may foster not only negative attitudes towards homosexuals but also prejudiced attitudes against immigrants and foreigners (Hodson & Costello, 2007). Disgust indeed functions as a protector of the soul from moral pollution and may extend to all kinds of immoral behaviors or beliefs that violate religious values (e.g., other religious beliefs, immoral sexual practices).

Finally, in recent studies, Gervais and colleagues (2011) demonstrated that distrust was central to anti-atheists prejudice. Religious people tend to use the religious beliefs of other people as cues of trustworthiness, since they conceive religion as a unique and necessary source of morality (Norenzayan & Shariff, 2008; Sosis, 2005). Religious people believe that individuals behave better if they believe that a supernatural agent, like God, is watching them, as this belief motivates individuals to inhibit immoral behavior and selfish tendencies (Gervais, 2013; Norenzayan & Shariff, 2008). Individuals who belong to a religious tradition may thus dislike atheists primarily due to a moral distrust towards them (Gervais et al., 2011). We therefore think that moral distrust may be a key mechanism in explaining the relationship between religiosity (promoting moral distrust) and anti-atheist prejudice.

2. Cross-Cultural and Cross-Religious Perspective

However, as previously mentioned, the above knowledge is built on studies carried out essentially among Christians from North America and Europe. Whereas studies suggest that the relation between religiosity and prejudice is similar for the three monotheistic religions (i.e. Christianity, Islam, and Judaism; see for instance Ginges et al., 2009) and possibly extends to Hindus (Hunsberger, 1996), little is known about (1) whether the religiosity-prejudice link extends to East Asian religions and cultures and (2) whether the underlying mechanisms are the same across religious cultures. One may have reasons to doubt the transposition of the religiosity-prejudice relationships to the East Asian religious context. Recent studies have shown that East Asian religiosity (i.e. religiosity among people socialized in a Buddhist/Taoist/Confucian tradition), contrary to Christian religiosity, relates negatively to prejudice against religious and ethnic outgroups, measured either explicitly or implicitly (Clobert et al., 2013).

A key point on which East Asian religions and monotheistic religions differ is the extent to which both kinds of religions relate to closed-minded ideologies as well as their acceptance of disruptive viewpoints. East Asian religions, such as Buddhism, seem to favor a more dialectical, probably less essentialist, thinking about the world compared to Catholicism and Protestantism. For instance, Buddhists easily tolerate alternative knowledge systems, such as science, that may contradict their religious views (Clobert & Saroglou, 2013). It is therefore not surprising that religions in the East Asian context are frequently blended under the same temple roof without any difficulty or tension (Gries, Su, & Schak, 2012). Furthermore, among Westerners converted to Buddhism, high scores on Buddhist beliefs and practice are unrelated to the epistemic need for closure (Saroglou & Dupuis, 2006), whereas the opposite is true for religiosity among Christians (Brandt & Renya, 2010; Saroglou, 2002). East Asian religiosity may therefore relate to a higher

tolerance of contradictions that in turn decrease prejudice, contrary to Christian religiosity.

Nevertheless, tolerance related to East Asian religiosity is not unlimited and does not extend to all targets. Researchers have indeed found that antigay prejudice, although lower among Buddhists than among Christians, was still positively related to individual religiousness (Detenber et al., 2007). Furthermore, two recent priming studies showed that priming of Buddhist concepts increases explicit antigay prejudice among Buddhists in Singapore (Ramsey, Pang, Johnson Shen, & Rowatt, 2013) and Christians in the US (Vilaythong, Lindner, & Nosek, 2010). Homonegativity is indeed partly a consequence of social conformity to traditional societal morality, and higher religiousness across all religions, including East Asian religions, is typically positively related to conformity and traditionalism (Norris & Inglehart, 2004; Saroglou, Delpierre, & Dernelle, 2004; Saroglou & Dupuis, 2006). East Asian religions, as almost all religions, are also concerned with sexual purity and abstinence (Ramsey, Pang, Johnson, & Rowatt, 2013), even if they do not explicitly condemn homosexuality (Vilaythong, Linder, & Nosek, 2010).

Furthermore, in a recent correlational study, religiosity was also found to be positively related to prejudice against atheists (Clobert et al., 2013). As all religions are concerned with morality, atheists who ostensibly chose to reject religion may be perceived as a-morals even among adherents of East Asian religions. Furthermore, according to recent polls, atheists are currently the least liked group in America (Edgell, Gerteis & Hartmann, 2006). It appeared that people were less likely to vote for, or desire their children to marry, an atheist than a homosexual or a Muslim. Finally, according to Gervais (2008), prejudice against atheists is the most prevalent prejudice among religious believers. In consequence, East Asian religions and religiosity may not foster tolerance towards atheists, and may even promote prejudice against them. For these reasons, we may reasonably hypothesize that (1) religiosity universally predicts prejudice against homosexuals and atheists; and that (2) the hypothesized underlying mechanisms (i.e., disgust and distrust) explaining this relationship are identical across religious and cultural contexts.

3. Overview of the Studies

In order to clarify (1) whether the negative association between East Asian religiosity and low prejudice could be replicated and (2) whether similar mechanisms may explain the relationship between religiosity and prejudice towards various targets across religious and cultural contexts, two similar studies were carried out among Western participants socialized in a Christian religious context and Taiwanese participants from a Buddhist/Taoist/Confucian tradition. In both studies, we investigated negative attitudes towards four targets (i.e. Muslims,

Africans, homosexuals, and atheists), the potential mediating role of three constructs known to impact prejudice (i.e. tolerance of contradiction, disgust, and distrust), and religious/spiritual orientations and practices.

In Study 1 we analyzed, using structural equations modeling (SEM), the respective role of tolerance of contradiction, disgust, and distrust in mediating the relationship between religiosity and, respectively, prejudice against religious and ethnic outgroups (i.e. Muslims and Africans), prejudice against homosexuals, and prejudice against atheists. This first study was conducted among Westerners from a Christian tradition in order to (1) replicate mediations found in the literature (i.e. closed-minded ideologies) and (2) clarify the role of hypothesized mediators (i.e. disgust and distrust). The second Study replicated exactly the methodology of Study 1 and aimed to (1) clarify the existing relationship between East Asian religiosity and prejudice towards four kinds of targets and (2) investigate whether the underlying mechanisms explaining the religiosity-prejudice relationship are similar or different across religious and cultural contexts. Study 2 was carried out among Taiwanese people from a Buddhist/Taoist/Confucian tradition.

Study 1

1. Method

1.1. Participants

Participants were 295 adults ($M = 21.6$, $SD = 4.7$) from Belgium ($N = 170$), France ($N = 108$) and other European countries ($N = 17$) who either responded to a paper-based or an online questionnaire (in French). They self-reported themselves as Catholic ($N = 126$), atheist ($N = 95$), agnostic ($N = 45$), or “other” (none of the major religions) ($N = 29$). A total of 228 women and 67 men took part in this study.

1.2. Measures

Prejudice. Prejudice against four targets (Africans, Muslims, atheists, and homosexuals) was assessed using three distinct measures. Participants answered four items measuring the social condemnation of the four targets (e.g., the target should not be discriminated (r), the target should not hold a responsible position) on a 7-point likert scale (α s ranging from .60 to .78). Second, participants rated their feelings towards the targets on a thermometer item from 0 = cold to 100 = warm. Finally, the social distance from the targets was evaluated using three items commonly used in international surveys: “Would you like to have this person as (1) a neighbor, (2) a political representative, and (3) your husband/wife?” on a Likert scale ranging from 1 = totally dislike to 7 = totally like (α s ranging from .67 to .85).

Mediators. Participants completed short measures of intolerance of contradiction, trust, and disgust. Intolerance of contradiction was measured with five pairs of seemingly contradictory scientific findings presented in short statements (see Peng & Nisbett, 1999). Participants were asked to rate the plausibility of all ten findings on a 9-point Likert scale. The absolute difference between the ratings of two seemingly contradictory findings indicated a stronger intolerance of contradiction. Participants were then asked to rate to what extent they trust a person described in a short paragraph to keep a secret, to look after their home and pets, and to look after children (7-point Likert scale; $\alpha = .86$). The person was described as kind, responsible, and socially integrated but as having made some minor transgressions (i.e., stole candy when she was young, crossed the street outside of the crosswalk). Finally, disgust sensitivity was measured through 12 items from the

revised version of the Disgust Scale (initial scale from Haidt, McCauley, Rozin, 1994; revised by Olatunji et al., 2007). The four items (two true/false, two 3-point scale) with the best factor loadings on each of the three dimensions (core disgust, animal reminder, contamination) measured by this scale were selected ($\alpha = .62$). We used the same scoring method as described by Olatunji and colleagues (2007).

Religiosity and spirituality. Participants were administered the 12-item Four Basic Dimensions of Religiosity scale (Saroglou et al., 2012) that measures religiosity as a composite of four basic dimensions (emotions-experience, affiliation-identity, meaning-beliefs, and values-morality). This scale was validated in 14 countries of various religious traditions. Furthermore, religious practice was measured with three items respectively addressing three facets of religious practice; i.e. frequency of prayer, collective practice (e.g., office attendance), and private practice (e.g., reading religious books). Existential quest using a 9-item scale (Van Pachterbeke, Keller, & Saroglou, 2012) and a 15-item scale of spirituality (dimensions of universalism and connectedness of the Spiritual Transcendence Scale; Piedmont, 1999) were additionally measured. All measures used scales on a 7-point Likert format (α s: .95, .85, .72, and .85).

2. Results

Means and standard deviations for all measures are detailed in Table 1 distinctly by convictional group, as are the mean comparisons (*t*-test) between participants who self-identified as Christians (i.e. Catholics and Protestants) and non-believers (i.e. atheists and agnostics). Not surprisingly, non-believers reported lower scores on religious measures, existential quest, and spirituality. As far as prejudiced attitudes are concerned, Christians showed significantly higher prejudiced attitudes in general against all the four targets (i.e. Africans, Muslims, atheists, and homosexuals) compared with non-believers. Moreover, non-believers were found to be marginally less intolerant of contradictions and less sensitive to disgust than Christians.

Data were then analyzed via structural equation modeling using the AMOS structural equation modeling software, Version 20. For each target of prejudice, an initial SEM containing religiosity, the three hypothesized mediators, and the three measures of prejudice was run. A revised SEM excluding non-significant paths was then estimated for each target of prejudice. In the present study, estimates were derived using the maximum likelihood procedure. Prior to running the structural equation analyses, correlations among the variables were computed (see Table 2). For each of the four models corresponding to the four targets, the model fit was evaluated using multiple fit indices, such as the chi-square statistic, the normed fit index (NFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Although values indicative of acceptable model fit remain

Table 1
Means, Standard Deviations (Distinctly by Religious Group), and Between-Groups Comparisons for All Variables (Study 1)

	Christians <i>N</i> = 130	Non-believers <i>N</i> = 140	Total <i>N</i> = 295	Mean comparisons <i>t</i> (2,268)
Social condemnation				
Africans	1.68(0.85)	1.46(0.81)	1.54(0.81)	2.13*
Muslims	2.52(1.42)	2.05(1.32)	2.24(1.36)	2.80**
Atheists	1.44(0.70)	1.18(0.37)	1.31(0.59)	3.85**
Homosexuals	1.54(0.83)	1.37(0.63)	1.45(0.75)	1.88+
Negative affect				
Africans	32.77(18.8)	34.17(20.4)	33.22(19.8)	0.54
Muslims	54.92(23.1)	50.24(25.3)	51.90(24.5)	1.62+
Atheists	34.08(20.4)	25.07(20.1)	30.00(20.9)	3.66**
Homosexuals	32.08(21.5)	30.07(20.9)	30.64(21.3)	0.40
Social distance				
Africans	3.91(1.17)	3.74(1.25)	3.80(1.21)	1.10
Muslims	5.03(1.11)	4.61(1.39)	4.77(1.29)	2.67**
Atheists	3.24(1.08)	2.53(1.19)	2.91(1.20)	5.10**
Homosexuals	4.14(1.01)	3.83(1.27)	3.97(1.17)	2.26*
Relgiosity	3.74(1.50)	1.94(0.88)	2.84(1.50)	12.15**
Religious practice	2.91(1.32)	1.51(0.51)	2.20(1.21)	11.63**
Existential quest	5.28(0.76)	5.05(0.84)	5.17(0.86)	2.33*
Spirituality	4.85(0.92)	3.98(1.01)	4.42(1.07)	7.34**
Intolerance of contradiction	2.57(0.96)	2.37(0.97)	2.48(0.99)	1.74+
Trust	4.99(1.28)	4.88(1.25)	4.90(1.29)	0.75
Disgust	16.02(2.7)	15.18(2.8)	15.47(2.8)	2.52*

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

controversial (Marsh, Hau, & Wen, 2004), a non-significant chi-square, NFI and CFI values exceeding .90 or .95, and RMSEA values below .08 or .05 are generally accepted indicators of an acceptable to excellent model fit (Hu & Bentler, 1999).

For prejudice against Africans, the structural model demonstrated a good fit to the data: $\chi^2(7) = 13.12$, $p = .07$, NFI = .95, CFI = .97, and RMSEA = .05 (90% CI = .00-.09). The standardized path coefficients, all significant at $p < .05$, are presented in Figure 1 (top). As expected, religiosity was found to predict the contamination dimension of disgust as well as intolerance of contradiction that in turn predicted social condemnation and social distance towards Africans. The indirect effects (using a bootstrapping method to test for significance) of religiosity on each measure of prejudice through the mediators were IE = .04, -.01, and .03 respectively for social condemnation, negative affect, and social distance. Furthermore, the social

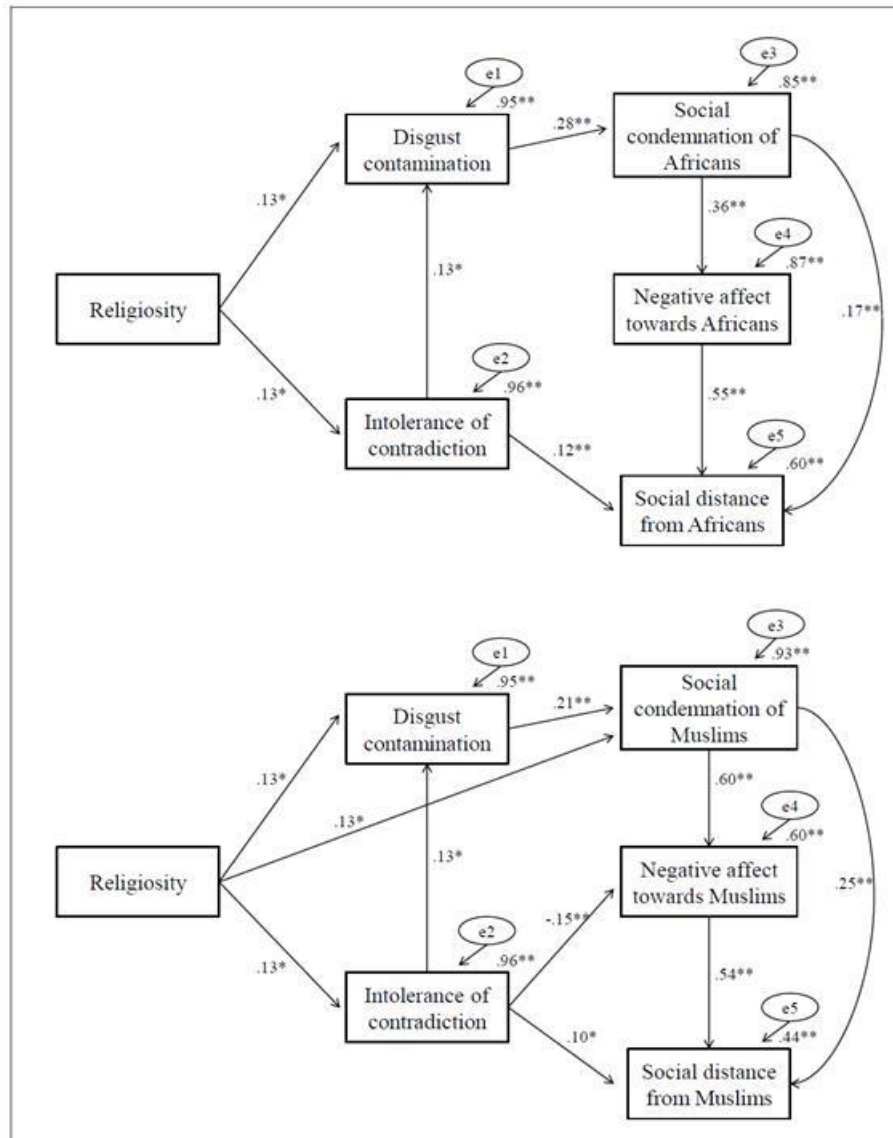
Table 2

Coefficients of Correlations Between the Independent and Dependent Variables as Well as the Mediators (Study 1)

	Religiosity	Intolerance of contradictions	Trust	Disgust core	Disgust animal	Disgust contamination
Social condemnation						
Africans	.14*	.01	-.18**	.07	.02	.28**
Muslims	.16**	.05	-.11+	.10	.02	.22**
Atheists	.32**	.05	-.14*	.10	.08	.14*
Homosexuals	.22**	.04	-.08	.00	.00	.16**
Negative affect						
Africans	.04	.08	-.18**	.04	.07	.13*
Muslims	.04	.19**	-.06	-.08	.01	.16**
Atheists	.24**	-.08	.08	.09	.03	-.03
Homosexuals	.12*	-.04	.19**	.13*	.07	.08
Social distance						
Africans	.09	.16**	-.14*	.08	.03	.18**
Muslims	.07	.21**	-.02	.13*	.09	.15**
Atheists	.32**	.02	-.06	.00	.03	.01
Homosexuals	.17**	.01	-.14*	-.05	.01	.03
Intolerance of contradictions	.13*		-.01	.02	.01	.15**
Trust	-.04	-.01		-.04	.05	-.16**
Disgust core	.14*	.02	-.04		.32**	.33**
Disgust animal	.12*	.01	.05	.32**		.30**
Disgust contamination	.15*	.15**	-.16**	.33**	.30**	

+ $p < .10$. * $p < .05$. ** $p < .01$.

condemnation of Africans predicted negative affects and the social distance from them. Finally, intolerance of contradictions was found to predict the contamination dimension of disgust. Regarding prejudice against Muslims, the model presented in Figure 1 (bottom) demonstrated an excellent fit to the data: $\chi^2(5) = 3.08$, $p = .67$, $NFI = .99$, $CFI = 1$, and $RMSEA = 0$ (90% CI = .00-.06) and was similar to the previous model. The indirect effects of religiosity on each measure of prejudice through mediators were IE = .03, -.11, and .11 respectively for social condemnation, negative affect, and social distance measures. The only difference between this model and the model found for prejudice against Africans is the direct link between religiosity and social condemnation of Muslims.



Note. Numbers on the models represents standardized coefficients.

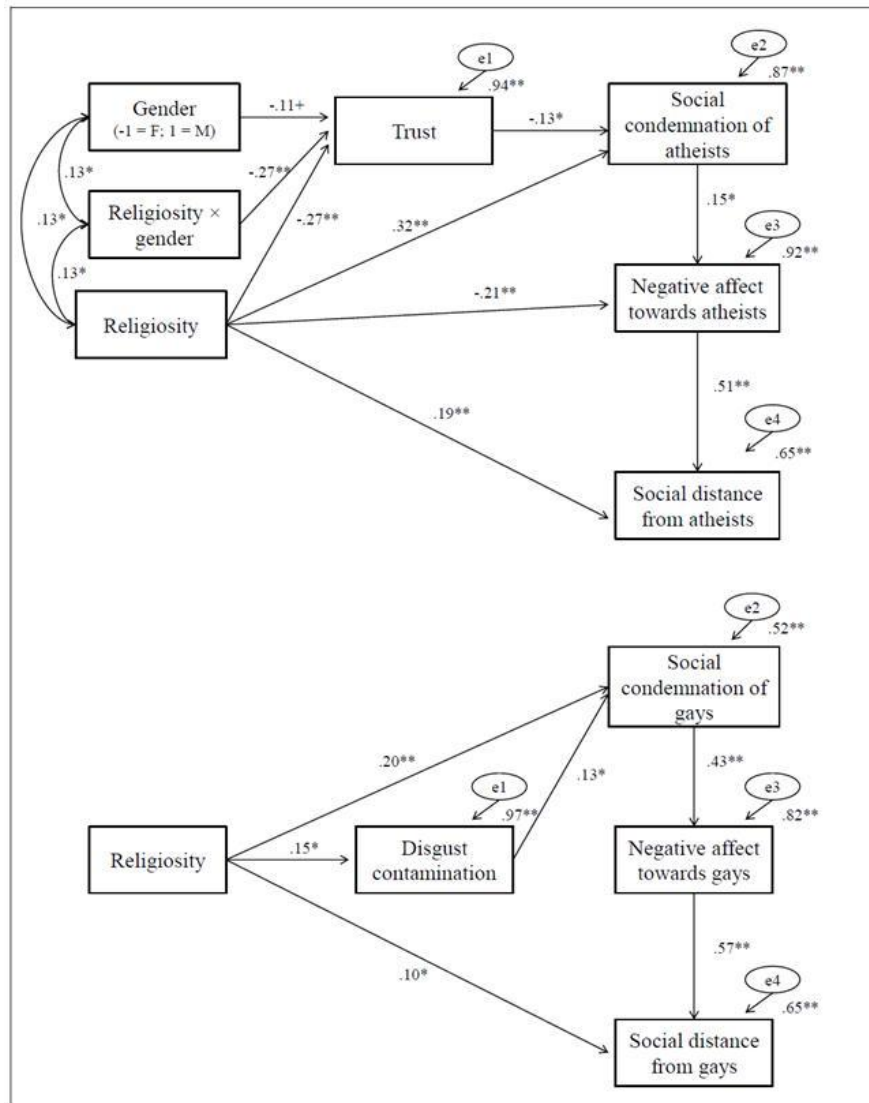
* $p < .05$. ** $p < .01$.

Figure 1. Structural equation models of the variables predicting prejudiced attitudes against African (top) and Muslims (bottom). (Study 1)

For prejudice against atheists, the model slightly differs and showed moderated mediation. The model (see Figure 2, top) has an acceptable fit to the data: $\chi^2(9) = 17.32$, $p = .05$, $NFI = .96$, $CFI = .98$, and $RMSEA = .06$ (90% CI = .01-.09). An interaction between religiosity and gender indicated that among men only, religiosity predicted low trust which in turn predicted social condemnation of atheists (IE = .03, -.05, and .13 respectively for social condemnation, negative affect, and social distance). Furthermore, religiosity was found to directly predict the three measures of prejudice against atheists. Finally, as was the case for Africans and Muslims, the social condemnation of atheists predicted negative affects and the social distance from them.

As far as prejudice against homosexuals is concerned, the model showed a mediating role solely for the contamination dimension of disgust. This model, illustrated in Figure 2 (bottom), has good fit indices: $\chi^2(4) = 3.12$, $p = .54$, $NFI = .99$, $CFI = 1$, and $RMSEA = 0$ (90% CI = .00-.07). Religiosity directly predicted social condemnation and social distance towards homosexuals. The relationship between religiosity and social condemnation of homosexuals was partially mediated by the contamination dimension of disgust (IE = .02, -.10, and .05 respectively for social condemnation, negative affect, and social distance). Here again, the social condemnation of homosexuals predicted negative affects and the social distance from them.

To conclude, religiosity among Westerners of Christian tradition was found to be positively related to prejudice against religious, ethnic, and moral outgroups. Different models were found to explain prejudice against specific targets of prejudice. A high intolerance of contradiction and a high sensitivity to the contamination dimension of disgust seem to explain the relationship between religiosity and prejudice against Africans as well as Muslims. Regarding prejudice against atheists, distrust indeed seems to be a key mechanism but explains the relationship between religiosity and prejudice against atheists only for men. Finally, the contamination dimension of disgust was found to mediate the relationship between religiosity and prejudice against homosexuals.



Note. Numbers on the models represents standardized coefficients.

* $p < .05$. ** $p < .01$.

Figure 2. Structural equation models of the variables predicting prejudiced attitudes against atheists (top) and homosexuals (bottom). (Study 1)

Study 2

1. Method

1.1. Participants

Participants were 196 adults ($M = 20.8$, $SD = 2.8$) from Taiwan who either responded to a paper-based or an online questionnaire. They self-identified as Folk believer ($N = 79$), Buddhist ($N = 39$), Taoist ($N = 21$), agnostic ($N = 43$), atheist ($N = 1$), or “other” ($N = 12$). A total of 134 women and 62 men took part in this study. All scales used in this second study were translated and adapted to traditional Chinese by a team of bilingual experts.

1.2. Measures

Religiosity and spirituality. As in Study 1, participants completed scales measuring religiosity, religious practice, existential quest and spirituality. The four measures displayed satisfactory reliabilities ($\alpha = .93$, $.74$, $.74$, and $.88$, respectively for each scale). Using principal component analysis, we found an equivalent one-factor structure between the Taiwanese and the Belgian sample (Study1) for religiosity ($\phi = .99$), religious practice ($\phi = .99$), existential quest ($\phi = .96$), and spirituality ($\phi = .98$). The Tucker’s Phi equivalence indices were thus satisfactory ($>.90$; Van de Vijver & Leung, 1997).

Mediators. Participants then completed the same short measures as used in Study 1 regarding the potential mediators: intolerance of contradiction, trust, and disgust. The reliability for trust and disgust were satisfactory ($\alpha s = .83$, and $.73$). The Tucker’s Phi equivalence indices between the Belgian and the Taiwanese sample were satisfactory for all three scales ($\phi = .93$, $.99$, and $.96$ respectively for tolerance of contradiction, trust, and disgust).

Prejudice. Prejudice against four targets (Africans, Muslims, atheists, and homosexuals) was assessed using the three same measures as in Study 1 (i.e., social condemnation, negative affect, and social distance). The reliabilities for the first and the third measures of prejudice were quite satisfactory for each target (αs ranging from $.53$ to $.77$).

The Tucker's Phi equivalence indices between the Belgian and the Taiwanese sample for the measures of social condemnation and distance were satisfactory for each target ranging from $\phi = .92$ to $\phi = .99$.

2. Results

Means and standard deviations for all measures are detailed in Table 3 distinctly by convictional group, as are the mean comparisons (*t*-test) between participants self-reported as believers (i.e. Buddhists, Folk believers, and Taoists) and non-believers (i.e. atheists and agnostics). As in Study 1, non-believers reported lower scores on religious measures and spirituality but not on existential quest. Regarding prejudiced attitudes, the only significant difference found between believers and non-believers concerned negative affect towards homosexuals. Non-believers reported lower negative affect towards homosexuals compared with believers. Compared with Study 1, we found significantly fewer differences between believers and non-believers in Taiwan, possibly due to the relatively smaller size of the non-believer sample.

As the sample was considerably smaller than the sample used in Study 1, we were not able to run structural equation analyses given the number of parameters to estimate. We therefore turned to simple mediation analysis using a bootstrapping method to test for the significance of the indirect effect. Prior to running the mediation analyses, the correlations among the variables were computed (see Table 4). Contrary to Study 1, religiosity was found to correlate negatively with negative affect towards Muslims, social distance towards Africans, Muslims, and homosexuals (marginally), as well as intolerance of contradictions. Nevertheless, as in Study 1, religiosity positively correlated with negative affect and social distance towards atheists.

Given the pattern of correlations, we first tested three simple mediation models with (1) religiosity as an independent variable, (2) social distance from Africans, Muslims, and homosexuals as dependent variables, and (3) intolerance of contradiction as a mediator. Furthermore, all the models controlled for gender and the two other measures of prejudice for the same target (i.e. social condemnation and negative affect) in order to be coherent with the SEM models used in Study 1. A SPSS macro (PROCESS) designed by Hayes (2013) was used to test for indirect effects. This macro facilitates the implementation of bootstrapping methods (5000 re-sampling). The three simple mediation models were found to be significant. As displayed in Figure 3, intolerance of contradiction mediated the negative relationships between religiosity and social distance from (1) Africans (IE = $-.03$, SE = $.02$, CI = $[-.08, -.01]$), (2) Muslims (IE = $-.03$, SE = $.01$, CI = $[-.06, -.01]$), and (3) homosexuals (IE = $-.02$, SE = $.02$, CI = $[-.07, -.01]$). Finally, different moderated

Table 3
Means, Standard Deviations (Distinctly by Religious Group), and Between-Groups Comparisons for All Variables (Study 2)

	Religious people <i>N</i> = 139	Non-believers <i>N</i> = 43	Total <i>N</i> = 182	Mean comparison: <i>t</i> (2,180)
Social condemnation				
Africans	2.05(0.94)	2.11(0.98)	2.06(0.99)	-0.36
Muslims	2.30(1.14)	2.27(0.97)	2.29(1.14)	0.16
Atheists	1.92(0.96)	1.81(0.78)	1.86(0.92)	0.72
Homosexuals	2.01(1.13)	2.01(0.84)	1.98(1.11)	0.04
Negative affect				
Africans	39.45(19.9)	39.30(19.4)	39.33(19.9)	-0.01
Muslims	54.10(20.8)	50.72(19.1)	52.72(21.1)	-0.95
Atheists	46.55(20.4)	42.14(20.7)	45.00(19.1)	-1.31
Homosexuals	40.00(19.4)	50.00(22.6)	42.41(20.7)	2.84**
Social distance				
Africans	4.58(0.90)	4.71(0.76)	4.60(0.89)	-0.87
Muslims	4.95(1.10)	5.08(1.07)	4.97(1.13)	-0.71
Atheists	3.68(1.02)	3.46(0.93)	3.62(1.01)	1.27
Homosexuals	4.41(1.02)	4.62(1.10)	4.48(1.05)	-1.16
Religiosity	3.82(1.01)	3.14(1.11)	3.67(1.11)	3.87**
Religious practice	3.06(1.05)	2.27(0.81)	2.89(1.08)	4.56**
Existential quest	4.80(0.75)	4.91(0.72)	4.83(0.75)	-0.81
Spirituality	4.99(0.82)	4.65(0.85)	4.93(0.84)	2.25*
Intolerance of contradiction	1.54(0.83)	1.45(0.88)	1.54(0.83)	0.61
Trust	4.47(0.92)	4.52(1.18)	4.47(0.99)	-0.33
Disgust	17.03(3.3)	17.14(3.4)	17.05(3.3)	-0.18

* $p < .05$. ** $p < .01$.

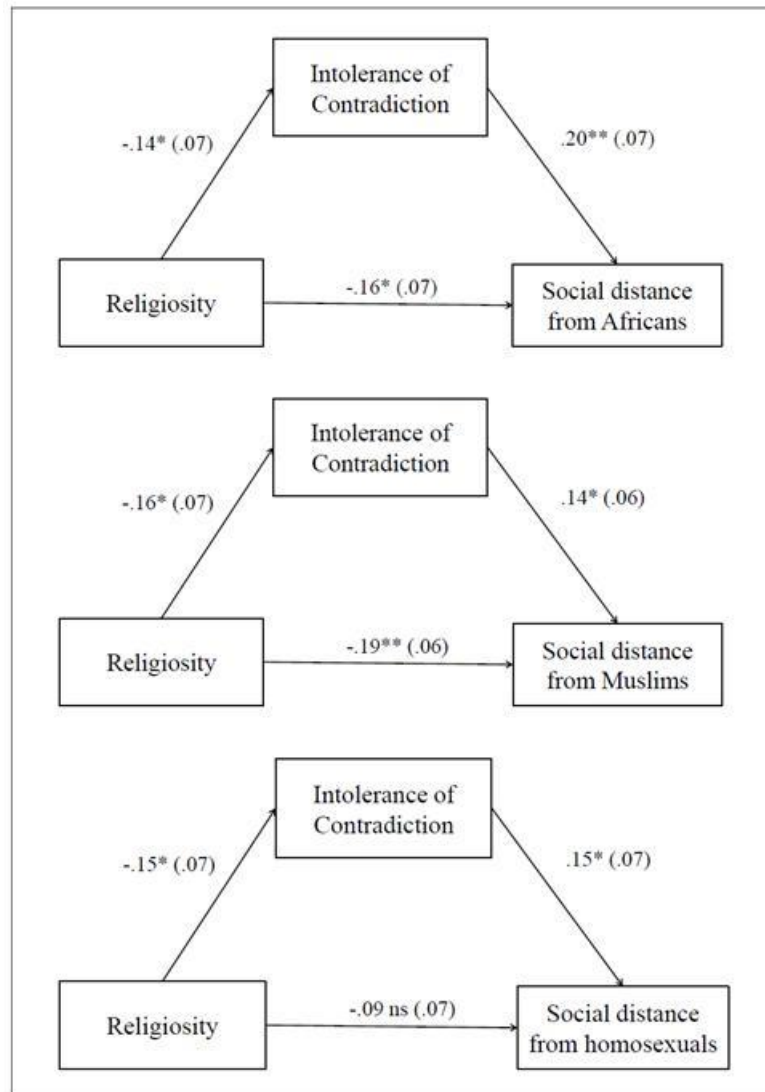
mediation models were tested, including religiosity as an independent variable, trust and disgust as mediators, all measures of prejudice for each target as dependent variables, and gender as a moderator. No significant conditional indirect effects were found.

To conclude, consistent results with previous studies were found. Religiosity in East Asia was indeed found to negatively correlate with ethnic and religious prejudice. A lower intolerance of contradiction was found to explain the relationship between religiosity and low prejudice against Africans and Muslims. Furthermore, whereas no direct effect of religiosity on prejudice against homosexuals was found, an indirect effect through intolerance of contradiction was found. More precisely, religiosity decreased intolerance of contradiction which in turn decreased prejudice against homosexuals.

Table 4
Coefficients of Correlations Between the Independent and Dependent Variables as Well as the Mediators (Study 2)

	Religiosity	Intolerance of contradictions	Trust	Disgust core	Disgust animal	Disgust contamination
Social condemnation						
Africans	-.01	-.02	-.08	.05	.13	-.02
Muslims	-.02	-.01	.04	.03	.16*	-.03
Atheists	.09	-.07	-.10	.07	.03	.03
Homosexuals	.01	.07	-.01	.06	.00	-.03
Negative affect						
Africans	-.10	.07	-.02	-.05	-.06	.08
Muslims	-.14*	.07	.02	.01	-.12	.01
Atheists	.16*	-.07	-.07	.02	.04	.08
Homosexuals	-.08	.14+	-.06	-.07	-.02	.10
Social distance						
Africans	-.21**	.23**	.04	.01	.06	.00
Muslims	-.27**	.15**	.08	.03	.06	.06
Atheists	.15*	.02	-.16*	-.02	-.07	.01
Homosexuals	-.12+	.17*	.01	.06	.00	.03
Intolerance of contradictions	-.15*		.15*	.06	.03	.01
Trust	-.10	.15*		-.06	.06	-.21**
Disgust core	-.07	.06	-.06		.42**	.40**
Disgust animal	.06	.03	.06	.42**		.33**
Disgust contamination	.02	.01	-.21**	.40**	.33**	

+ $p < .10$. * $p < .05$. ** $p < .01$.



Note. Numbers on paths represent unstandardized regression coefficients; standard errors are in parentheses.

* $p < .05$. ** $p < .01$.

Figure 3. The mediator role of intolerance of contradiction on the relation between religiosity and social distance from Africans, Muslims, and homosexuals (Study 2).

Discussion

These two studies showed results consistent with the literature. Religiosity in the West was indeed positively linked with prejudice against all targets, especially when examining the social condemnation measure. As far as East Asian religiosity is concerned, we found exactly the reverse association. Religiosity in East Asia was negatively associated with prejudice against Muslims, Africans, and, indirectly, against homosexuals (when considering the social distance measure). Nevertheless, religiosity in East Asia still predicts prejudice against atheists. Furthermore, it is interesting to notice that no associations were found between religiosity and the social condemnation of any target of prejudice in Taiwan. This issue will be discussed later.

As expected, religiosity in the West was positively correlated with closed-minded attitudes, represented by disgust and the intolerance of contradictions, whereas religiosity in the East was negatively correlated with the intolerance of contradiction. Furthermore, no relationship was found between East Asian religiosity and any dimension of disgust. In both studies, the intolerance of contradiction was found to be positively related with social distance towards religious and ethnic outgroups but the contamination dimension of disgust, as well as trust, were related to prejudice against all targets only among Westerners. Finally, through the SEM and mediational analysis, it appeared that the intolerance of contradiction and the contamination dimension of disgust (both positively related to religiosity) explained the relationship between religiosity and prejudice against religious and ethnic groups in the West. Furthermore, the contamination dimension of disgust also mediated the relationship between religiosity and prejudice against homosexuals. Regarding prejudice against atheists, religiosity was found to increase distrust which, in turn, increased prejudice but only among men. In contrast, it seems that solely the intolerance of contradiction plays an important role in East Asia. East Asian religiosity was indeed found to decrease intolerance of contradiction which in turn softens prejudice against religious and ethnic groups, but also against homosexuals.

Through both studies, the intolerance of contradiction seemed to be a valuable mechanism in mediating the relationship between religiosity and prejudice against other ethnic and religious groups. Compared with homosexuals and atheists, religious and ethnic outgroups, such as Muslims or Africans, are more visible and ostensibly display other customs, clothes, or skin colors. In sum, religious and ethnic outgroup members ostensibly display norms, values, and beliefs that are in contradiction with those of the ingroup. Homosexuals and atheists are indeed quite similar to the ingroup members, at least in appearance, and are socialized in the

same cultural context. Furthermore, the intolerance of contradiction seems to be particularly important when one actually lives with an outgroup member who may contradict the ingroup conceptions. Intolerance of contradiction was indeed mainly associated with the social distance measure of prejudice in both studies.

As previously found in the literature, East Asian religiosity tends to imply ethnic and inter-religious tolerance, both being explained by a lower intolerance of contradiction. One may argue that these results may be an artifact due to the relative low familiarity of East Asians (compared with Westerners) with Muslims or African people. It is indeed true that East Asians may be less likely to encounter a Muslim than Europeans. They might thus feel less threatened by these outgroups and report less prejudice. Nevertheless, the cultural and social environment seems to not be responsible for this negative association between religiosity and prejudice. The mean scores of prejudice in East Asia are indeed similar or even higher than those in the Western sample. Moreover, moral prejudice, especially relative to sexual orientation, seems not to be as common across religions as initially thought. Indeed, in Study 2, religiosity was found to be indirectly negatively linked with prejudice against homosexuals. Contrary to the findings in Study 1, disgust did not play a role in explaining this relationship. Despite their endorsement of conservative and traditional societal values, East Asian religions, as previously stated, do not specifically condemn homosexuality.

Nevertheless, Western and Eastern believers seem to have a common, clear and “total” outgroup, i.e. atheists. Whereas people from other religious and ethnic groups may be assumed to follow moral guidelines, even if they are different, atheists are supposed to follow none of the elementary moral rules since they are not required by any religious system to behave in a moral way. Compared to homosexuals who may behave in an immoral way with regard to sexuality but not in other areas of social life, atheists are “free” to behave without moral concerns in any situation. Despite the fact that atheists seem to be a common target of prejudice among religious people in the West and in the East, our studies failed to demonstrate the existence of a common mechanism. Distrust was indeed found to mediate the religiosity-prejudice relationship only among Westerners of Christian tradition.

The present work has several limitations. Whereas the mean age and educational background were similar in both studies, there were fewer participants in Study 2 compared to Study 1. Furthermore, the sample of Study 1 included a higher proportion of women compared to Study 2. Along the same line, the small size of the sample in the second study made any mean comparison between believers and non-believers difficult, and did not allow for data analysis to be carried out following the same procedure used in the first study (SEM). Moreover, as this research only included two countries, it seems premature to generalize our conclusions to all Eastern religions or cultures. Finally, even if our models were all significant and displayed good fit indices, the indirect effects sizes were small overall, suggesting that further investigations are needed to fully understand the

mechanisms explaining the religiosity-prejudice relationship across cultural and religious backgrounds.

An additional set of mechanisms deserves further investigations in future research: the role of underlying emotions as a function of religion and culture. A substantial body of research has shown great differences between Westerners and East Asians regarding emotions and affects. For instance, whereas collectivists (like East Asians) feel especially good when an emotional experience lead them to connect with others, individualists (like Americans) feel especially good when dwelling on emotional experiences that distinguish them from others (Kitayama, Mesquita, & Karasawa, 2006). Furthermore, the ideal positive affect valued in East Asian and Buddhist contexts, compared to the ideal positive affect valued in European American and Christian Protestant contexts, is characterized by low arousal (e.g., calm) rather than high arousal (e.g., excitement) (Tsai, Knutson, & Fung 2006; Tsai et al., 2007). Therefore, if we take into consideration the fact that prejudice is often fueled by emotions like fear or anger (Cottrell & Neuberg, 2005) which imply high arousal and disturbance in interpersonal relationships, it is reasonable to hypothesize that East Asian religiosity, compared to the religiosity in Western monotheism, is less favorable of these kinds of emotions. This in turn may lead to greater tolerance and/or weaker prejudice.

To conclude, it is our impression that the mechanisms explaining the association between religiosity and prejudice are partially similar but also different across religious and cultural contexts. It seems that closed-minded attitudes regarding the relative tolerance towards disruptive viewpoints represent a valuable cross-religious mechanism which is cross-culturally valid. Nevertheless, the role of disgust and distrust seems to be more specific to particular religious and cultural context. Whereas disgust and distrust are indeed positively related with all kind of prejudice in the West, this is not the case in East Asia.

Chapter 4

Intercultural Non-conscious Influences: Prosocial Effects of Buddhist Priming on Westerners of Christian Tradition

Magali Clobert

Vassilis Saroglou

Université catholique de Louvain

Clobert, C., & Saroglou, V. (2013). Intercultural Non-conscious Influences: Prosocial Effects of Buddhist Priming on Westerners of Christian Tradition. *International Journal of Intercultural Relations*, 37, 459-466.

Abstract

Prosocial concepts and behavior are often found to be activated when participants are primed with concepts of their own religious cultural tradition. We investigated whether similar effects can be found when people (Westerners of Christian tradition) are primed with concepts of a different from their own religious cultural tradition (Buddhist and Islamic). Participants (104 young Belgian adults) were randomly assigned to three conditions. They were supraliminally primed with either Buddhist or Islamic images; or they were not primed (control condition). Priming Buddhism increased prosocial intentions (spontaneous sharing of hypothetical gains), and decreased, among participants highly valuing universalism, implicit prejudice toward an ethnic outgroup. Priming Islam had no effect on prosociality or prejudice. The findings suggest that concepts from one religious and cultural context are transposable, under some conditions, to another religious and cultural context and can influence even implicit social cognition.

Keywords: cultural priming; Buddhism; prosociality; ethnic prejudice; universalism

Introduction

Across cultural contexts, religions emphasize prosocial values and ideals (Habito & Inaba, 2006), even if the latter are not purely altruistic (Neusner & Chilton, 2005). Religiosity is related to highly valuing benevolence among Christians, Jews, and Muslims (Saroglou, Delpierre, & Dernelle, 2004, for a meta-analysis), as well as Buddhists (Saroglou & Dupuis, 2006). In very recent years, priming experiments have confirmed the hypothesized causal direction in which religious concepts, texts, and places activate prosocial concepts and behaviors such as generosity, cooperation, volunteering, and low retaliation, most often regardless of participants' individual religiosity (Pichon, Boccato, & Saroglou, 2007; Shariff & Norenzayan, 2007; see also Ahmed & Salas, 2011; Pichon & Saroglou, 2009; Preston, Ritter, & Hernandez, 2010; Saroglou, Corneille, & Van Cappellen, 2009, Study 1; Sasaki, Kim, Mojaverian, Kelley, Park, & Janusonis, in press; Tsang, Schulwitz, & Carlisle, 2012).

In these studies, participants were primed with concepts of their own (mostly Christian) religious tradition. However, what the effects would be if participants were primed with non-Christian religious primes? In other words, is hetero-religious priming effective at activating prosociality even among believers and non-believers of a different religious/cultural tradition?

This is the question addressed in the present study. Posing this question has implications on at least two theoretical levels. First, is there something culturally universal about religion (i.e., its capacity to activate prosociality) beyond religious and cultural barriers? Or, alternatively, does hetero-religious priming activate mistrust in others, especially outgroup members, and thus decrease prosociality? Second, more broadly, is implicit cognition mainly limited by cultural group barriers? Or, alternatively, can cultural concepts (e.g., Eastern Buddhism's tolerance and compassion) transpose on different cultural groups and thus activate, even non-consciously, corresponding attitudes and behaviors in a different than the origin cultural context (e.g., Westerners of Christian tradition)? Below we detail these two theoretical issues and further describe our specific hypotheses and the ways in which we have operationalized them in the present study.

1. Consequences of Hetero-religious Priming

Little if anything is known regarding whether religion's role with respect to many individual outcomes (well-being, self-control, prosocial tendencies,

conservative morality, prejudice toward outgroups; Hood, Hill, & Spilka, 2009) is due to mechanisms and effects of one's own religious culture or, rather, is due to more universal religious ideas, values, and practices (see for this debate: Belzen, 2010; Saroglou & Cohen, in press). Regarding experimental findings in particular, two existing studies seem to provide divergent evidence on this issue.

In the first study, North American participants of Christian tradition who were experimentally reminded of their mortality, expressed stronger beliefs in the power of not only (Christian) God, but also of culturally alien supernatural agents, i.e. Buddha and Shamanic spirits (Norenzayan & Hansen, 2006). Obviously, others' supernatural agents can also be seen as powerful and helpful in difficulties. In the second study, Christians, mostly from the US, who were primed with the Golden Rule attributed to Buddha, showed higher explicit (but not implicit) antigay attitudes (Vilaythong, Lindner, & Nosek, 2010). The authors interpreted their findings as suggesting that "when a tolerance message comes from a religious outgroup figure, it does not increase but instead may decrease tolerance toward another outgroup" (p. 502). Note, however, that in that study even priming participants with the Golden Rule attributed to Jesus did not weaken antigay attitudes, a finding that may call into question the interpretation of the authors based on the in/outgroup distinction. Moreover, homosexuals are known to be a strong target of religious prejudice (Hood et al., 2009) and antigay attitudes may not be an optimal way to test the hetero-religious priming-prosociality hypothesis.

Very likely, the effects of a religious culture that is different from one's own may importantly depend on the nature of the domain concerned. As far as prosocial tendencies in general are concerned, given the universality of various religions in promoting prosocial and compassionate values (Habito & Inaba, 2006), we postulated that priming participants (Westerners of Christian tradition) with religious elements from other religions (Buddhism and, for comparison reasons, Islam) would increase participants' prosocial tendencies.

2. Intercultural Implicit Cognition

Contrary to the religious domain, where there is almost no research on the non-conscious influences of "foreign" religious aspects from another cultural *milieu*, there is interesting research on non-conscious influences of foreign cultural dimensions. Indeed, probably due to the "culturally erosive" effects of globalization (Chiu, Gries, Torelli, & Cheng, 2011), priming people with elements from another culture often activates concepts and behaviors consistent with the primed construct. For instance, European Americans who were primed with East Asian culturally-laden locations and the East Asian yin-yang symbol showed attitudes (anticipated greater change) that were consistent with East Asians' typical endorsement of

greater change in the world (Alter & Kwan, 2009). Similarly, German students, belonging to an individualistic culture with independent rather than interdependent self-construal, experienced more pride when thinking about the achievements of others after being primed with the interdependent self-construal, typical of collectivistic societies (Neumann, Steinhäuser, & Roeder, 2009).

Given that religions can be considered as part of cultures, if not as cultural systems themselves (Cohen, 2009; Saroglou & Cohen, 2011), and taking into account the increasing cultural globalization, also occurring in the religious domain, we expected hetero-religious priming to be effective in increasing Westerners' prosociality. We investigated particularly whether or not this would be true for Buddhism, a religion which reflects, for both religious and (Eastern) cultural reasons, love, compassion, interdependence, and dialecticism, i.e. tolerance of contradictions (Davidson & Harrington, 2002; Goodman, 2009; Ma-Kellams, Spencer-Rodgers, & Peng, 2011). We also added Islamic religious primes to determine whether the above expected effects are specific to Buddhism or can be more broadly generalized to other religions.

3. Two Sides of Prosociality: Generosity and Tolerance

In the present study we focused on two indicators of prosociality: (a) generosity, measured as the spontaneous willingness to share hypothetical gains rather than keeping them for oneself, and (b) outgroup tolerance, i.e. decreased prejudice of an ethnic outgroup. These two indicators may not function equally. Indeed, religious priming has typically been found to have an effect on prosociality, in particular when the targets of the prosociality are partners with whom the subject shares everyday interactions (see the many studies cited above). The impact of religious priming on (decreased) prejudice is less clear.

In one study, the prosocial outcomes of (homo-)religious priming were limited to ingroups, not extending to ethnic outgroups (Pichon & Saroglou, 2009). In three other studies, priming religion in general, or priming specific, coalitional, aspects of it, increased negative attitudes and prejudice against ethnic, religious, or moral outgroups (Johnson, Rowatt, & LaBouff, 2010, in press; LaBouff, Rowatt, Johnson, & Finkle, 2011)¹. However, two other studies show that exposing religious people (in fact, fundamentalists) to biblical texts praising prosocial and compassionate

¹ We do not consider here additional studies showing other antisocial effects of religious priming, such as aggression, revenge, or punishment, because in these studies those effects were found (a) for people with dispositional submissiveness, (b) for targets which threaten the values or the group's existence, and/or (c) for primes consisting of biblical texts legitimizing violence (Bushman et al., 2007; Ginges et al., 2009; McKay, Efferson, Whitehouse, & Fehr, 2011; Saroglou et al., 2009).

values decreases prejudice and increases prosociality toward ethnic, moral, and religious outgroups (Blogowska & Saroglou, in press; Rothschild, Abdollahib, & Pyszczynski, 2009).

Consequently, we expected hetero-religious (Buddhist and Islamic) priming to increase generosity in general (spontaneous willingness to share hypothetical evidence) among Westerners of Christian tradition. Our expectations were less pronounced with regard to tolerance, measured as a decrease in attitudes of prejudice toward an ethnic outgroup. Given the ethnicity of our participants (French-speaking Belgians living in Wallonia) we selected Flemish as a typical strong ethnic (but not national) outgroup (Luminet, 2012). Also, given the advantages of using implicit rather than explicit measures of prejudice in avoiding social desirability concerns, which are particularly relevant in the context of religion (Sedikides & Gebauer, 2010), we used an Implicit Association Test to measure ethnic prejudice. Taking into account the above cited research on religious priming, prosociality, and prejudice, we were more cautious in exploring whether hetero-religious (Buddhist and Islamic) priming would activate tolerance (decreased prejudice) of an ethnic outgroup. The effects would be less clear, inexistent, or depending on individual dispositions.

4. The Moderating Role of Individual Dispositions

Although many experiments show that the social effects of religious priming and similar relevant manipulations apply equally to believers and non-believers, some studies show that the effects are stronger for, or only manifest among, religious participants. Indeed, the prosocial effects of Sunday, in comparison to weekdays (Malhotra, 2010), and the induction of self-transcendent positive emotions (Van Cappellen & Saroglou, in press), as well as the antisocial effects of religious texts legitimizing violence (Bushman, Ridge, Das, Key, & Busath, 2007; Saroglou & Blogowska, in press) are observed more or only among religious participants.

This is in line with broader research evidence according to which primes are more or only effective among participants who place importance on the activated construct or behavior in their life in terms of personal dispositions and values (e.g., Meier, Robinson, & Wilkowski, 2006; Verplanken & Holland, 2002) and is strongly associated with the primed construct in long-term memory (Bargh & Barndollar, 1996). For instance, religious priming activates submission to the experimenter, conformity to informational influence, and rigid deontological morality only among participants who are high in dispositional submissiveness themselves; it is only among these participants that religious priming also activates submission-related concepts (Saroglou et al., 2009; Van Cappellen, Corneille, Cols, & Saroglou, 2011; Van Pachterbeke, Freyer, & Saroglou, 2011). We thus expected a moderating role of

individual differences, with the hypothesized prosocial effects of hetero-religious priming to be stronger among people with high levels of religiosity and/or prosocial values.

5. The present study

In summary, we hypothesized that priming Westerners of Christian tradition (native Belgians) with hetero-religious concepts (i.e. Buddhist and Islamic) would increase or activate (a) spontaneous prosocial intentions to share hypothetical gains with others; and, to a lesser extent, (b) tolerance toward an ethnic outgroup (Flemish), i.e. lower levels of implicit attitudes of prejudice, in comparison with a control (no priming) condition. Individual religiosity and importance attributed to the value of Universalism were also measured as possible moderating factors, with those scoring highly on these measures showing more sensitivity to the priming effects.

Given the importance suggested by previous research of avoiding religious primes that denote exclusively coalitional or positive aspects of religion (Ginges, Hansen, & Norenzayan, 2009; Pichon et al., 2007; Preston et al., 2010), we used primes that refer to religion as a whole, i.e. personal and collective aspects, and were neither highly positive nor negative in terms of valence. Moreover, in order to avoid using words that may be either culturally/religiously quasi-universal (e.g., *prayer*), or fully specific and thus incomparable (e.g., *Christ*, *Mohamed*, *Buddha*), we used pictures that denote activities that are similar across the two religious traditions and familiar to participants of Christian background (prayer/meditation, effigies/places) but also, uniquely and unambiguously referring to the specific religious and cultural context, i.e. Buddhism and Islam.

Method

1. Participants

Participants were 117 students at a Belgian University (Wallonia region) who took part in the study for credit for their introduction to psychology course. We excluded from our data analyses three participants who self-identified as Muslims, one participant who self-identified as Buddhist, and nine participants who reported citizenship other than Belgian. The remaining 104 participants were all French-speaking Belgian citizens, had been raised in a society marked by Christian tradition, and self-identified as Catholics (57), atheists (33), agnostics (12), or “other” (2). Their age ranged from 18 to 23 ($M = 19.6$) and they were predominantly female (90%).

2. Material and Procedure

2.1. Priming material

Participants were randomly assigned to three conditions: Buddhist priming, Islamic priming, or the control condition (no priming). Across conditions, participants completed the experiment in the same lab. In the Buddhist priming condition, three color photos (20×24 cm) depicting, respectively, a Buddhist individual in meditation, a collective Buddhist meditation, and a Buddhist statue, were inserted into three posters (30×40 cm) that were hung on the wall. The Islamic priming condition consisted of three color photos of the same size as those in the Buddhist priming condition (also inserted into three posters of the same size), which depicted similar themes (private Islamic prayer, collective Islamic prayer, and a Islamic mosque). In order to maximize randomness, the three pictures were changed (or withdrawn, in the control condition) after each group of participants exited the lab. The two sets of three pictures were selected following a pretest in which among 29 evaluators rated 10 pictures for (a) their relevance as related to religion, respectively Buddhism or Islam (7-point scale ranging from 1 = *not all related* to 7 = *totally related*) and (b) valence (similarly, from 1 = *negative* to 7 = *positive*). The six selected pictures were all very religious (scores > 6) and neutral in valence (scores between 3 and 5). They were equal in mean typicality for religiosity, $M_s = 6.57, 6.55$ ($SD_s = 0.45, 0.55$) and mean valence, $M_s = 4.52, 4.64$ ($SD_s = 0.50,$

0.51), $t(28) = 0.28, 1.37, n.s.$ In order to provide the opportunity for participants to have a look around the room and to see the pictures, rather than being solely focused on the computer screen, before the experiment started participants were left waiting for two minutes. Additionally, during the experiment, the experimenter advised participants to take a breath after each IAT block (see below) before returning their focus to the computer screen.

2.2. Implicit measure of prejudice

When participants entered the lab in small groups (3-6 persons), they were welcomed and asked to complete a computer task. This was in fact an Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) measuring ethnic prejudice. In the context of Belgium, this concerned prejudice of Walloons (French-speaking Belgians) against the Flemish (Dutch-speaking Belgians).

The IAT consisted of five blocks. The targets categories used were *Walloon* and *Flemish*, whereas the attributes categories were *positive* and *negative words*. The associated stimuli for targets were 10 Walloon and 10 Flemish first names and stimuli for attributes were 10 positive and 10 negative words. Each of the discrimination tasks (Blocks 1, 2, and 4) consisted of a total of 20 trials. Each of the combined tasks (Blocks 3 and 5) comprised 40 trials with targets and attributes presented in a random order. In each trial, the participant had to focus on a blank screen for 395 ms, at which point a target or an attribute appeared on the screen for 10,000 ms, a time during which participants had to press the key corresponding to the correct category. Feedback followed the response, indicating the participants' accuracy and response times. Participants were then allowed to make some classification errors.

The critical comparison between the prejudice-congruent sorting task (Block 3: Walloon first names + positive words / Flemish first names + negative words) and the prejudice-incongruent sorting task (Block 5: Walloon first names + negative words / Flemish first names + positive words), provided us with a measure of prejudice against Flemish people. Each block started with short instructions that described the assignment of the two response keys (i.e., "s" and "l") for the stimulus categories. Participants were told to respond as quickly and as accurately as possible.

The 10 Flemish and the 10 Walloon first names were selected after a pre-test conducted with a different group of another 29 psychology students. These participants rated 20 male and 20 female Flemish first names and 20 male and 20 female Walloon first names on (a) the supposed ethnic/linguistic origin of those first names (Flemish and Walloon) and (b) the supposed gender (male and female) on a Likert scale ranging from 1 to 7 (respectively, from *Walloon* to *Flemish*, and from

male to female). Out of the names rated to be most typically Flemish or Walloon ($M > 6.5$ for Flemish, $M < 1.5$ for Walloons), we chose the five most representative female and male first names ($M > 6.5$ for female, $M < 1.5$ for male).

2.3. Prosocial behavior

After completing the IAT, participants were informed that they would be asked additional questions. They were asked to write down what they would do if they won 100,000 euros, specifying each expenditure and the percentage of money they would allocate for each one. The percentage of money participants allocated to others (e.g., family, friends, charities) and not to themselves was coded as a measure of prosociality for the analyses.

2.4. Individual differences

Post-experimentally, we measured individual differences on (a) the value of universalism, using the eight items from the Schwartz (1992) Value Survey, and (b) religiosity, using a three-item index measuring the importance of God in life, the importance of religion in life, and frequency of prayer (Saroglou & Muñoz-García, 2008). For both measures, 7-point Likert scales were used. Reliabilities were satisfactory, with respective α s = .80 and .85.

At the end of the experiment, participants were debriefed and were asked whether they guessed what the objective of the study was and whether they noticed the themes of the pictures hanged in the lab room. No participant guessed the study's objectives or noticed/remembered what was depicted in the photos.

Results

For the IAT results, we followed the data reduction procedure described by Greenwald, Nosek, and Banaji (2003). Indeed, this new algorithm significantly outperforms the conventional procedure that used log-transformation (Greenwald et al., 1998). After checking for subjects for whom more than 10% of the trials have latencies lower than 300 ms (0 subjects), we replaced error latencies with respective block mean plus 600 ms.

Descriptive statistics for all measures are shown in Table 1, distinctly by condition. There were no differences between conditions for religiosity and universalism, $F_s(2, 103) = 0.09$ and 0.54 , n.s. A repeated-measures ANOVA analysis confirmed the classic discrimination effect of the IAT, $F(1, 103) = 126.88$, $p < .001$, partial $h^2 = .62$. Indeed, participants needed more time to classify first names in a prejudice inconsistent manner (non-compatible task) than in a prejudice consistent manner (compatible task). In other words, Walloon participants showed prejudice toward Flemish targets.

Table 1
Means and Standard Deviations for All Measures, Distinctly by Condition

	Buddhist priming	Islamic priming	Control condition
Measures	<i>M(SD)</i>	<i>M(SD)</i>	<i>M(SD)</i>
IAT-Compatible task (ms)	622 (140.16)	628 (142.55)	626 (126.58)
IAT-Incompatible task (ms)	795 (316.16)	813 (310.39)	820 (328.67)
Prosociality (sharing, %)	32.93 (26.77)	21.44 (23.75)	20.85 (19.44)
Agreeableness	3.96 (0.43)	3.77 (0.45)	3.77 (0.53)
Universalism	5.41 (0.87)	5.60 (0.54)	5.51 (0.72)
Religiosity	2.67 (1.35)	2.58 (1.06)	2.65 (1.28)

In order to test the effect of priming on prosociality, we computed a one-way ANOVA with condition as the between-subject variable. A main effect of condition was found, $F(2, 101) = 2.85$, $p = .06$, partial $h^2 = .05$. Comparing each priming condition to the control condition (Tukey post-hoc tests) revealed that the amount of

hypothetically received money that participants were spontaneously willing to allocate to others was higher after participants were primed with Buddhist images than compared to the control condition, $F(1, 70) = 4.93$, $p = .03$, partial $h^2 = .07$. No difference was found between the Islamic priming and the control conditions, $F(1, 71) = 0.01$, n.s. To test for moderators, we computed a moderated multiple regression of prosociality on (a) condition (Buddhist priming versus control), (b) religiosity and universalism, and (c) the interactions of the later with condition. As shown in Table 2, in addition to the main effect of the condition, there were main effects of religiosity and universalism, but there were no interaction effects. Computing the above moderated multiple regression only for female participants (in order to control for possible “noise” by the few male participants) did not influence the main effect of priming, $\beta = .27$, $p = .01$.

Table 2
Moderated Multiple Regression of Prosociality and Prejudice on Condition (Buddhist Priming Versus Control), Religiosity and Universalism, and their Interaction with Condition

Predictors	Prosociality			Prejudice		
	β	t -test	p	β	t -test	p
Condition	.28	2.63	.010	-.02	-0.20	.840
Religiosity	.20	1.89	.063	.02	0.19	.846
Universalism	.35	3.27	.002	-.04	-0.34	.733
Condition $\times$ Religiosity	-.06	-0.57	.571	.16	1.41	.163
Condition $\times$ Universalism	.14	1.30	.199	-.31	-2.64	.010
$R^2 = .26, .12$						

In order to test the effects of priming on prejudice, we conducted a 2 (block: compatible and non-compatible) $\times$ 3 (condition: Buddhist prime, Islamic prime, and control) repeated-measures ANOVA, with block as a within-subject variable and condition as a between-subject variable. There was no main effect of condition, $F(2, 101) = 0.159$, n.s. We subsequently focused on the comparison between the Buddhist priming and the control conditions by performing a moderated multiple regression, similar to the above, in order to test the possible role of moderators (religiosity and universalism) on the IAT effect. As the dependant variable of prejudice against the Flemish, we used the incompatible task response time minus

the compatible task response time divided by its associated pooled-trials standard deviation. As predicting variables we included (after centering them) condition, religiosity, universalism, and their interactions with condition (see also Table 2). There were no main effects of the priming and the individual differences measures, but there was a significant interaction between condition and universalism. A simple slope analysis revealed that the Buddhist prime had no effect on prejudice among participants who place little value on universalism (one SD below the mean), $\beta = .25$, n.s., but decreased prejudice among participants who value universalism highly (one SD above the mean), $\beta = -.33$, $p = .05$. Computing the above moderated multiple regression only for female participants maintained the significant interaction of condition with universalism as predictor of (low) prejudice in the Buddhist priming condition, $\beta = -.30$, $p = .02$.

Discussion

In the present experiment, priming Western (Belgian) participants of Christian tradition with pictures depicting typical, personal and collective, aspects of Buddhism increased participants' prosociality, compared to a control condition. This occurred through the increase of participants' spontaneous willingness to share hypothetical gains with others and the decrease of implicit prejudice toward an ethnic outgroup (Flemish for Walloons). These effects were not obtained when participants were primed with aspects of Islam that were similar in content and depicted form, and pretested to be equal to the Buddhist ones in religious typicality and valence. Finally, the effect of Buddhist priming on generous behavioral intention was independent of participants' religiosity and endorsement of the value of universalism, whereas the same effect on outgroup tolerance was present only among those who highly valued universalism.

Taken together, the results partially confirm (a) the hetero-religious prosociality hypothesis and (b) the idea of implicit intercultural cognition in the context of globalization. First, religious primes activate prosocial behavior not only when the primes come from the participants' own religious and cultural tradition (almost all previous studies cited in the Introduction have shown such effects within a Christian homo-religious context), but also when the primes come from some other religious and cultural traditions such as Buddhism. Obviously, associations, conscious or non-conscious, between religion and prosocial behavior may exist across various cultures and religions and can be transposed to "foreign" religious and cultural contexts. And, given the high percentage of non-believers in the present study as well as the lack of moderation of the effects by individual religiosity, these associations seem to exist also among non-believers. Second, not all religious cultures have the potential to activate prosociality in other than the origin contexts. Although Buddhism is equally, if not less, known and present in the West in general, and Belgium in particular, differed from Islam in its capacity to non-consciously activate prosociality among Westerners.

The latter difference suggests that the cultural erosion in the context of globalization alone is not sufficient to explain why Buddhist but not Islamic priming activated prosociality among Westerners. It is very likely that the more positive (social) perception in general, and in particular the stronger association of Buddhism and Eastern culture with compassion and interdependence in particular, render Buddhist priming powerful enough to increase prosocial tendencies among believers and non-believers of Christian tradition. Note also that world events of the last decade and frequent news in the media may have increased among Westerners' tendency to associate Islam with violence. Interestingly, as indicated by unpublished

data collected by Matthieu Van Pachterbeke and Vassilis Saroglou in 2011 among 174 Belgian students, students are clearly more open to the idea of having a Buddhist as neighbor ($M = 5.02$), political representative (4.43), and husband/wife (4.06) than a Muslim (respective M s = 3.91, 3.16, 2.87), and perceived the latter to be more different (5.24) than the former (4.30) from themselves (all scores were on 7-point scales ranging from 1 to 7), global $F(1, 172) = 117.18, p < .001$.

Note that, as suspected, the priming effects were less large as far as the reduction of prejudice was concerned; only among people who highly value universalism did Buddhist priming increase tolerance of the ethnic outgroup. This is in line with the idea that priming effects occur to a greater degree, or only, when the primed construct corresponds with personal dispositions (e.g., prosocial orientation, when priming prosociality/aggression: Meier et al., 2006; Verplanken & Holland, 2002).

To better evaluate this finding one must take into account the previous evidence, reviewed in the introduction on the effects of (Christian) religious priming on (Christian) participants' prejudice. Those studies taken together indicate that, when results are significant, and when participants are not exposed to biblical texts praising either prosociality or violence, Christian priming increases different types of prejudice, i.e. religious, ethnic, and moral (Johnson et al., 2010; Johnson et al., in press; LaBouff et al., 2011). The fact that the opposite was true for Buddhist primes suggests that, at least in people's mind, Buddhism, an Eastern religion/worldview, may be more strongly associated with prosocial values and interdependence than Christian religion. Indeed, in a study among Belgians who had converted to Buddhism (Saroglou & Dupuis, 2006), participants affirmed that a major difference they found between Buddhism and Christianity was the former's tolerance and lack of dogmatism (unpublished data).

The present findings may be seen as in contrast with those of a previous study showing that priming Christians with the Golden rule attributed to Buddha increased explicit antigay attitudes (Vilaythong et al., 2011). However, important differences exist between the two studies in many respects, i.e., respectively: picture- vs. word-based primes, ethnic vs. antigay prejudice (the latter known to be stronger within a religious context; Leak & Finken, 2011), implicit form vs. explicit form of prejudice, Belgian participants living in a highly secularized country vs. mostly US participants, and moderation of personal prosocial values vs. main effects of the Buddhist hetero-religious priming.

This study, however, also has some limitations and should be considered as rather exploratory. The sample was essentially composed of female students living in a highly secularized society which shows a certain degree of fascination with Buddhism and mistrust of Islam. Generalization to other cultural contexts is thus not guaranteed. Moreover, the explanatory mechanisms of the prosocial effects of Buddhist priming on another religious cultural context have yet to be investigated. Finally, religiosity and universalism were measured at the end of the experiment.

This was preferable than having administered for instance religiosity before the experiment (then, religiosity could have acted itself as a prime), but it would possibly have been even preferable to have acquired these measurements weeks earlier. However, this was not practically possible in the context of the present study. In addition, the two measures were not affected by the priming; and both can reasonably be perceived as measures of mostly stable attitudes.

A very interesting issue worth investigating in future research is whether *multi-religious* priming may be even more effective in activating prosociality and reducing prejudice. There is experimental evidence showing that people become more creative after viewing symbols from their own culture *and* a foreign culture (mixed cultural priming), whereas viewing symbols of one's own culture or a foreign culture alone (monocultural priming) has no creative benefit (Leung & Chiu, 2010). It may be that mixing religious elements from more than one religious and cultural context increases people's, including believers', creativity in the way in which they view the similarities and differences between religions, thus overcoming inter-religious barriers and reducing inter-religious and inter-cultural prejudice.

Chapter 5

Buddha makes you tolerant: The role of Buddhist primes in reducing prejudice and increasing prosociality

Magali Clobert

Vassilis Saroglou

Université catholique de Louvain

Kwang-Kuo Hwang

National Taiwan University

Abstract

Does Buddhism really promote tolerance and prosociality? Based on theoretical and empirical cross-cultural and cross-religious evidence, we hypothesized that Buddhist concepts differ from those of other religions (see previous research on social outcomes of Christian priming) by fostering not only prosociality but also low prejudice. We examined whether this holds true in diverse cultural/religious contexts and investigated key mediators explaining the effect. In Experiment 1, Western Buddhists ($N = 116$) supraliminally primed with Buddhist words versus non-religious words showed lower explicit prejudice against ethnic, religious, convictional (atheists), and moral outgroups. This effect was mediated by the emotional-relational aspect of pro-Buddhist attitudes. In Experiment 2, Westerners of Christian tradition ($N = 128$) subliminally primed with Buddhist words showed greater prosocial attitudes and lower implicit ethnic and religious prejudice versus those primed with neutral or Christian words. This effect was mediated by increased compassion. In Experiment 3, among Taiwanese of Buddhist/Taoist tradition ($N = 122$), both Buddhist and Christian primes increased prosociality compared with neutral primes, whereas only Buddhist primes decreased ethnic and religious prejudice. Tolerance of contradiction mediated the positive effect of Buddhism on reducing religious prejudice. These results suggest that the general idea that religion paradoxically promotes both prosociality and prejudice lacks cross-cultural sensitivity; Buddhism consistently promotes positive social attitudes and behaviors, even with regard to outgroups.

Keywords: religious priming; Buddhism; prosociality; prejudice; compassion; tolerance of contradiction

Introduction

The role of religion regarding pro and anti-social attitudes is paradoxical: religion may foster both prosociality and prejudice. Religions emphasize prosocial values and ideals (Habito & Inaba, 2006), even if the latter are not purely altruistic (Neusner & Chilton, 2005). Religiosity is related to highly valuing benevolence among Christians, Jews, and Muslims (Saroglou, Delpierre, & Dernelle, 2004, for a meta-analysis), as well as converted Buddhists (Saroglou & Dupuis, 2006). In very recent years, priming experiments have confirmed the hypothesized causal direction in which religious concepts, texts, and places activate prosocial concepts and behaviors (e.g., Preston, Ritter, & Hernandez, 2010; Sasaki, Kim, Mojaverian, Kelley, Park, & Janusonis, 2013). Nevertheless, most dimensions of religiosity have also been shown to correlate with negative attitudes toward various outgroups and people who are perceived to violate religious values. Religiosity indeed predicts prejudice against other religious groups, atheists, homosexuals, women, single mothers, and feminists (Batson, Schoenrade, & Ventis, 1993; Blogowska & Saroglou, 2011; Hall, Matz, & Wood, 2010; Hunsberger & Jackson, 2005; Whitley, 2009). Priming experiments have shown that exposure to religious concepts increases various negative attitudes, including intergroup prejudice (e.g., Johnson, Rowatt, & LaBouff, 2010).

In these studies, participants were mainly Christians primed with concepts of their own religious tradition, with few additional studies being conducted with Muslims and Jews (Ginges, Hansen, & Norenzayan, 2009; Rothschild, Abdollahi, & Pyszczynski, 2009). The present work aims to address a cross-culturally important question: Is there something universal in the way religion influences social behavior or is there something culturally/religiously-specific? Given that most studies using religious priming were carried out in monotheistic and Western contexts, one may wonder about the impact of Eastern religions such as Buddhism on pro- and anti-social attitudes and behaviors. As Buddhism places particular emphasis on the ideals of compassion and tolerance, we hypothesized that priming Buddhist concepts would indeed promote prosociality, but also, contrary to what has been found for Christianity, would also undermine prejudice. The rationale supporting the hypotheses and the ways in which we have operationalized them in the present studies are detailed below.

1. Religious Priming, Prosociality, and Prejudice

Until recently, studies in the field of religion and social attitudes and behavior were mainly correlational, but researchers aiming to examine how religion can shape social attitudes and behavior have recently turned to priming methodologies. In this line of research, religious priming has been found to promote both positive and negative outcomes. For instance, among Westerners, priming (Christian) religion has been found to decrease moral hypocrisy (Carpenter & Marshall, 2009) and retaliation (Saroglou, Van Cappellen, & Corneille, 2009) and to increase problem-solving effort (Uhlman, Poehlman, & Bargh, 2008), honesty (Randolph-Seng & Nielsen, 2007), “virtuous” choices (for participants holding a positive image of God; Newton & McIntosh, 2009), cooperation (Ahmed & Salas, 2011; Preston & Ritter, 2012), generosity (Shariff & Norenzayan, 2007), gratitude (Tsang, Schulwitz, & Carlisle, 2012), helping (Pichon & Saroglou, 2009), and charity (Pichon, Boccato, & Saroglou, 2007).

Nevertheless, whereas religious priming can increase positive behaviors, the prosocial effects are often limited to proximal targets and members of the ingroup (Galen, 2012). Furthermore, religious priming has also been found to lead to negative outcomes. For instance, Dutch and North Americans who read a violent passage were found to be more aggressive toward a loser in a mock game when they were told the passage comes from the Bible versus an ancient scroll (Bushman, Ridge, Das, Key, & Busath, 2007). In a similar way, Belgian participants who were encouraged by the experimenter to seek revenge displayed greater revenge after being subliminally primed with religious words (Saroglou, Corneille, & Van Cappellen, 2009). These two studies suggest that priming religious concepts increases submission to authority (either religious or non religious) encouraging aggression toward others. Priming religious concepts has been found to increase support for terrorist attacks: Israeli Jews from the West Bank of Gaza reported a recent Jewish terrorist attack as more heroic after having been asked about their synagogue attendance (Ginges et al., 2009).

Current priming studies indicate that the activation of religious concepts may also implicitly affect intergroup relations. For instance, North Americans subliminally primed with Christian religious words reported higher levels of subtle racism and general negative attitudes toward African American than participants primed with neutral words (Johnson et al., 2010). Along the same line, subliminally priming US adults with Christian concepts increased negative attitudes toward atheists, Muslims, and gay men (Johnson, Rowatt, & LaBouff, 2012). In two other experiments, Johnson (2012) found that US participants primed either subliminally or supraliminally with religious concepts gave fewer raffle tickets to atheists compared to Muslims and Christians. Finally, Northern Europeans reported significantly higher negative attitudes toward foreigners, gay men, and Muslims

when they were interviewed in front of a church compared to a neutral city building (LaBouff, Rowatt, Johnson, & Finkle, 2012).

2. Cross-religious and Cross-cultural Perspective

Priming studies interested in the effects of religion on social behaviors typically suffer from a lack of cross-religious and cross-cultural perspective: studies have been mainly carried out in the context (participants and primes) of the three major monotheistic religions (i.e. Christianity, Judaism, and Islam). We know almost nothing about the pro- and anti-social effects of East Asian religions and whether these effects may be similar across cultural contexts. A few recent studies have suggested that religion may function differently in East Asian religions (e.g., Buddhism) compared to monotheistic (e.g., Christian) religions. For instance, Sasaki and Kim (2011) found that, whereas religion is a means to maintain control among Christians, this does not seem to be relevant in the context of Eastern religion among East Asians. In a cross-country study, Stark (2001) found that the belief in a personal moral God is related to morality in Western monotheistic societies but not among East Asians. More generally, the different dimensions of religion (beliefs, emotions, moral norms, and group identity) seem to be interconnected to a much lesser degree in Eastern religions than in Christianity (Saroglou, 2011). Furthermore, philosophers, religious scholars and cultural psychologists have argued that Eastern religions, especially Buddhism, may escape the temptation of monotheistic religions to tend toward dogmatism, rigidity, and the subsequent intolerance and prejudice (e.g., Harvey, 1990; Ji, Lee, & Guo, 2010; Nisbett, Peng, Choi, & Norenzayan, 2001).

Three major characteristics of Buddhism which may impact prejudice/tolerance have been underscored throughout the literature. First, Buddhism emphasizes, presumably in a stronger way than Abrahamic religions, ideals of compassion and non-violence (Davidson & Harrington, 2002). Buddhism uses a variety of teachings and means to help people develop a calmer, more integrated and compassionate personality (Harvey, 1990). Buddhist believers are urged to feel compassion towards all beings in general. In this context, universal compassion and tolerance are strongly emphasized, possibly in a clearer way than in the three monotheisms. The latter suffer from an accentuated distinction between the ingroup and outgroups, with prosociality being limited mainly to the ingroup (Galen, 2012; Saroglou, 2013).

Second, Buddhism favors a more holistic and dialectical, thus probably less essentialist, thinking about the world compared to Catholicism and Protestantism. Indeed, Buddhists experience a high global-precedence effect (Colzato, Hommel, & van den Wildenberg, 2010) and easily tolerate alternative knowledge systems, such as science, that may contradict their religious views (Clobert & Saroglou, 2013b). It

is therefore not surprising that religions in the East Asian context are frequently blended without any difficulty or tension under the same temple roof (Gries, Su, & Schak, 2012). Furthermore, among Westerners converted to Buddhism, high scores on Buddhist beliefs and practice are unrelated to the epistemic need for closure (Saroglou & Dupuis, 2006), whereas the opposite is true for religiosity among Christians (Brandt & Renya, 2010; Saroglou, 2002).

Third, the concerns for harmony and interdependence between all life forms are particularly present in East Asian religions on varying levels: between individuals, between groups, and between humans and nature (Ji et al., 2010). Regardless of religious affiliation, ethnicity, or race, all beings are seen as interconnected and necessary to each other. In this context, all beings are equal and need to be respected. Correlational evidence favors the idea that Buddhist religiosity is related to the value of universalism (Saroglou & Dupuis, 2006), contrary to Christian, Jewish, and Muslim religiosity (Saroglou et al., 2004).

The above mentioned specific characteristics of Buddhism provide arguments in favor of the broad hypothesis of the present work. Given the emphasis on compassion, tolerance of contradictions, and the feeling of interdependence and oneness, Buddhist concepts should enhance prosociality and tolerance even towards outgroup members. Initial correlational studies have shown that Eastern religiosity is negatively related to both explicit and implicit prejudice against ethnic and religious outgroups (Clobert, Saroglou, Hwang, & Soong, 2013c). Is there any causal link between Buddhism concepts and prosocial outcomes? This is still unclear. Two recent priming studies showed that priming of Buddhist concepts increased explicit antigay prejudice among Buddhists in Singapore (Ramsay, Pang, Johnson Shen, & Rowatt, 2013) and Christians in the US (Vilaythong, Lindner, & Nosek, 2010). The limitation of these two studies was that they focused on prejudice against homosexuals, who potentially constitute the strongest moral outgroup across all religions. Almost nothing is known of the causal role of Buddhist concepts on prejudice/tolerance toward various kinds of outgroups, such as those represented by ethnic, religious, and convictional (atheists) differences. A recent experiment has provided initial evidence that Europeans primed with Buddhist pictures show more generosity (spontaneous sharing of hypothetical gains) and, among those who valued universalism, less implicit prejudice against an ethnic outgroup (Clobert & Saroglou, 2013a).

3. How Buddhism May Impact Prosociality and Prejudice?

3.1. Mediators

Based on the main characteristics of Buddhism, and East Asian religions in general, three potential mediators were hypothesized: (1) the emotion of compassion, (2) tolerance of contradiction, and (3) the feeling of oneness. These three constructs may indeed, at least partially, explain how a Buddhist prime impacts prosociality and prejudice. First, compassion, as a distinct emotion, is a determinant of prosocial behavior (Batson & Shaw, 1991) and orients individuals to a social approach (Goetz, Keltner, & Simon-Thomas, 2010). Second, the dialectical concept of tolerance of contradiction considerably impacts attitudes towards ingroup and outgroup members (Spencer-Rodgers, Williams, & Peng, 2010). People that easily tolerate contradictory elements do not systematically attribute stereotypical positive or negative qualities to the ingroup or the outgroup (Spencer-Rodgers, Williams, & Peng, 2012). As a consequence, they are less susceptible to ingroup favoritism and are even susceptible to ingroup derogation (Bond & Hewstone, 1988; Cuddy et al., 2009; Ma-Kellams, Spencer-Rodgers, & Peng, 2011; Snibbe, Kitayama, Markus, & Suzuki, 2003). Third, for evolutionary reasons, individuals show altruistic and prosocial behavior towards people considered as genetically proximal, such as family members, but also towards people who are ingroup members for social normative reasons (Batson, 1983; Sober & Wilson, 1998). Individuals who are considered as non-proximal do not benefit from these altruistic and cooperative behaviors (Bernhard, Fischbacher, & Fehr, 2006). Therefore, the feeling of closeness or oneness with another person or a group may facilitate enlarged prosocial behavior and undermine prejudice.

3.2. Targets

Across the present experiments we also aimed to investigate whether the main hypothesis regarding prejudice applies to various kinds of outgroups, i.e. religious, convictional (atheists), ethnic, and moral (homosexuals). Even if recent studies suggest that a common global tendency for high versus low prejudice across a variety of targets exists (e.g., Akrami, Ekehammar, & Bergh, 2011), distinct psychological processes may be involved in different kinds of prejudice toward specific targets. For instance, research has found that prejudice can differ depending on whether the target is dangerous, derogated, or dissident (Asbrock, Sibley, & Duckitt, 2010), and whether the outgroup is perceived as socially threatening or economically competitive (Duckitt & Sibley, 2010). Similarly, Mavor and Gallois

(2008) have distinguished moral outgroups from “simple” (e.g., ethnic) outgroups: mere religiosity typically implies prejudice toward the former, whereas fundamentalism results in prejudice toward both kinds of targets (see also Leak & Finken, 2011).

Overall, the general hypothesis (Buddhist priming should decrease prejudice) was expected to apply to the various prejudice targets. Nevertheless, the possibility that Buddhist primes would not reduce prejudice against some kinds of targets, i.e. homosexuals, was not excluded (see the two experiments cited earlier: Ramsey et al., 2013; Vilaythong et al., 2010). Homonegativity is partly a consequence of social conformity to traditional societal morality, and higher religiousness across all religions, including Buddhism, is typically positively related to conformity and traditionalism (Norris & Inglehart, 2004; Saroglou et al., 2004; Saroglou & Dupuis, 2006). Indeed, researchers have found that antigay prejudice, although lower among Buddhists than Christians, was still positively related to individual religiousness (Clobert et al., 2013c; Detenber et al., 2007). This positive relation was mediated by traditional morality across both religious groups (Clobert et al., 2013c).

3.3. Cultural contexts

In addition, in the present experiments, the impact of Buddhist concepts on pro- and anti-social attitudes and behaviors was tested across three distinct populations, i.e. (1) Westerners converted to Buddhism, (2) Westerners of Christian tradition, and (3) East Asians of Buddhist/Taoist tradition. Since the three groups diverge in the way people conceptualize, approach, and invest in, Buddhism, the effects of Buddhist primes may differ. Among converted Buddhists in the West, Buddhism has an extremely positive connotation and is very actively internalized; there was thus a stronger chance that our hypothesis would be confirmed. It could also be very intriguing to test whether Buddhist concepts also positively impact Westerners of Christian tradition. Indeed, even if Buddhism is quite popular in the West (Goldberg, 2006), it represents a religious outgroup, and it is still unclear how hetero-religious priming functions (Saroglou, 2013). Interestingly, Western students are clearly more open to the idea of having, for instance, a Buddhist as a neighbor, political representative or husband/wife than they are to having a Muslim in one of these positions (Van Pachterbeke & Saroglou, personal communication). Finally, independent of the fact that Buddhism is typically seen in the West as exotic, attractive, and tolerant (such a positive perception could strengthen its prosocial effects), it is one of the major established religions in East Asia. East Asians are raised and socialized within a Buddhist/Taoist tradition. Internalization of Buddhist values may thus be weaker overall than among converts. Also, since Buddhist traditions often define religious ingroups, the positive effects of Buddhist concepts on decreased prejudice may be less evident.

3.3. Individual differences

Series of studies have showed that priming effects may, though not necessarily, interact with individual predispositions. In accordance, primes may be more or only effective among participants who place some or high importance on the activated construct or behavior in their life in terms of personal dispositions and values (e.g., Meier, Robinson, & Wilkowski, 2006; Verplanken & Holland, 2002). Accordingly, we expected that the hypothesized positive effects of Buddhist priming on prosociality and decreased prejudice would be stronger among people with high levels of extended prosocial values (i.e. universalism) and/or low levels of closed-minded social attitudes (i.e. authoritarianism). Note that, as mentioned earlier, the exposure of Westerners to Buddhist pictures has been found to decrease ethnic prejudice only among those highly valuing universalism (Clobert & Saroglou, 2013a). Furthermore, religious priming has been found to activate submission to the experimenter, conformity to informational influence, and rigid deontological morality only among participants who are high in dispositional submissiveness and/or authoritarianism (Saroglou et al., 2009; Van Cappellen, Corneille, Cols, & Saroglou, 2011; Van Pachterbeke, Freyer, & Saroglou, 2011).

Finally, individual religiosity may also be a relevant potential moderator. Although several studies on religious priming indicate no moderating role of religiosity (Galen, 2012), evidence also suggests that religiosity may interact with a religious prime. For instance, the prosocial effects of Sunday vs. weekdays (Malhotra, 2010) and of the induction of self-transcendent positive emotions (Van Cappellen & Saroglou, 2012), as well as the antisocial effects of religious texts legitimizing violence (Bushman et al., 2007; Blogowska & Saroglou, 2013; Bushman et al., 2007;), were observed more or only among religious participants. We thus expected that, if anything, high religiosity should strengthen the positive effects of Buddhist concepts on prosociality and tolerance.

4. Overview of the Experiments

Across three experiments carried out in different cultural and religious groups, we tested the effect of priming Buddhist concepts on pro- and anti-social attitudes. Experiment 1 investigated the effect of Buddhist supraliminal primes (word-search puzzle) on explicit prejudice against ethnic, religious, convictional, and moral outgroups. The participants were Europeans converted to Buddhism and attending Buddhist centers. The study also focused on the possible mediating role of aspects valued by participants in Buddhism as well as the moderating role of religious identification and the value of universalism. In Experiments 2 and 3, the effect of subliminal Buddhist primes (words), compared to Christian and neutral ones, on

East Asian religions, prejudice, and prosociality

ethnic and inter-religious prejudice was tested. Furthermore, ethnic and religious prejudices were assessed implicitly, using an Implicit Association Test. These two experiments were carried out among Belgian (of Christian tradition, Experiment 2) and Taiwanese (of Buddhist/Taoist tradition, Experiment 3) young adults and included measures of religiosity, value of universalism, and authoritarianism as possible moderators. Finally, partly on the basis of the first experiment, three possible mediators were added in Experiments 2 and 3: compassion, tolerance of contradiction, and the feeling of oneness.

Experiment 1

The aim of Experiment 1 was to test the possible causal effect of Buddhist concepts on decreased prejudice against various targets. As a first step, this experiment was carried out among Westerners familiar with Buddhism. After being supraliminally primed with either Buddhist or neutral words, participants were asked to fill in explicit measures of prejudice against people from ethnic (Americans and Africans), religious (Christians, Hindus, and Muslims), convictional (atheists), and moral (homosexuals and single mothers) outgroups. This study also provided information on possible processes involved in the priming effect by distinctly measuring cognitive and emotional/relational aspects of the participants' pro-Buddhist attitudes.

Compared to the neutral condition, the Buddhist priming condition was expected to decrease prejudice, especially prejudice against ethnic and religious outgroups. Whether this would extend to moral outgroups (homosexuals) was, for reasons mentioned in the introduction, unclear. Finally, the value of universalism and religious identification were measured as possible moderators.

1. Method

1.1. Participants

Participants ($N = 116$) were recruited through Buddhist centers in Belgium ($N = 87$) and France ($N = 29$) and took part in the study voluntarily. The study was advertised as a research investigating the rise of Buddhism in the West and the characteristics of converted believers. Questionnaires were distributed either in French (76%) or English (24%). Participants were either Belgian or French citizens and self-identified as Buddhist ($N = 104$), atheist ($N = 2$), agnostic ($N = 6$), Taoist ($N = 1$) or "other" ($N = 3$). Participants' mean age was 49.3 and 56 % of them were women.

1.2. Material and procedure

Priming material. Participants were asked to complete a word-search puzzle which served as a priming manipulation (Bargh, Gollwitzer, Lee-Chai, Barndollar,

& Trötschel, 2001). The ten words hidden in the puzzle were either Buddhist (experimental condition) or non-religious. The Buddhist words (e.g., *Buddha*, *Dharma*, *Sutras*) were pretested and were all rated positively in valence ($M_s > 5$). Therefore, ten positive non-religious words (e.g., *sun*, *flower*, *freedom*) as a control condition were taken from Pichon et al. (2007).

Prejudice. Prejudice towards ethnic (Americans and Africans), religious (Christians, Hindus, and Muslims), convictional (atheists), and moral (gays and single mothers) outgroups were measured. For each target, participants answered three questions commonly used in international surveys: “Would you like to have this person as a (1) neighbor, (2) political representative, and (3) husband/wife?” (Likert scales ranging from 1 = *totally dislike* to 7 = *totally like*). As satisfactory reliability was found for the three items (α s ranging from .72 to .89), the scores were averaged, after being reversed, thus providing a single score of prejudice for each target.

Attitudes toward Buddhism. Individual differences on dimensions highly valued by believers in Buddhism were measured using a scale developed by Saroglou and Dupuis (2006). This 7-item scale ($\alpha = .72$) measures the interests of believers in Buddhism (7-point Likert scale). Computing an exploratory factor analysis (principal component) with varimax rotation, two factors were identified which explained 61.55 % of the total variance. The first factor (loadings: .91 - .71) represented the emotional-relational dimension (i.e. beauty, emotions, and community) whereas the second factor (loadings: .87 - .53) reflected the cognitive/self-growth dimension (i.e. meaning, personal experience, art of living, and working on self).

Individual differences. Finally, as possible moderators, individual differences on (a) self-identification as Buddhist (“To what extent do you consider yourself as a Buddhist?”) and (b) the value of universalism, using the eight items from the Schwartz (1992) Value Survey ($\alpha = .80$ for this data), were measured post-experimentally (7-point Likert scale for both measures).

2. Results

Means and standard deviations of prejudice distinctly by condition are detailed in Table 1. One-way analyses of variance (ANOVAs) showed significant differences between conditions for all targets of prejudice. Participants primed with Buddhist words were more tolerant toward all targets. Moreover, they also reported significantly higher scores on attitudes towards Buddhism, compared with participants primed with positive non-religious words, $F(1,114) = 5.55$, $p = .02$. This effect was due to the emotional-relational dimension of pro-Buddhist attitudes,

$F(1,114) = 5.62, p = .02$, rather than to the cognitive/self-growth dimension, $F(1,114) = 2.43, p = .13$.

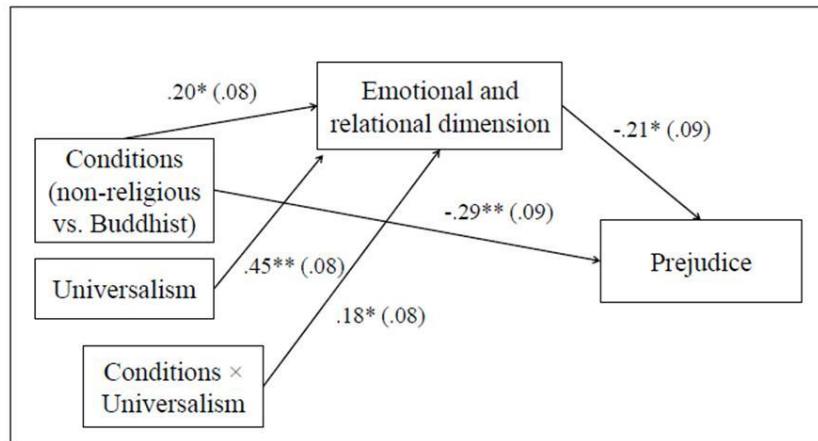
Table 1

Means, Standard Deviations, and Between-Condition Comparisons of Prejudice Against Various Targets (Experiment 1)

	Buddhist Prime ($N = 59$)		Non-religious Prime ($N = 57$)		Comparisons
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	$F(1,114)$
Prejudice against...					
Christians	2.63	1.31	3.39	1.15	11.07**
Hindus	2.51	1.29	3.50	1.17	18.38**
Muslims	2.99	1.48	3.88	1.24	12.24**
Atheists	2.60	1.37	3.22	1.12	6.98**
Americans	2.67	1.32	3.32	1.13	7.85**
Africans	2.71	1.34	3.50	1.08	11.99**
Homosexuals	2.93	1.42	3.60	1.12	7.96**
Single mothers	2.48	1.34	3.28	1.14	11.89**

** $p < .01$.

Furthermore, we investigated (1) whether the effect of Buddhist concepts on prejudice was mediated by the emotional-relational dimension of attitudes towards Buddhism and (2) whether this indirect effect was moderated by individual differences on religious identification and/or universalism. As an outcome variable, an aggregate measure of prejudice against the eight targets was used ($\alpha = .97$). The simple mediation model was first tested using the SPSS macro (MEDIATE) designed by Hayes and Preacher (2013). The indirect effect of Buddhist priming on reduced prejudice through the emotional-relational dimension of attitudes towards Buddhism was found to be significant ($IE = -.09, SE = .06, CI = [-.26, -.01]$). Second, we examined whether religious identification or universalism could moderate the mediation found (Preacher, Rucker, & Hayes, 2007). A SPSS macro (PROCESS) designed by Hayes (2013) was used to test for conditional indirect effects. Analysis revealed that the indirect effect of the Buddhist condition on lower prejudice via the emotional-relational dimension was significant among participants high in universalism ($IE = -.08, SE = .05, 95\% CI = [-.22, -.01]$) but not among participants low in universalism ($IE = -.00, SE = .02, 95\% CI = [-.05, .04]$). Standardized regression coefficients for this model are reported in Figure 1.



Note. Numbers on paths represent standardized regression coefficients; standard errors are in parentheses.

* $p < .05$. ** $p < .01$.

Figure 1. Conditional indirect effect of conditions (non-religious vs. Buddhist) on prejudice through the emotional-relational dimension of pro-Buddhists' attitudes at values of universalism (Experiment 1).

3. Discussion

Experiment 1 provided confirmation of the main hypothesis. After being primed with Buddhist words, participants reported lower explicit negative attitudes towards all kinds of outgroups. These results go much further than previous correlational research (Clobert & Saroglou, 2013c), establishing for the first time a causal link between Buddhism and reduced prejudice against various kinds of targets. Moreover, this study provides some interesting information regarding the possible mechanisms responsible for the positive effect of Buddhist concepts. Among Westerners converted to Buddhism, the positive impact of the Buddhist priming condition in reducing prejudice seems to be due to an emphasis on emotional and relational aspects of Buddhism. This mediational process was particularly true for universalists (see also Clobert & Saroglou, 2013a). Taken as a whole, the findings suggest that in this study, Buddhism did not positively influence people through beliefs and ideology but rather through emotions and relational concerns. Future research should clearly investigate the respective role of cognitions and emotions in this effect.

Finally, in this study, Buddhist concepts were found to decrease prejudice not only towards ethnic and religious targets, but also towards convictional (atheists) and moral (homosexuals) outgroups. Given previous studies showing that Buddhist

primes increase sexual prejudice (Ramsay, 2013; Vilaythong, Lindner, & Nosek, 2010), one may be surprised by such an extended tolerance found in the present experiment. Two main explanations, relative to the sample, should be underlined. First, the priming effect of Buddhism on decreased prejudice against homosexuals and atheists may be explained by the conversion process implying an important distance from traditional values. Second, Westerners converted to Buddhism hold of a particularly positive image of Buddhism and very likely internalize to a significant extent the ideas of compassion, tolerance, and harmony promoted by Buddhism. Given thus the high sensitivity of Buddhist converts to Buddhist prosocial ideas, it would be of particular interest to examine whether the tolerance found here is not only explicit, but deeply rooted in human cognition, and whether it may result as a function of Buddhist primes also among people who are less, or not particularly, attached to Buddhism.

Experiment 2

In Experiment 2, the effects of religious priming on prejudice were further investigated addressing additional questions and providing seven extensions compared with Experiment 1: (1) participants were primed, not supraliminally but subliminally, through a Lexical Decision Task; (2) ethnic (Africans) and religious (Muslims) prejudice was measured not explicitly but implicitly with an Implicit Association Test (IAT); (3) an additional Christian priming condition was added; (4) proactive prosocial behavioral tendencies were also investigated; (5) three new mediators were included; (6) an additional construct of individual differences was provided (authoritarianism); and (7) the hypotheses were tested in a population with a lesser attachment to Buddhism, i.e. Westerners of Christian tradition. We expected that, among Westerners, the exposure to Buddhist and Christian concepts, compared to the neutral condition, would respectively decrease and increase implicit ethnic and religious prejudice. Regarding prosociality, in accordance with previous studies (see introduction), we hypothesized that both religious priming conditions (Christian and Buddhist) would increase participants' prosocial tendencies compared to a neutral condition.

Three mediators of the hypothesized effects were tested: (1) tolerance of contradiction (cognitive dimension), (2) compassion (emotional dimension), and (3) oneness (relational dimension). Finally, Experiment 2 included a further measure of individual differences. Right-wing authoritarianism, in addition to universalism and religiosity (Experiment 1), was measured, as this construct is known to shape closed-minded and prejudiced attitudes. Its presence may therefore attenuate, if not oppose, the positive effect of a Buddhist priming on reduced prejudice.

1. Method

1.1. Participants

Participants were 128 students from a Belgian French-speaking university. On the basis of a funneled debriefing, 11 participants were excluded because they either identified a priming word or guessed the purpose of this experiment. The final sample included 117 participants (88% female). Mean age was 20 years ($SD = 1.99$). Participants self-identified as Catholic (45%), atheist (43%), agnostic (8.5%), or Protestant (1.5%), whereas 2% reported "other". They took part to this study in exchange for course credit and entered the lab in small groups (from 3 to 10 people)

to complete the computer tasks. The study was presented as a recognition and categorization task.

1.2. Material and precedure

Lexical decision task (LDT). Prior to their arrival at the lab, participants were randomly assigned to one of the three conditions: (1) a Christian prime condition, (2) a Buddhist prime condition, or (3) a neutral prime condition. Upon entering the lab, participants were invited to complete a lexical decision task (Wittenbrink, Judd, & Park, 1997) designed to subliminally prime Christian, Buddhist, or neutral concepts. The words used for the LDT and for the neutral prime condition were retrieved from Pichon and colleagues (2007). The Buddhist (e.g., *Buddha*, *monk*, *reincarnation*) and Christian words (e.g., *Jesus*, *Church*, *Bible*) were pretested among 25 Belgian participants.

Hypothesized mediators. Immediately after the LDT, participants completed short measures of three constructs: tolerance of contradiction, compassion, and oneness. Tolerance of contradiction was measured with three pairs of seemingly contradictory scientific findings presented in short statements (see Peng & Nisbett, 1999). Participants were asked to rate the plausibility of the findings on a 9-point Likert scale. The absolute difference (reversed) between the ratings of two seemingly contradictory findings indicated a stronger tolerance of contradiction. Compassion was measured with a shortened version (6 items; $\alpha = .85$) of the Compassionate Love Scale (Sprecher & Fehr, 2005). In this version, the two items with the best factor loadings on each of the three dimensions of that scale (7-point Likerts scale) were selected. Finally, feeling of oneness was measured with the Inclusion of Others in the Self Scale (Aron, Aron, & Smollan, 1992). Participants were asked to select the picture that best describes their relationship from a set of 7 Venn-like diagrams representing different degrees of overlap of two circles (me and the others). The scores ranged from 1 (lowest overlap) to 7 (highest overlap).

Implicit Association Test. Afterwards, participants were invited to complete another computer task. This included two Implicit Association Tests (IAT; Greenwald, McGhee, & Schwartz, 1998) designed to measure implicit prejudice against African people and Muslims. Each IAT consisted of five blocks (total of 10 blocks, with blocks 1, 2, 4, 6, 7, and 9 constituting simple practice and blocks 3, 5, 8, and 10 being the critical test phases). For the first IAT (African people), the targets categories used were *Caucasian* and *African* (10 and 10 faces) and the attributes categories were *positive* and *negative* (10 and 10 words). The associated stimuli for targets were Caucasian and African neutral-expression male faces generated using FaceGen Modeller (Version 3.5). For the second IAT (Muslims), the target categories were *Christian* and *Muslim* (10 and 10 first names), whereas

the attribute categories were *positive* and *negative* (10 and 10 words). The Christian (e.g., *Christian, Mary, Matthew*) and Muslim (e.g., *Mohammed, Fatima, Aziz*) first names were selected after a pre-test conducted in another group of 26 Belgian.

Each of the practice blocks (1, 2, 4, 6, 7, and 9) consisted of a total of 20 trials. Each of the test blocks comprised 40 trials with targets and attributes presented in a random order. In each trial, participants focused on a blank screen for 395 ms, at which point either a target or an attribute appeared on the screen for 10,000 ms. During this time, participants had to press the key corresponding to the correct category. Feedback followed the response, indicating participants' accuracy and response times. The IAT score was calculated using the improved D algorithm (Greenwald, Nosek, & Banaji, 2003).

Prosocial behavior. When participants had completed the IATs, they were informed that they would be asked additional questions. They were invited to write down what they would do if they won 100,000 euros, specifying each expenditure and the amount of money they would allocate towards each. The percentage of money participants allocated to others (e.g., family, friends, charity) was coded as a measure of prosociality.

Post-experimental measures. After completing a distraction task (neutral words-search puzzle, see Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000), participants completed a last questionnaire measuring (a) the value of universalism, as in Experiment 1, (b) authoritarianism, with a 12-item Right Wing Authoritarianism scale (Funke's, 2005, adapted to the international context by Van Pachterbeke et al., 2011), and (c) religiosity, using a 3-item index measuring the importance of God in life, the importance of religion in life, and the frequency of prayer (Saroglou & Muñoz-García, 2008). For all measures, we used a 7-point Likert scale and reliabilities were satisfactory with respective α s = .74, .72, and .92. At the end of the experiment, participants completed a funneled debriefing.

2. Results

Descriptive statistics, distinctly by condition, and mean comparisons are detailed in Table 2. Because we had clearly defined a priori hypotheses, our analytical strategy followed the suggestions made by Abelson and Prentice (1997): for each theoretical prediction, a contrast that described the hypothesized rank ordering of the means was created. We then created a linear contrast (Contrast 1: -1, 0, 1; corresponding respectively to the Christian, the neutral, and the Buddhist condition). This contrast of interest was opposed to an orthogonal contrast (Contrast 2: -1, 2, -1; corresponding respectively to the Christian, the neutral, and the Buddhist condition) and the results were considered to be consistent with the theoretical prediction when the following two conditions were satisfied: (a) the contrast of

Table 2
Means, Standard Deviations, and Between-Condition Comparisons for the Variables in Experiment 2

	Christian Prime (<i>N</i> = 34)		Neutral Prime (<i>N</i> = 43)		Buddhist Prime (<i>N</i> = 40)		Comparisons <i>F</i> (2,114)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Prejudice against Africans	0.46	0.40	0.44	0.33	0.39	0.38	0.36
Prejudice against Muslims	0.97	0.30	0.93	0.39	0.96	0.46	0.13
Prosociality	17.76	16.73	21.63	20.43	28.42	24.28	2.50†
Compassion	4.51	1.12	4.61	1.07	5.00	0.95	2.36†
Tolerance of contradiction	5.57	1.01	5.57	1.04	5.82	0.94	0.82
Oneness	4.12	1.06	4.47	1.10	5.82	1.26	1.66

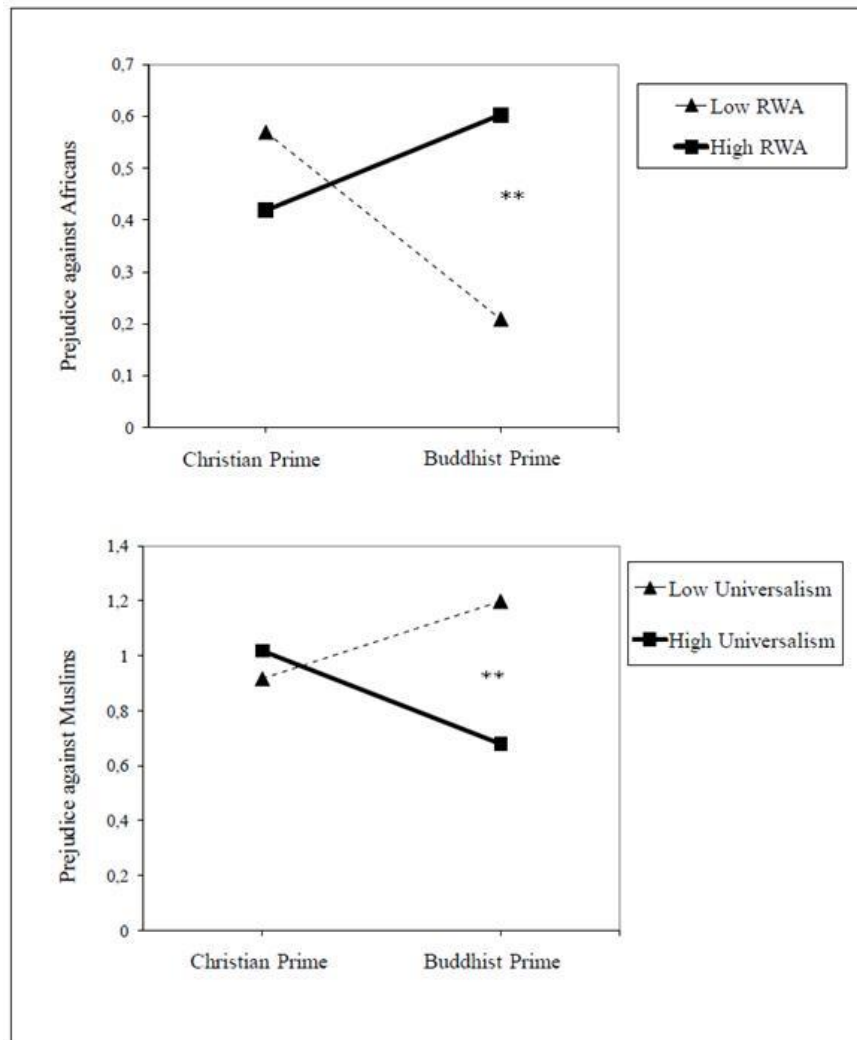
† *p* < .10

interest was statistically significant and (b) the orthogonal contrast was not statistically significant.

Regression analyses showed that there were no differences between conditions on prejudice against African people as well as on prejudice against Muslims. To examine the possible moderating role of the hypothesized moderators, multiple regressions were conducted for each kind of prejudice, including as independent variables the two contrasts, the moderators (universalism, authoritarianism, and religiosity), and their interactions with the contrasts. A significant interaction was found between Contrast 1 and authoritarianism in predicting prejudice against African people, $\beta = .22$, $t(5,111) = 2.32$, $p < .05$, as well as a significant interaction between Contrast 1 and universalism in predicting prejudice against Muslims, $\beta = -.18$, $t(5,111) = 1.98$, $p < .05$. A simple slope analysis (see Figure 2) revealed that the priming had no significant effect on prejudice among high authoritarians (one SD above the mean), $\beta = .13$, ns, or on participants who place little value on universalism (one SD below the mean), $\beta = .20$, ns. However, the Christian and the Buddhist prime conditions respectively increased and decreased prejudice against Africans among low authoritarians (one SD below the mean), $\beta = -.32$, $p < .05$, as well as prejudice against Muslims among participants who highly value universalism (one SD above the mean), $\beta = -.26$, $p < .05$.

Regarding prosocial tendencies, on the basis of our hypothesis, a contrast comparing both religious conditions to the neutral condition was created (Contrast 2: -1, 2, -1; corresponding respectively to the Christian, the neutral, and the Buddhist condition) and opposed to an orthogonal contrast (Contrast 1: -1, 0, 1; corresponding respectively to the Christian, the neutral, and the Buddhist condition). Disconfirming our hypothesis, the regression analysis showed that the orthogonal contrast, and not the contrast of interest, significantly predicts prosociality, $\beta = .20$, $t(2,114) = 2.22$, $p < .05$. To better understand this result, the prosociality score was divided into two sub-scores representing the percentage of gains shared either with unknown people (e.g., charity, donation) or with proximal people (e.g., family, friends). Regression analysis revealed that results were only valid for the percentage of gains shared with unknown people, $\beta = .23$, $t(2,114) = 2.58$, $p < .01$. No differences were found between conditions (using both contrasts) for prosociality towards proximal people.

Finally, the hypothesized mediator of compassion, but not those of tolerance of contradiction or oneness, was affected by the condition, $\beta = .19$, $t(2,114) = 2.06$, $p < .05$. A simple mediational analysis was then conducted with Contrast 1 as the independent variable, compassion as the mediator, and the three social attitudes and behaviors as outcome variables (prejudice against Africans, prejudice against Muslims, and prosociality). A significant indirect effect of condition on prosociality (Christian and Buddhist priming respectively decreasing and increasing prosociality) through compassion was found (IE = .09, SE = .05, 95% CI = [.01, .19]). Standardized regression coefficients for this model are reported in Figure 3. Nevertheless, as far as prejudice was concerned, the simple mediation models with

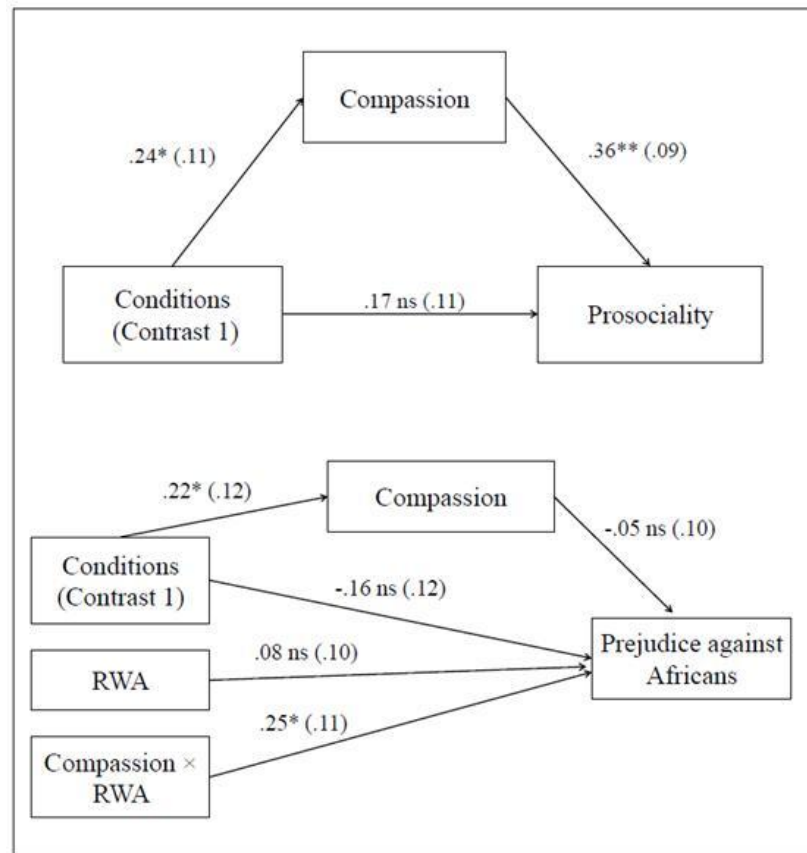


** $p < .01$.

Figure 2. Prejudice against Africans (top) and Muslims (bottom) as a function of conditions (Christian priming vs. Neutral priming vs. Buddhist priming), right-wing authoritarianism (RWA), and universalism (Experiment 2).

compassion as the mediator were not significant. Subsequently, we tested whether this mediational model could be significant at different levels of hypothesized moderators (i.e. universalism, authoritarianism, and religiosity). According to our theoretical predictions specific models (conceptual model 14, see Hayes, 2013) were tested for both ethnic and religious prejudice with the three hypothesized mediators.

Analysis revealed that the indirect effect of condition on prejudice against Africans (Christian and Buddhist priming respectively increasing and decreasing prejudice) through compassion was significant (IE = $-.07$, SE = $.05$, 95% CI = $[-.21, -.01]$) among low authoritarians (-1 SD above the mean). For participants high in authoritarianism ($+1$ SD below the mean), this indirect effect was not significant (IE = $.04$, SE = $.04$, 95% CI = $[-.01, .16]$). Regression coefficients are displayed in Figure 3. To ensure the unique validity of our model, alternative models were tested but were not significant (see conceptual models 5, 8, 14, 15, and 58; in Hayes, 2013).



Note. Numbers on paths represent standardized regression coefficients; standard errors are in parentheses.

* $p < .05$. ** $p < .01$.

Figure 3. The indirect effect of conditions (contrast 1: Christian priming vs. Neutral priming vs. Buddhist priming) on prosociality through compassion (top) and the conditional indirect effect of conditions (contrast 1) on prejudice against Africans through compassion at values of RWA (bottom) in Experiment 2.

3. Discussion

Experiment 2 replicated and extended the findings of Experiment 1 relative to ethnic and inter-religious prejudice. Compared to Experiment 1, it implied the use of a sample not necessarily attached to Buddhism (Belgian students of a Christian tradition), implicit and not explicit measures of prejudice, subliminal and not supraliminal priming, an additional Christian condition allowing comparisons between primes of different religions, and additional mediators and moderators that provided a better understanding of the processes implied. As expected, compared with neutral and Christian priming, Buddhist priming played a positive role in reducing prejudice among Westerners, depending however on individual differences. Specifically, Buddhist priming reduced prejudice against Muslims and African people respectively among high universalists and low authoritarians.

Even if the effect of religious priming on prosociality did not follow our hypothesis, since only Buddhist but not Christian primes increased prosocial behavior, the results were consistent with those found for prejudice: the Buddhist impact on prosociality may be stronger than that of the Christian religion. Nevertheless, it remains that Christian primes in the present experiment did not increase, if not decrease, prosociality, a finding that contrasts several previous studies on religion and prosociality (e.g., Pichon et al., 2007; Shariff & Norenzayan, 2007). Nevertheless, Christian religion suffers from an accentuated distinction between the ingroup and outgroups, thus limiting prosociality mainly to the ingroup (Galen, 2012; Preston et al., 2010; Saroglou, 2013) whereas Buddhism emphasizes, presumably in a stronger way, ideals of harmony, compassion, and non-violence (Davidson & Harrington, 2002; Ji et al., 2010). Interestingly, the divergent effects of Buddhist and Christian concepts on prosociality found here were in fact due to generosity towards unknown people, clearly activated only in the Buddhist priming condition.

Finally, the positive impact of the Buddhist priming seems to be explained by an increase in compassion when participants are exposed to Buddhist concepts, which in turn enhances prosociality and diminishes ethnic prejudice (compared with neutral and Christian priming). These findings are in line with, clarify, and nuance, results from Experiment 1. Among Westerners, even those not attached to Buddhism, the exposure to Buddhist concepts elicits positive emotional responses of compassion that, in turn, increase prosociality (especially towards unknown people) and decrease prejudiced attitudes towards Africans (among low authoritarians).

Experiment 3

In Experiments 1 and 2, Buddhist concepts were found to respectively undermine prejudice and foster prosocial behavior among Western Buddhists but also among Westerners of Christian tradition. Before generalizing the relevance of the present findings, one could be suspicious whether this positive effect of Buddhism may be due to the highly positive representation of Buddhism in the West. As discussed in the Introduction, Buddhism in East Asia is probably less presented as unequivocally positive, as it is in the West. As Buddhism is probably less exotic, attractive, and extremely positively connoted in East Asia, the exposure to Buddhist concepts may not have the same prosocial impact in that cultural context. Experiment 3 aimed to clarify this intriguing question by replicating Experiment 2 in an East Asian context, where the positive effects of Buddhism may be less prominent, since Buddhism there constitutes a dominant, historical, so socially banalized religion. Experiment 3 followed exactly the same design as Experiment 2 and was carried out among East Asians (Taiwanese young adults) of a Buddhist/Taoist tradition. The main aim of this study was to replicate the positive impact of Buddhism on prejudice and prosocial behavior.

1. Method

1.1. Participants

Chinese-speaking undergraduate students ($N = 122$; 59% female) from National Taiwan University took part to this study in exchange of course credit. Mean age was 21.4 ($SD = 3.6$). Regarding religious affiliation, participants self-identified as follows: folk believers¹ (47.5%), atheists (32%), Buddhists (8.5 %), Taoists (3.3%), and “other” (8.7%). Participants entered the lab in small groups (3 to 10 people) and completed the task on a computer. The study was advertised as a recognition and categorization task.

¹ In 2010, about 35% of the Taiwanese population self-identified as folk believer, 22% as Buddhist, 17% as Taoist, 5% as Christian, and 21% as non-religious (Gries et al., 2012). Folk religion consists of a blend of deities and practices coming from Buddhism, Taoism, divination, and ancestor worship. The main focus of folk religion is the propitiation of death including sacrifice to the ancestors, selecting auspicious burial sites, warding off “ghosts” or malevolent spirits, and worshipping a pantheon of gods (Ahern, 1981; Wolf, 1978).

1.2. Material and procedure

Lexical decision task (LDT). As in Experiment 2, participants were randomly assigned to one of the three conditions prior to their arrival at the lab: (1) a Christian prime condition, (2) a Buddhist prime condition, or (3) a neutral prime condition. The words used for the lexical decision and for the neutral prime condition were the same as in Experiment 2 and were translated into traditional Chinese. The Buddhist (e.g., *Buddha*, *Sangha*, *Sutras*) and Christian words (e.g., *Jesus*, *Bible*, *Church*), similar, but not identical to those used in Experiment 2, were selected after a pre-test conducted with 27 Taiwanese undergraduate students.

Hypothesized mediators. As in Experiment 2, participants completed three short scales measuring tolerance of contradiction, compassion ($\alpha = .88$), and oneness after the LDT. All scales were translated (and back-translated) and adapted to traditional Chinese by a team of bilingual experts. Using principal component analysis, we found an equivalent one-factor structure between the Taiwanese and the Belgian sample (Experiment 2) for tolerance of contradiction ($\phi = .91$) and compassion ($\phi = .99$). The Tucker's Phi equivalence indices were satisfactory ($>.90$; Van de Vijver & Leung, 1997).

Implicit Association Test. Participants then completed two Implicit Association Tests (IAT; Greenwald, McGhee, & Schwartz, 1998) designed to measure implicit prejudice against African people and Muslims. The IATs were designed similarly to Experiment 2 but the targets categories were adapted. For the first IAT (African people), the target categories used were *Asian* and *African* and the associated stimuli were 10 Asian and 10 African neutral-expression male faces generated using FaceGen Modeller (Version 3.5). For the second IAT (Muslims), the targets categories were *Buddhist* and *Muslim* (10 and 10 words). The Buddhist words were the same as those used for the LDT. The 10 Muslim words (e.g., *Islam*, *mosque*, *Koran*) were selected after a pre-test conducted in another group of 27 Taiwanese participants.

Prosocial behavior. Participants were invited to complete the same measure used in Experiment 2 except that the amount of money was presented in New Taiwan dollars.

Post-experimental measures. Finally, participants were assessed on the same constructs as in Experiment 2: (a) the value of universalism ($\alpha = .76$), (b) authoritarianism ($\alpha = .58$), and (c) religiosity ($\alpha = .60$). At the end of the experiment, participants completed a funneled debriefing. None of the participants guessed the aim of the study or were able to recall the primed words. Using principal component analysis, we found an equivalent one-factor structure between the Taiwanese and the Belgian sample (Experiment 2) for universalism ($\phi = .98$), authoritarianism ($\phi = .90$), and religiosity ($\phi = .99$).

2. Results

Descriptive statistics and mean comparisons are reported distinctly by condition in Table 2. As in Experiment 2, our analytical strategy followed that of Abelson and Prentice (1997). Since the hypotheses were exactly the same as those in Experiment 2, a contrast that described the hypothesized rank ordering of the means was created. We hypothesized that a Christian prime should increase prejudice compared to a neutral condition, whereas a Buddhist prime should decrease it (Contrast 1: -1, 0, 1). This contrast was opposed to an orthogonal contrast (Contrast 2: -1, 2, -1). Multiple regression analyses were thus conducted using the two contrasts simultaneously as independent variables.

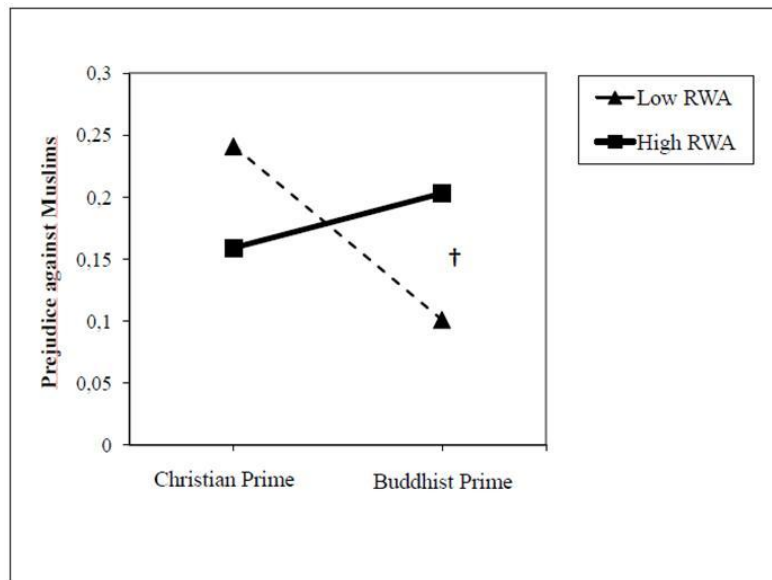
The results showed that there were significant differences between conditions (Contrast 1) for prejudice against African people, in line with our hypothesis, $\beta = -.18$, $t(2,117) = -2.03$, $p < .05$. Regarding prejudice against Muslims, the differences between conditions following the hypothesized contrast were not significant, $\beta = -.14$, $t(2,118) = -1.52$, *ns*. The potential moderating role of individual differences on universalism, authoritarianism, or religiosity was also investigated. A significant interaction between Contrast 1 and authoritarianism in predicting prejudice against Muslims was found, $\beta = .21$, $t(5,115) = 2.20$, $p < .05$. A simple slope analysis (see Figure 4) revealed that the priming conditions had no effect among high authoritarians (one SD above the mean), $\beta = .09$, *ns*, whereas the Buddhist and the Christian conditions respectively decreased and increased prejudice against Muslims among low authoritarians (one SD below the mean), $\beta = -.34$, $p < .05$.

As far as prosociality was concerned, we hypothesized, as in Experiment 2, that both Buddhist and Christian conditions should increase prosocial behaviors. Contrast 2 was then used as the hypothesized contrast, opposing the two religious conditions to the neutral condition, and Contrast 1 as the orthogonal contrast. As expected, the regression analysis showed that both religious conditions had a significant positive impact on prosociality, $\beta = -.25$, $t(2,118) = -2.81$, $p < .01$.

Finally, tolerance of contradiction, but not the two other possible mediators (i.e. compassion and oneness), was affected by condition (Contrast 1), $\beta = .19$, $t(2,118) = 2.04$, $p < .05$. We investigated whether tolerance of contradiction could mediate the effect of condition (Contrast 1) on prejudice against Africans and Muslims. The indirect effect of condition on prejudice against Muslims (Christian and Buddhist priming respectively increasing and decreasing prejudice) through tolerance of contradiction was significant, $IE = -.04$, $SE = .03$, $CI = [-.12, -.01]$. Standardized regression coefficients for this model are reported in Figure 5. As far as prosociality is concerned, no significant differences were found between the religious and the neutral conditions (Contrast 2) for any of the mediators.

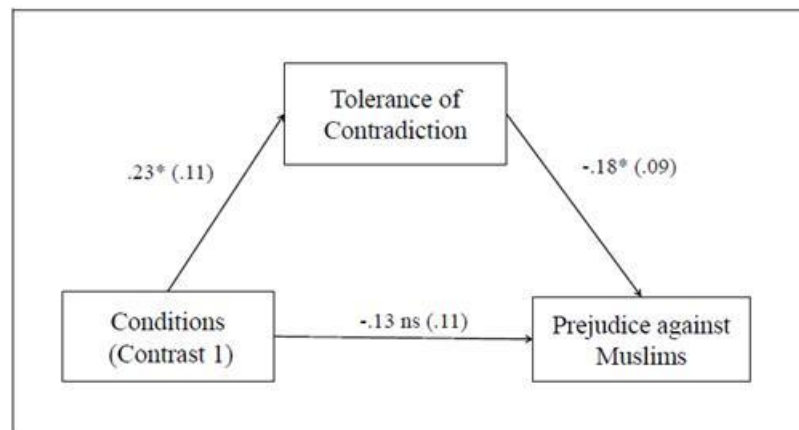
Table 3
Means, Standard Deviations, and Between-Condition Comparisons for Variables in Experiment 3

	Christian Prime (<i>N</i> = 32)		Neutral Prime (<i>N</i> = 45)		Buddhist Prime (<i>N</i> = 45)		Comparisons
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Prejudice against Africans	0.62	0.33	0.54	0.58	0.41	0.42	1.96
Prejudice against Muslims	0.73	0.42	0.59	0.43	0.55	0.45	1.71
Prosociality	25.27	21.96	19.02	18.46	29.35	28.47	2.20
Compassion	4.97	1.04	5.13	0.85	4.94	0.91	0.51
Tolerance of contradiction	6.02	1.28	6.20	1.17	6.49	0.76	1.97
Oneness	4.52	1.03	4.29	1.12	4.16	1.25	0.86



† $p < .10$.

Figure 4. Prejudice against Muslims as a function of conditions (Christian priming vs. Neutral priming vs. Buddhist priming) and RWA (Experiment 3).



Note. Numbers on paths represent standardized regression coefficients; standard errors are in parentheses.

* $p < .05$.

Figure 5. The indirect effect of conditions (contrast 1: Christian priming vs. Neutral priming vs. Buddhist priming) on prejudice against Muslims through tolerance of contradiction (Experiment 3).

3. Discussion

The findings of Experiment 3 revealed that the positive effects of Buddhism are not restricted to cultural contexts in which Buddhism is seen as particularly attractive, exotic, and valued (Experiments 1 and 2). Also in East Asia, where Buddhism is a dominant religion, the exposure to Buddhist concepts, compared with neutral and Christian concepts, decreased prejudice against Africans and against Muslims (among low authoritarians). Furthermore, Experiment 3 (contrarily to Experiment 2) confirmed the hypothesized positive effect of both sets of religious primes (Buddhist and Christian) on prosocial behavioral inclinations. Finally, tolerance of contradiction was found to mediate the effect of religious priming on prejudice against Muslims. Specifically, Buddhist priming, compared with neutral and Christian priming, increased tolerance of contradiction, which in turn decreased prejudice.

General discussion

Across three experiments carried out in a Western and an East Asian country (Belgium and Taiwan) with samples of Buddhists, Christians, Taoists, folk believers, and non-believers, evidence was provided in favor of the idea that Buddhist concepts increase prosociality and decrease prejudice. The exposure to Buddhist concepts, consistently across the studies, promoted prosocial behavior (Experiments 2 and 3) and undermined prejudice against people of other religious and ethnic groups, whether this was measured explicitly or implicitly. The positive effects of Buddhist concepts seem thus to be an empirical reality and not only a pro-Buddhist positive stereotype, although with certain limitations that will be discussed in this section.

Experiments 2 and 3 provided important information by comparing the effects of Buddhist and Christian primes. The exposure to Christian concepts consistently increased prejudiced attitudes towards ethnic and religious outgroups (Experiments 2 and 3). On the other hand, Christian primes, along with Buddhist primes, promoted prosociality among Taiwanese (Experiment 3), but this was not the case among Westerners of Christian tradition. Taken as a whole, these findings confirm the main hypothesis. Whereas the effects of Christian religion, promoting both pro- and anti-social attitudes and behaviors depending on the target, remain paradoxical, Buddhist concepts seem to consistently promote both prosociality and tolerance of people holding other religious beliefs or belonging to other ethnic groups.

Compassion and tolerance of contradiction seem to play a key role in explaining the positive impact of Buddhism on prosociality and tolerance. As hypothesized, the emotion of compassion and the cognitive tendency for tolerance of contradiction promoted in Buddhism explain the positive effects of Buddhist priming on social attitudes and behaviors. These two mechanisms may of course be complementary, but note that compassion and emotional aspects of Buddhism were found to constitute a privileged pathway in the West (Experiments 1 and 2) whereas tolerance of contradictions was more central in the East (Experiment 3). This difference may of course be fortuitous but could also be explained by specific approaches towards Buddhism in the West and the East. On one hand, Westerners may be interested in Buddhism for affective reasons rather than for metaphysical or theoretical ones and overemphasize the ideal of Buddhist compassion. Buddhism in the West is mainly conceived as a humanist philosophy promoting universal tolerance and positive emotionality. On the other hand, tolerance of contradiction represents a dimension of the holistic thinking style typically characterizing East Asian cultures. As tolerance of contradictions touches deeper cognitive structures embedded in culture, it may constitute a privileged pathway explaining positive social influences of

Buddhism in East Asia. Note, finally, that oneness, in the present experiments, was not found to mediate the prosocial effects of Buddhist priming. A possible reason is that in the measure used to assess oneness, participants had to evaluate how close they were to “the others”. One cannot however really know what exactly “the others” represent for participants who may preferentially have referred to ingroup members rather than to unknown people from other ethnic or religious groups. This measure was indeed originally created to evaluate the interconnectedness between the self and close others (Aron et al., 1992). Furthermore, the inclusion of other in the self was not found to explain empathy-induced helping of an outgroup member (Batson et al., 1997).

Beyond an overall positive effect of Buddhist concepts on prosocial attitudes and behaviors, the findings of the present experiments demonstrate the role of key moderators. People who highly endorsed the value of universalism (Experiments 1 and 2) and who were low in authoritarianism (Experiments 2 and 3) were more susceptible to the positive influences of Buddhist primes on social attitudes. This is in line with the idea that priming effects occur to a greater degree, or only, when the primed construct corresponds to personal dispositions (e.g., Meier et al., 2006; Verplanken & Holland, 2002). In the context of prosociality and prejudice, universalism and authoritarianism have already been found to interact with a religious prime (e.g., Clobert & Saroglou, 2013a; Van Pachterbeke et al., 2011). Moreover, the observed effects seem to be independent from participants’ religiosity. This is in line with previous studies suggesting that priming religion may have comparable effects on believers and non-believers as religious concepts are part of culture and socialization (Galen, 2012).

These studies also provide interesting information on a broader debate: the psychological universality versus cultural relativism of religion and its effects. Like cultures, religions function as systems (Cohen, 2009) and may deeply influence people’s attitudes and behavior. Some of these effects may be universal, corresponding to similarities found across religions (e.g., reference to tradition), and others may be specific to a given religion and cultural context, leading to cross-religious differences (Saroglou & Cohen, 2013). Throughout the present studies, evidence was found in favor of both the universal effects of religions (i.e. prosocial behavior) and the religion/culture-specific effects (i.e. prejudice). The causal relation between religion and prosociality seems to be universal and was found in many religions including Buddhism (Clobert, 2013a; Saroglou, 2013). Nevertheless, the effect of religion on anti-social attitudes (e.g., prejudice, aggression, terrorism) seems to be more dependent on cultural and specific religious contexts. Whereas priming monotheistic religions, such as Christian religion or Judaism, increases antisocial attitudes (Ginges et al., 2009; Johnson et al., 2010), priming Buddhist concepts was found here to promote tolerance consistently across three cultural contexts.

Nevertheless, the present work has several limitations. Beyond consistencies across the studies, the effect sizes were rather small. Future research should thus focus on other possible cognitive, emotional, and social mechanisms which may explain the positive effects of Buddhism, comparatively to Christian religion, on social attitudes and behaviors. Indirect evidence reviewed in the Introduction suggests several possible explanatory factors related to cognition and self-perception: low need for closure and consistency, high interdependence, low egocentrism, similarity perception, and holistic thinking. These factors may attenuate the in- vs. outgroup distinction and increase the perceived similarity between various beliefs and value systems among East Asian believers.

An additional set of mechanisms worth investigating in future research which may play a possible role in explaining the effect of Buddhism on prejudice include the role of underlying emotions (other than compassion) as a function of religion and culture. Existing research suggests promising pathways for future investigation. For instance, the ideal positive affect valued in East Asian and Buddhist contexts, compared to the ideal positive affect valued in European, American, and Christian contexts, is characterized by low arousal (e.g., calm) rather than high arousal (e.g., excitement) (Tsai, Knutson, & Fung 2006; Tsai et al., 2007). Therefore, as prejudice is often fueled by emotions like fear or anger (Cottrell & Neuberg, 2005) which imply high arousal, one may hypothesize that East Asian religions, compared to Christian religion, are less promoting of these kinds of emotions. This in turn may lead to greater tolerance and/or weaker prejudice.

To conclude, it is our impression that this work has the merit to provide, for the first time, experimental evidence in favor of the idea that there is a causal relationship between Buddhism and positive social outcomes (prosociality and low prejudice). Contrary to Christian and other monotheistic religions that paradoxically promote prosociality but also prejudice, Buddhism consistently favors positive social attitudes and behaviors. Emotional (compassion) and cognitive (tolerance of contradictions) mechanisms explain, to some extent, how Buddhist concepts make people more tolerant and prosocial, consistently across cultural contexts. This seems to be well embedded in East Asian cultural contexts, but also transposable and efficient in other, i.e. Western cultural contexts. Religious and cultural characteristics travel and influence people's attitudes and behavior in a globalized world.

GENERAL DISCUSSION

In this last section, we provide a brief summary of the findings reported in the five empirical chapters. Then we discuss these findings, highlighting their strengths but also their limitations. Finally, possible future directions are presented as well as possible implications for the field of cross-cultural psychology as well as for the psychology of religion.

1. Summary of the findings

The main aim of this doctoral dissertation was to test whether East Asian religions promote not only prosociality but also low prejudice, contrary to the so-called Abrahamic religions. This issue was divided into two complementary topics: (1) the role of individual religiousness as well as (2) the role of religious concepts in promoting tolerance. We will review here the results and provide the reader with a comprehensive vision of the findings.

Overall, the paradoxical role of religion found in the literature did not extend to East Asian religions, as hypothesized. Through correlational studies carried out in Chapter 1, we showed that East Asian religiosity, contrary to Christian religiosity, relates both to prosociality and tolerance toward other religious and ethnic groups. The first empirical chapter was indeed designed to explore the relationships between religiosity, prosociality, and prejudice against various targets in East Asia. In the first study of this chapter, religiosity was found to be negatively related with inter-religious prejudice among Buddhists and Taoists (in Japan, South-Korea, and Taiwan). On the contrary, religiosity was positively related to inter-religious prejudice among Christians in the same countries. Furthermore, whereas Christian religiosity predicted antigay prejudice, East Asian religiosity was no longer a predictor of antigay prejudice when age and gender were controlled for. In the second study, we explored whether this religious tolerance might extend to specific religious outgroups including Christians, Jews, Muslims, a fictive religious group (the “Yxtos”), and atheists. East Asian religiosity in Taiwan was indeed found to correlate negatively with prejudice against all religious outgroups except atheists. In the third study (conducted in Taiwan), prejudice against a religious (Muslims) as well as an ethnic (Africans) outgroup was measured implicitly using an implicit association test. In addition, prosociality was measured using a spontaneous sharing measure. As in the two previous studies, East Asian religiosity was found to correlate negatively with prejudice against Muslims but also with prejudice against Africans. Moreover, East Asian religiosity, as expected, correlated positively with prosociality. In sum, this first chapter confirmed the hypothesis of East Asian religions’ tolerance by showing that religiosity in East Asia (i.e. Buddhist, Taoist, and folk religiosity) was negatively related with prejudice against other religious and ethnic groups.

The second chapter was designed to better understand how East Asian religiosity might differ from Christian religiosity. As East Asian religiosity was found to relate negatively with prejudice, contrary to Christian religiosity, the next step was to understand why this difference was found. Since we hypothesized that East Asian religiosity might be associated with less closed-mindedness and might allow for a more easy tolerance of contradictory elements, we first investigated whether East Asian and Christian religions differ in their acceptance of a contradictory system of knowledge: science. As expected, East Asian religiosity (in South-Korea) was positively related with trust in science whereas the exact contrary was true for Catholics (in Austria) and Protestants (in Denmark). This high tolerance of contradiction might explain why East Asian religiosity, contrary to Christian religiosity, relates negatively with prejudice against religious and ethnic outgroups.

In the third chapter, designed to (1) find possible mediators explaining East Asian religions' tolerance and (2) compare East Asian and Christian religiosity in the way they relate to prejudice against four targets (i.e. Muslims, Africans, homosexuals, and atheists), we indeed found that the negative association between East Asian religiosity and prejudice was explained by a high tolerance of contradiction characterizing East Asian religions. This confirms our hypothesis that East Asian religiosity reflects low closed-minded ideologies and dogmatism compared with monotheistic religions. In the first study of this chapter, carried out in Belgium among participants of Christian tradition, religiosity was associated with all kinds of prejudice (i.e. Muslims, Africans, homosexuals, and atheists). Using structural equation modeling, we found that the relationship between religiosity and prejudice against Muslims and Africans was mediated by a lower tolerance of contradiction as well as a higher sensitivity to the contamination dimension of disgust. Second, the contamination dimension of disgust was also found to explain the relationship between religiosity and prejudice against homosexuals. Third, religiosity predicted higher distrust among men that in turn increased prejudice against atheists. In the second study, carried out in Taiwan with participants of a Buddhist/Taoist tradition, the tolerance of contradiction was also a valuable mediator explaining the relationship between religiosity and prejudice. Nevertheless, East Asian religiosity was positively related with tolerance of contradiction. This high tolerance of contradiction as a function of East Asian religiosity explained the negative relationship between religiosity and prejudice against Muslims, Africans, and even homosexuals. Disgust and distrust were unrelated to East Asian religiosity. In sum, whereas the relative tolerance of contradiction seems to be a key mediator in both Christian and East Asian religions, disgust and distrust are more prevalent in a Western Christian context. As hypothesized, East Asian religiosity differs from Christian religiosity in the acceptance of contradictory elements. This high tolerance of contradiction is responsible of low religious and ethnic prejudice in East Asian religious contexts and might even extend to prejudice against homosexuals.

In the second part of our empirical work, we additionally showed that East Asian religious concepts cause prosocial behavioral intentions as well as a decrease in prejudice against religious and ethnic outgroups consistently across cultural and religious contexts. Nevertheless, different processes were found to explain the positive effect of Buddhist priming in the West and in the East. Whereas compassion seems to be a key mediator among Westerners, the tolerance of contradiction is central among East Asians in explaining the positive effects of Buddhist concepts. Finally, universalism and authoritarianism importantly moderated the effects of Buddhist concepts on prejudice. Overall, the positive effect of Buddhist priming on tolerance was clearer among people who highly value universalism and among low authoritarians.

The fourth chapter investigated the potential effects of East Asian religious concepts on prosociality and prejudice in Belgium. According to our hypotheses, participants exposed to superliminal Buddhist priming (pictures) reported more prosocial intentions of sharing and lower implicit prejudice against the Flemish (a typical outgroup for our sample). The effect of Buddhist priming on prejudice was moderated by universalism. More precisely, Buddhist priming decreased prejudice against the Flemish only for participants who highly value universalism. As expected, the exposure to East Asian religious concepts promoted both prosocial tendencies and tolerance among Westerners.

The last empirical chapter was designed to replicate the positive effect of East Asian religious concepts in other cultural contexts (i.e., Westerners converted to Buddhism and East Asians of a Buddhist/Taoists tradition) and to test potential explanatory mechanisms (i.e. tolerance of contradiction, compassion, and oneness). The first study replicated and extended the findings of Chapter 4. Western Buddhists exposed to superliminal Buddhist priming reported lower prejudice against religious (i.e. Christians, Hindus, Muslims), ethnic (i.e. Americans and Africans), and moral (i.e. homosexuals, atheists, and single mothers) outgroups. The second and the third studies followed the same design and were conducted in a Western sample of Christian tradition as well as in an East Asian sample of Buddhist/Taoist tradition. In these two studies, participants were assigned to one of three distinct conditions designed to supraliminally prime Buddhist, Christian, or neutral words (using a lexical decision task). The effects of the priming conditions on implicit religious (Muslims) and ethnic (Africans) prejudice were analyzed using contrasts. As expected, in the first study, the Buddhist priming condition was found to decrease prejudice against Muslims (among participants who highly value universalism) and prejudice against Africans (among low authoritarians). Furthermore, Buddhist priming was found to promote compassion that in turn increased the prosocial intentions of sharing and decreased prejudice against Africans among low authoritarians. In sum, participants exposed to Buddhist concepts reported lower prejudice against religious and ethnic outgroups but these effects were moderated by universalism and authoritarianism, respectively. Furthermore, the positive effect of

Buddhist concepts on prosociality and tolerance were mediated by compassion. In the second study, Buddhists concepts were also found to promote prosociality as well as tolerance toward Africans and Muslims (only among low authoritarians). Finally, the positive effect of Buddhist concepts on tolerance toward Muslims was explained by a high tolerance of contradictions.

2. Discussion of the findings

Overall, East Asian religions seem to be more tolerant than Christianity. Throughout this doctoral dissertation, it has appeared that East Asian religiosity is indeed less dogmatic since it is related to a high tolerance of contradiction and unrelated to right wing authoritarianism. This high tolerance of contradiction as a function of East Asian religiosity was found to explain East Asian religions' tolerance. It seems therefore that East Asian religiosity favors a specific cognitive framework that encourages people to apprehend the world in a holistic and dialectical way. In this perception of the world, change is constant, reality is transitory, and two seemingly incompatible phenomena may be true at the same time and complementary. Consequently, East Asian believers are not forced to choose between two religions or two customs since both are perceived to be valuable and may even be complementary. As an indicator of this high tolerance of contradiction, when asking East Asians about their religious beliefs and affiliations one may note that beliefs of different religious traditions are always mixed yet people identified themselves as members of different religious traditions quite naturally (see Gries et al., 2012).

Furthermore, East Asian religious concepts, as hypothesized, were found to foster not only holistic cognitive mindsets (tolerance of contradiction) but also the emotion of compassion that in turn explained the reduced prejudice against religious and ethnic outgroups. These two mechanisms may of course be complementary, but note that the compassion and emotional aspects of Buddhism were found to constitute a privileged pathway in the West whereas tolerance of contradictions was more central in the East. This difference may of course be fortuitous but could also be explained by specific approaches toward Buddhism in the West and the East. On one hand, Westerners may be interested in Buddhism for affective reasons rather than for metaphysical or theoretical ones and overemphasize the ideal of Buddhist compassion. Buddhism in the West is mainly conceived as a humanist philosophy promoting universal tolerance and positive emotionality. On the other hand, tolerance of contradiction represents a dimension of the holistic thinking style characteristic of East Asian cultures. As tolerance of contradictions touches on deeper cognitive structures embedded in culture, it may constitute a privileged pathway explaining the positive social influences of Buddhism in East Asia. Note finally that East Asian religious concepts seem to impact pro- and anti-social

attitudes mainly through cognitive and emotional constructs but not through social-relational mechanisms. Oneness was indeed not found to mediate the positive effects of Buddhist priming on tolerance and prosociality. A possible reason is that in the measure used to assess oneness, participants had to evaluate how close they were to “the others”. One cannot however really know what exactly “the others” represent for participants who may preferentially have referred to ingroup members rather than to unknown people from other ethnic or religious groups. Consequently, oneness might become an indicator of ingroup identification. This measure was indeed originally created to evaluate the interconnectedness between the self and close others (Aron et al., 1992). Furthermore, the inclusion of other in the self was not found to explain empathy-induced helping of an outgroup member (Batson et al., 1997).

Nevertheless, East Asian religions’ tolerance was not unlimited. Whereas the relationship between East Asian religiosity and prejudice against homosexuals was not clear, East Asian religiosity was consistently associated with higher prejudice against atheists. Since several studies suggested that homosexuals are known to be the target of homonegativity, in various degrees and forms, across all religions (Detenber et al., 2007; Siker, 2007), we were not convinced that East Asian religion’s tolerance might extend to homosexuals. However, in the first chapter, no relation was found between East Asian religiosity and antigay prejudice when age and gender were controlled for. Interestingly, we found that East Asian religiosity might decrease prejudice against homosexuals through a higher tolerance of contradictory elements. Furthermore, East Asian religiosity was found to be unrelated with disgust which constitutes a strong predictor of antigay attitudes (Olatunji, 2008). In the third empirical chapter, religiosity in a Christian context was found to increase prejudice against homosexuals through a higher sensitivity to disgust (contamination dimension). In sum, it seems that, while East Asian religiosity is related to tradition and conservative ideologies (Noris & Inglehart, 2004; Sargolou & Dupuis, 2006), the lack of dogmatism, purity concern, and closed-minded ideologies prevent East Asian believers from displaying prejudice against homosexuals.

However, such tolerance was not extended to atheists, people that possibly constitute the believers’ most typical outgroup (see Gervais et al., 2011). Atheists are known to constitute the strongest targets of prejudice in studies with Christian participants in the West (Gervais et al., 2011). Atheists may be seen by believers, apparently of all religions, including those of East Asia, as the typical outgroup per excellence. They not only differ from believers in some or many beliefs and convictions but, in principle, they preach exactly the opposite. Despite the fact that East Asian religiosity is related to the tolerance of contradiction, atheists may be perceived as promoting no contradictory ideologies but rather an absence of ideology altogether, which can be even more destabilizing for believers. Nevertheless, prejudice against atheists in East Asia seems clearly not to be a matter

of trust since East Asian religiosity was unrelated to trust in Chapter 3. From studies carried out in the West, we know that religious people tend to use the religious beliefs of other people as cues of trustworthiness, since they conceive religion as a unique and necessary source of morality (Norenzayan & Shariff, 2008; Sosis, 2005). In this context, individuals who belong to a religious tradition may dislike atheists primarily due to a moral distrust of them (Gervais et al., 2011). Religiosity in a Christian context was indeed found to predict prejudice against atheists due to a higher moral distrust (see Chapter 3). Although further research is needed to assure that anti-atheist prejudice in the East Asian religious context is not a matter of trust, several cues, such as the fact that East Asian religious beliefs are less strongly related to morality compared with monotheistic religious beliefs (Stark, 2001), tend to confirm our results. In sum, atheists seem to remain a universal target of prejudice among believers, but the mechanisms explaining this relationship might differ across religious and cultural contexts.

Finally, through these studies we have shown that the positive effects of East Asian religiosity and religious concepts were sometimes moderated by individual differences. More precisely, East Asian religiosity and the exposure to Buddhist concepts were related to low prejudice mainly among low authoritarians and high universalists. As previously said, low prejudice as a function of East Asian religions may result from the independence of Eastern religiosity and religious concepts from closed-minded ideologies such as authoritarianism, leaving the latter to be unable to contribute to religious prejudice. Research indeed showed that closed-minded secular ideologies such as authoritarianism often fuel prejudice (Altemeyer & Hunsberger, 1992; Whitley, 1999). Nevertheless, authoritarianism might still weaken, if not oppose the tolerant role of East Asian religions. In other words, authoritarianism moderates the religiousness-prejudice link as well as the effect of East Asian religious priming on low prejudice. In sum, our findings suggest that, whereas in monotheistic contexts authoritarianism nourishes and strengthens religious prejudice, in Eastern religious contexts authoritarianism simply inhibits religious tolerance. Finally, according to our hypotheses, Buddhist priming was more effective in reducing prejudice among people who already value egalitarian values such as universalism. Previous studies have indeed shown that people sharing universalist and egalitarian values were more willing to have contact with outgroups, and reported more positive attitudes toward immigrants (Sagiv & Schwartz, 1995; Schwartz, 2006). Consequently, universalism strengthens the effects of Buddhist priming on reduced prejudice. In the next section, the limitations of our findings will be discussed.

3. Limitations

Overall, this dissertation allows us to clarify the cross-cultural and cross-

religious validity of the paradoxical role of religion. As hypothesized, East Asian religiosity and religious concepts were found to relate to prosociality as well as to tolerance across ten studies, suggesting that the paradoxical role of religion is not universal. It is our impression that we provided strong and replicated results using various methodologies. Across the studies presented throughout these five chapters we (1) used both implicit (IAT) and explicit measures of prejudice, (2) measured prejudice against a variety of targets from religious, ethnic, and moral outgroups, (3) ran similar studies in different cultural and religious samples, (4) compared religious groups within the same cultural context, (5) compared the effects of the same religion across cultures, (6) used both correlational and experimental (priming) designs, (7) used both superluminal and supraliminal priming methodologies, and (8) tested several potential mediators and moderators.

Nevertheless, each of these studies are subject to several limitations. First, we only included two Western (i.e. Belgium and France) and three East Asian countries (i.e. Japan, Taiwan, and South-Korea) in our studies in which Buddhism or East Asian religions are not linked to conflict situations (e.g., Myanmar). Even if Buddhism is synonymous worldwide with nonviolence, tolerance, and loving kindness, radical Buddhism is rising in several parts of the world and Buddhist nationalist groups spread hate speech against minorities. This year, Time magazine published a special issue addressing this topic (Beech, 2013). This paper raised a lot of criticism from the Buddhist community and Sri Lanka even banned sales of the issue. In several South-East Asian countries in which Buddhism is the main religion (e.g., Sri Lanka, Myanmar, Thailand), Buddhist nationalist movements preaching anti-Muslims ideas are on the rise. In Myanmar, over the past years, Muslims have been targeted by Buddhist manifestations with scores being killed and mosques destroyed. Radical monks explicitly exhort their followers to act against “the Muslim threat”. Currently, the Rohingya Muslim minority in Myanmar is seen as particularly threatening. For Buddhists living in South-East Asian countries, there might be a vague sense that their religion is threatened by Islam which already conquered the Buddhist lands of Indonesia and Malaysia centuries ago.

The situation of Buddhism and Islam in South-East and East Asia differ in several ways. First, the Buddhism practiced in Thailand or Myanmar is not the same as the Buddhism practiced in East Asian countries such as Taiwan. While the dominant form of Buddhism practiced in South-East Asian countries was clearly inspired by Theravada Buddhism, Mahayana Buddhism was the main source of East Asian Buddhist movements (Harvey, 1990). These two major schools of Buddhism agree about the core teachings of the Dharma but differ slightly in the way they conceive liberation to be personal or universal. Whereas Theravada Buddhism emphasizes a strict personal observance and practice of the teachings in order to reach Enlightenment, the Mahayana doctrine is based on universal liberation from suffering for all living beings. In Mahayana Buddhism the feature of compassion for all beings that must be released from suffering is central and

strongly encouraged. Second, the proportion of Muslims, as well as the contacts with Islam, is quite different in South-East and East Asia. In Myanmar, Thailand, or Sri Lanka, the proportion of Muslims represent around 5% of the population whereas no more than 0,2% of the population believe in Islam in East Asian countries such as Taiwan, Japan, or South-Korea (Denny & Smart, 2007; Gladney, 2003). Even in China, the proportion of Muslims does not exceed 1,5% of the population. Furthermore, Islam in South-East Asia is perceived as a threat since historic Buddhist lands were converted to Islam. In this context, radical monks in South-East Asia accuse Muslims of trying to occupy their country and destroy their Buddhist cultural heritage. We thus must keep in mind that our results seem to be valid in the specific context of East Asia but might not extend to South-East Asia.

A second limitation related to the one we just presented is the familiarity and threatening character of the outgroups chosen as potential targets of prejudice. As previously stated, religious outgroups, such as Muslims, are not particularly numerous in East Asia. Furthermore, there is considerably less chance to meet Black people in East Asian countries than in Europe or the U. S. One might then argue that religiosity is correlated with low prejudice in East Asia because East Asians are less familiar with various outgroups and thus feel less threaten by these outgroups. While it is true that Muslims and Africans are not numerous in East Asia, Christians and Westerners are more visible and constitute a real minority in East Asia that might threaten economic resources or religious beliefs. Nevertheless, in the studies we presented, we showed that religiosity was also negatively related with prejudice against Christians and Westerners. Furthermore, if the negative association between religiosity and prejudice against Muslims and Africans was explained by the low familiarity and the non-threatening character of the targets, the level of prejudice against these targets should be lower among East Asians relative to Westerners. However, in the third chapter of this dissertation, we showed that the mean prejudice against Muslims and Africans was higher in Taiwan compared to Belgium. Finally, in the first chapter, we also showed that East Asian religiosity was negatively related with prejudice against a fictitious religious group. This group was obviously unfamiliar and should not represent a threat. A similar study ran in several Western countries, however, revealed that religiosity was associated with prejudice even against this fictitious religious group (Van Pachterbeke & Saroglou, personal communication). It seems then that the relationship between East Asian religiosity and low prejudice is real and not an artifact due to the unfamiliar and non-threatening character of the target. Nevertheless, the extent to which the target is considered as a threat might moderate the relationship between religiosity and prejudice as well as the potential impact of East Asian religious concepts on prejudice. This issue will be discussed in the future directions' section.

Third, the way religion is conceived and the way people deal with religion is very different in the East Asian world compared to the Western world. One should thus be extremely cautious when interpreting comparisons between East Asian

religions and Christianity. East Asian countries, and more specifically Taiwan, experience a polytheistic approach to religion and people often worship gods and goddesses from distinct religious traditions such as Taoism, Buddhism, or Chinese Folk religion (Kuo, 2008). Most of the population in Taiwan is polytheist. With the exception of Christians who are supposed to be monotheists and who represent 5% of the population, the Taiwanese often worship deities from different religious traditions as reflected by the many temples in the country housing Buddhist figures alongside popular gods and goddesses as well as Taoist priests (Gries et al., 2012). Believing in Taoism, folk religion and Buddhism was indeed found to be strongly correlated whereas believing in Christianity was unrelated with other belief systems. Nevertheless, when comparing the exact beliefs of people who claimed to be mostly Taoist, Buddhist, Folk believers or Christians, Gries and colleagues found that even Christians are not monotheists, strictly speaking, since they also believe in precepts coming from East Asian religious tradition (with strictly Christian beliefs only representing around 50% of their actual beliefs).

In this context, it might be problematic to measure religiousness in East Asia as we do in Western monotheistic contexts (Cadge, Levitt, & Smilde, 2011). Following the suggestion of Gries and colleagues (2012), questions regarding religiosity and especially religious affiliation should be adapted to polytheistic contexts. In the present studies, we mainly used religious scales used in the Western monotheistic context, even if we adapted these scales to avoid certain words such as “God” or “Satan”. Furthermore, we asked participants to report only one religious affiliation, the most salient one. The distinctions obtained may thus be artificial and we should keep this limitation in mind when interpreting the results. Nevertheless, in most studies, East Asian religiosity and its association with prejudice was measured in the general sample and not as a function of different religious affiliations. This issue reminds us of the importance of the development of specific measurement instruments when researchers investigate a very different religious and cultural world.

Fourth, in the studies carried out in this dissertation, we mainly used two measures of prejudice: a measure of social distance (“Would you like to have this person as a neighbor, political representative, husband or wife?”) and an Implicit Association Test (IAT). Prejudice, however, can be measured using other scales such as thermometer items or the Modern Racism Scale (for a review see Correll et al., 2010). In Chapter 3, other measures of prejudice were used, such as negative affect (thermometer items) and social condemnation, but these measures were unrelated to East Asian religiosity. Only social distance and the IAT were thus found to be negatively related with East Asian religiosity. Furthermore, in the first study described in Chapter 5, we additionally used a scale measuring Islamophobia and found that Buddhist concepts decreased this measure. In sum, Buddhist concepts were found to decrease social distance, implicit prejudice (using IAT), and Islamophobia. Once again, one must be careful when claiming that East Asian

religiosity and religious concepts undermine prejudice. Even if it seems clear that, at an explicit level, East Asian religiosity and religious concepts favor the ability to live with outgroup members, it is still not clear whether this might also favor positive affects toward outgroup members.

Furthermore, in our attempt to measure implicit prejudice, we choose to use the Implicit Association Test (IAT) since it has become the most widely used measure of implicit prejudice (Greenwald et al., 1998). The underlying assumption of the IAT is that people should respond more quickly to stimuli with compatible rather than incompatible associations. For instance, as an indication of prejudice attitudes toward Black people, White individuals should categorize white faces more quickly with positive words as well as black faces with negative words rather than white faces with negative words and black faces with positive words. The IAT is one of the most widely used measures of implicit prejudice and shows adequate test-retest reliability (Nosek, Greenwald, & Banaji, 2007) as well as satisfactory predictive validity (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Nevertheless, the implicit association test, as well as implicit measures in general, faces several criticisms regarding its psychometric properties (Fielder, Messner, & Bluemke, 2006). Among several other problems, researchers have cited the lack of a testable model underlying IAT-based inferences, the susceptibility of the IAT to deliberate faking, and the difficulty to interpret a difference score in terms of outgroup prejudice or ingroup favoritism. Furthermore, scholars have also debated whether the implicit measures really assess an individual's evaluation of the association between two targets (Fazio, 1993; Greenwald & Banaji, 1995) or culturally shared associations (Bargh, Chaiken, Govender, & Pratto, 1992; Devine, 1989; Karpinski and Hilton, 2001; Olson & Fazio, 2004). Other researchers have also argued that implicit and explicit measures reflect different components of a system of dual attitudes (Wilson, Lindsey, & Schooler, 2000). It might then be interesting to compare the results obtained with the IAT with other implicit measures of prejudice such as the evaluative priming or the affect misattribution procedure (Fazio, Jackson, Dunton, & Williams, 1995; Payne, Cheng, Govorum, & Stewart, 2004).

Finally, the effect sizes of the mediations described in our studies were, overall, small to moderate, suggesting that other mediators should be tested to fully understand the relationships observed. While East Asian religiosity and religious concepts raise the relative tolerance toward contradictory elements as well as prosocial tendencies for compassion, these two constructs are not the only valuable mediators explaining the East Asian religions' tolerance. For instance, we think that the role of underlying emotions or the threatening character of the targets may be promising indications which may help explain the level of tolerance observed. Other possible mediators will be presented and discussed below. In the next last section, future directions in the research on religion and prejudice will be discussed as well as possible implications of our findings. We will additionally highlight the relevance of our work for the fields of cross-cultural psychology as well as for the psychology

of religion.

4. Future directions and implications

Inspired directly from the limitations section, future research should manipulate the threatening character of the outgroup. As previously stated, Muslims or Africans may not represent a threat for East Asian believers. Since Muslims and Africans are neither highly visible nor numerous, they are less likely to threaten, symbolically or economically, religious people in East Asian countries. Research has indeed consistently shown that the perception of an outgroup as threatening for symbolic or economic resources dramatically increases prejudice (Stephan & Stephan, 2000). It might thus be highly interesting to select an outgroup perceived as a greater threat or even to experimentally manipulate the threatening character of a target. For instance, due to historical events, Japanese and Chinese might be seen as threatening for the Taiwanese since they have both invaded and occupied Taiwan. It could therefore be interesting to investigate whether East Asian religiosity or religious concepts still predict low prejudice against these targets. In other words, future research should check whether the tolerance toward religious and ethnic outgroups as a function of East Asian religions is unlimited or conditional to the threatening character of the outgroup.

In the limitations section, the relatively small explanatory power of the mediation models was highlighted, leaving room for other mechanisms to explain East Asian religions' tolerance. We think that one additional possible mechanism deserving further investigations is the underlying role of emotions. On one hand, throughout studies, prejudice has been showed to be often fueled by high arousal negative emotions like fear or anger (Cottrell & Neuberg, 2005; Smith & Mackie, 2010). For instance, anger-prone white individuals were more prejudiced toward African-Americans (Cottrell & Neuberg, 2005; Vanman, Saltz, Nathan, Warren, 2004). On the other hand, existing research suggests that culture may deeply influence people's emotional experience (see Heine, 2012). In some cultural contexts, the expression of intense or high arousal emotions may be problematic for fitting in well with others. This is particularly the case in collectivist cultures which avoid the expression of interpersonally disruptive emotions such as anger. For example, East Asians have been shown to experience anger less intensely compared to Americans (Anderson & Linden, 2006). Furthermore, Tsai and colleagues (2006) found that people in collectivist cultures place more value on more low arousal positive affects (e.g., calmness, peacefulness) whereas people in individualist cultures value more high arousal positive affects (e.g., excitement, enthusiasm) to a greater degree. In the same vein, the ideal positive affect valued in a Buddhist context, compared to a Christian Protestant context, is characterized by low arousal rather than high arousal (Tsai et al. 2006; Tsai et al., 2007). In accordance, cultures

valuing low arousal positive affects should avoid high arousal negative affects (e.g., anger, fear) to a greater extent. Tsai and colleagues (2007) indeed found that Buddhists devalued more high arousal negative affects compared to Christians. Therefore, given the fact that prejudice is often fueled by high arousal negative emotions and that East Asian cultures and religions are less favorable of these kinds of emotions, it is reasonable to hypothesize that East Asian religions may lead to weak prejudice because of the underlying role of emotions.

Across studies in this dissertation, only prejudiced attitudes were measured and found to be negatively related with East Asian religiosity and religious priming. Nevertheless, one might ask whether this negative association may extend to behavior. In other words, do East Asian religions also have an impact on discrimination? Even if our results regarding prejudiced attitudes are not likely to be due to social desirability since both explicit and implicit measures were used, low prejudiced attitudes do not necessarily equate to low discriminatory behavior. Whereas prejudice and stereotypes are related to, and may affect, discriminatory behavior, discrimination is multiply determined and uniquely difficult to capture (Correll et al., 2010). Deciding, for instance, to help a Muslim depends not only on the attending stereotypes and prejudiced attitudes you have regarding Muslims but also on how busy you are, how capable you feel to help, how benevolent you are, and so on. In sum, there are plenty of other variables that may affect discriminatory behavior besides prejudice and stereotypes. Furthermore, the qualification of a behavior as discriminatory strongly depends on the attributions that a perceiver makes for a given behavior. In accordance, some will judge a behavior as discriminatory whereas other will not. Given the higher complexity of discrimination compared with prejudice, it is challenging to investigate whether low prejudice attitudes as a function of East Asian religiosity and religious concepts may translate into low discriminatory behavior (e.g., hiring outgroup members, allocation of resources to outgroup members, aggression of outgroup members) and under which conditions.

In the two last empirical chapters, Buddhism was primed using Buddhist words and concepts. East Asian religious concepts thus really cause prosocial and low prejudiced attitudes but we do not know whether East Asian religiosity may cause such attitudes. Future research should then elucidate this question by priming East Asia religious affiliation, religiosity, or even religious practice in order to investigate whether the effects are similar or different. For instance, Ginges and colleagues (2009) found that priming the frequency of prayer versus synagogue attendance had opposite effects on support for suicide attacks. While participants primed with the frequency of prayer were less likely to support such attacks compared to a control condition, participants primed with synagogue attendance were more likely to support suicide attacks. In this context, it would be particularly interesting to investigate the effects of the exposure to different religious dimensions, not only to religious concepts in general. Even if we hypothesized that East Asian religions

should promote tolerance in general, we cannot exclude the possibility that specific dimensions of religion or religiosity (such as fundamentalism or extrinsic religiosity) may not have such a positive impact on prejudiced attitudes.

Finally, future studies should focus additionally on how religiosity functions in East Asian cultural contexts in general. Indeed, as mentioned in the introduction, we know next to nothing about the functions, correlates, and psychological implications of East Asian religiosity. From scarce previous literature and our empirical findings, it appears that religiosity in the East functions differently from religiosity in the West (Christianity). Contrary to Christian religiosity, East Asian religiosity does not function as a control mechanism (Sasaki & Kim, 2011), does not relate to the need for closure (Saroglou & Dupuis, 2006) or authoritarianism (see Chapter 1) but relates rather to the tolerance of contradiction (see Chapter 3), and relates positively with universalism in the West (Saroglou & Dupuis, 2006). Even if several similarities between Christian and East Asian religiosities may be found (both relate to tradition and conservatism), the differences found suggest that East Asian religiosity should be investigated more in depth and not from a West-oriented perspective. We are convinced that a more thorough investigation of the specific case of East Asian religiosity will provide us with a more complex and accurate understanding of the religious phenomenon in general.

It is our impression that this doctoral dissertation tackles key issues within the broad domain of psychology for at least three reasons. First, in the current context of globalization, individuals from different cultural and religious groups must inevitably live and work together. Intergroup contacts have become increasingly frequent and can sometimes lead to prejudiced attitudes and intergroup anxiety (see Dovidio, Hewstone, Glick, & Esses, 2010). It is thus particularly important to better understand how prejudiced attitudes emerge across religious and cultural contexts. Furthermore, how prejudiced attitudes and conflicts in the name of religion are shaped is a fundamental question since religious radicals continue to preach hatred throughout the world. This dissertation provides us with a better understanding of the mechanisms involved in the prejudice shaped by religions and allows us to hope that religion, by definition, does not fuel prejudice. Indeed, East Asian religions promote tolerance toward other ethnic and religious groups (possibly even toward homosexuals). The main reason for this difference between Abrahamic and East Asian religions is a higher tolerance of contradictory elements. Therefore, religious leaders should encourage their followers to approach the world in a dialectical way by teaching them that seemingly contradictory elements are actually interrelated and necessary to each other. We are convinced that a way to overcome religious hatred and prejudice is through a better understanding of how some religions in the world may foster tolerance.

Second, it is also our impression that these studies contribute significantly to the body of research in cross-cultural psychology. Cross-religious differences are indeed an important part of cross-cultural psychology but are often understudied. From our

perspective, religions are cultural systems as they comprise an integrated set of ideas, rituals, and practices (Cohen, 2009; Saroglou & Cohen, 2013). Furthermore, as mentioned earlier, religions, as other aspects of culture, deeply influence people's behaviors and attitudes. It seems interesting therefore to include between-ethnic/civilizational group religious differences/similarities as an important domain of investigation within cross-cultural psychology. According to our perspective, it is particularly important to keep in mind that the majority of research within the domain of cross-cultural psychology (including cognition, emotions, modes of being, and so on) barely compares Westerners to East Asians. These two groups are indeed characterized by distinct cultural syndromes (individualism versus collectivism) but they are also characterized by two distinct religious traditions. Whereas most Westerners were raised in a Christian tradition, East Asians' education is rooted in a blend of Taoism, Buddhism, and Confucianism. In other words, the differences observed between Westerners and East Asians inspiring most cross-cultural theories may be due to cultural syndromes but may also be due to their different religious backgrounds. In order to clear up the possible overlap between culture and religion, it is our opinion that cross-religious differences should be included and investigated more often in cross-cultural studies.

Finally, this dissertation represents a major breakthrough in the field of psychology of religion. These ten studies provide strong evidence suggesting that the functioning of religion and religiosity are not universal. First, the paradoxical role of religion, promoting both prosociality and prejudice, is not universal and does not extend to East Asian religions. East Asian religiosity, as well as religious concepts, indeed promotes prosociality but undermines prejudice. Second, East Asian religions are not related to the same variables as Christianity. For instance, Buddhist/Taoist religiosity is related to the tolerance of contradiction (see Chapter 3) and universalism (Saroglou & Dupuis, 2006) but unrelated to the need for closure (Saroglou & Dupuis, 2006), authoritarianism (see Chapter 1), or disgust sensitivity (see Chapter 3). In sum, even if some traits seems to be universal across religious faiths (e.g., traditionalism, conservatism, prosociality), all religions do not function in the same way, do not fulfill the same roles, and do not fuel similar attitudes and behavior. One should be aware of these important differences when investigating religious correlates in different cultural and religious contexts.

REFERENCES

References

- Abel, T. M., & Hsu, F. I. (1949). Chinese personality revealed by the Rorschach. *Rorschach Research Exchange*, 13, 285-301.
- Abelson, R. P., & Prentice, D. A. (1997). Contrast tests of interaction hypotheses. *Psychological Methods*, 2, 315-328.
- Ahern, E. M. (1981). *Chinese ritual and politics*. New York, NY: Cambridge University Press.
- Ahmed, A. M., & Salas, O. (2011). Implicit influences of Christian religious representations on dictator and prisoner's dilemma game decisions. *Journal of Socio-Economics*, 40, 242-246.
- Akrami, N., Ekehammar, B., & Bergh, R. (2011). Generalized prejudice: Common and specific components. *Psychological Science*, 22, 57-59.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Altemeyer, B. (1996). *The authoritarian specter*. Cambridge, MA: Harvard University Press.
- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *The International Journal for the Psychology of Religion*, 2, 113-133.
- Altemeyer, B., & Hunsberger, B. (2004). A revised religious fundamentalism scale: The short and sweet of it. *International Journal for the Psychology of Religion*, 14, 47-54.
- Alter, A. L., & Kwan, V. S. Y. (2009). Cultural sharing in a global village: Evidence for extracultural cognition in European Americans. *Journal of Personality and Social Psychology*, 96, 742-760.
- Anderson, J. C., & Linden, W. (2006). *The influence of culture on cardiovascular response to anger*. Poster session presented at the annual meeting of the American Psychosomatic Society, Denver, CO.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal for Personality and Social Psychology*, 63, 596-612.
- Asbrock, F., Sibley, C. G., & Duckitt, J. (2010). Right-wing authoritarianism and social dominance orientation and the dimensions of generalized prejudice: A longitudinal test. *European Journal of Personality*, 24, 324-340.
- Bainbridge, W. S. (2004). After the New Age. *Journal for the Scientific Study of Religion*, 40, 381-394.
- Baity, P. C. (1975). *Religion in a Chinese town*. Taipei, TW: Chinese Association for Folklore.

- Bargh, J. A. (2006). What have we been priming all these years? On the development, mechanisms and ecology of nonconscious social behavior. *European Journal of Social Psychology*, 36, 147-168.
- Bargh, J. A., & Barndollar, K. (1996). Automaticity in action: The unconscious as repository of chronic goals and motives. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 457-481). New York, NY: Guilford.
- Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253-285). New York, NY: Cambridge University Press.
- Bargh, J. A., Chaiken, S., Govender, R., & Pratto, F. (1992). The generality of the automatic attitude activation effect. *Journal of Personality and Social Psychology*, 62, 893-912.
- Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Trötschel, R. (2001). The automated will: Nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology*, 81, 1014-1027.
- Batson, C. D. (1983). Sociobiology and the role of religion in promoting prosocial behavior: An alternative view. *Journal of Personality and Social Psychology*, 45, 1380-1385.
- Batson, C. D., Flink, C. H., Schoenrade, P. A., Fultz, J., & Pych, V. (1986). Religious orientation and overt versus covert racial prejudice. *Journal of Personality and Social Psychology*, 50, 175-181.
- Batson, C. D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology*, 73, 495-509.
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social-psychological perspective*. New York, NY: Oxford University Press.
- Batson, C. D., & Shaw, L. L. (1991). Evidence for altruism: Toward a pluralism of social motives. *Psychological Inquiry*, 2, 107-122.
- Beech, H. (2013). The face of Buddhist terror. *Time Magazine*, 182, 1.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. Berkeley, CA: University of California Press.
- Belzen, J. A. (2010). *Towards cultural psychology of religion: Principles, approaches, applications*. New York, NY: Springer.

References

- Bernhard, H., Fischbacher, U., & Fehr, E. (2006). Parochial altruism in humans. *Nature*, 442, 912-915.
- Blogowska, J., & Saroglou, V. (2011). Religious fundamentalism and limited prosociality as a function of the target. *Journal for the Scientific Study of Religion*, 50, 44-60.
- Blogowska, J., & Saroglou, V. (2013). For better or worse: Fundamentalists' attitudes toward outgroups as a function of exposure to authoritative religious texts. *International Journal for the Psychology of Religion*, 23, 103-125.
- Bomhoff, E. J., & Gu, M. M. L. (2012). East Asia remains different: A comment on the index of "self-expression values" by Inglehart and Welzel. *Journal of Cross-Cultural Psychology*, 43, 373-383.
- Bond, M. H., & Hewstone, M. (1988). Social identity theory and the perception of intergroup relations in Hong Kong. *International Journal of Intercultural Relations*, 12, 153-170.
- Bower, B. (2012). The Hot and Cold of Priming. *Science News*. Retrieved from: http://www.sciencenews.org/view/feature/id/340408/description/The_Hot_and_Cold_of_Priming
- Brandt, M. J., & Renya, C. (2010). The role of prejudice and the need for closure in religious fundamentalism. *Personality and Social Psychology Bulletin*, 36, 715-725.
- Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 554-594). New York, NY: Oxford University Press.
- Brown, R. J. (2010). *Prejudice: Its social psychology* (2nd ed.). Oxford, UK: Blackwell.
- Bushman, B. J., Ridge, R. D., Das, E., Key, C. W., & Busath, G. L. (2007). When God sanctions killing: Effect of scriptural violence on aggression. *Psychological Science*, 18, 204-207.
- Cadge, W., Levitt, P., & Smilde, D. (2011). De-centering and re-centering: Rethinking concepts and methods in the sociological study of religion. *Journal for the Scientific Study of Religion*, 50, 437-49.
- Carpenter, T. P., & Marshall, M. A. (2009). An examination of religious priming an intrinsic religious motivation in the moral hypocrisy paradigm. *Journal for the Scientific Study of Religion*, 48, 386-393.
- Chiu, C.-Y., Gries, P., Torelli, C. J., & Cheng, S. Y. Y. (2011). Toward a social psychology of globalization. *Journal of Social Issues*, 67, 663-676.

- Choi, I., Koo, M., & Choi, J. A. (2007). Individual differences in analytic versus holistic thinking. *Personality and Social Psychology Bulletin*, 33, 691-705.
- Choi, I., Nisbett, R. E., & Norenzayan, A. (1999). Causal attribution across cultures: Variation and universality. *Psychological Bulletin*, 125, 451-471.
- Clobert, M., & Saroglou, V. (2013a). Intercultural non-conscious influences: Prosocial effects of Buddhist priming on Westerners of Christian tradition. *International Journal for Intercultural Relations*, 37, 459-466.
- Clobert, M., & Saroglou, V. (2013b). Religion, Magical Thinking, and Distrust in Science: Comparing East versus West. Manuscript submitted for publication.
- Clobert, M., Saroglou, V., Hwang, K-K., & Soong, W-L. (2013). East Asian religious tolerance: A myth or a reality? Empirical investigations of religious prejudice in East Asian societies. Manuscript submitted for publication.
- Cohen, A. B. (2009). Many forms of culture. *American Psychologist*, 64, 194-204.
- Cohen, A. B., Malka, A., Hill, E. D., Thoemmes, F., Hill, P. C., & Sundie, J. M. (2009). Race as a moderator of the relationship between religiosity and political alignment. *Personality and Social Psychology Bulletin*, 35, 271-282.
- Collins, F. S. (2006). *The language of God: A scientist presents evidence for belief*. New York, NY: The Free Press.
- Colzato, L., Hommel, B., van den Wildenberg, W., & Hsieh, S. (2010). Buddha as an eye opener: A link between prosocial attitude and attentional control. *Frontiers in Psychology*, 1, 156.
- Correll, J., Judd, C. M., Park, B., & Wittenbrink, B. (2010). Measuring prejudice, stereotypes and discrimination. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The SAGE handbook of prejudice, stereotyping and discrimination* (pp. 45-62). New Delhi, India: SAGE.
- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to "prejudice". *Journal of Personality and Social Psychology*, 88, 770-789.
- Cuddy, A. J. C., Fiske, S. T., Kwan, V. S. Y., Glick, P., Demoulin, S., Leyens, J-P., et al. (2009). Stereotype content model across cultures: Toward universal similarities and some differences. *British Journal of Social Psychology*, 48, 1-33.
- Davidson, R. J., & Harrington, A. (Eds.). (2002). *Visions of compassion: Western scientists and Tibetan Buddhists examine human nature*. New York, NY: Oxford University Press.
- Davidson, L. A., Pettis, C. T., Joiner, A. J., Cook, D. M., & Klugman, C. M. (2010). Religion and conscientious objection: A survey of pharmacists' willingness to dispense medications. *Social Science and Medicine*, 71, 161-165.

References

- Dawkins, R. (2006). *The God delusion*. New York, NY: Houghton Mifflin.
- Denny, F., & Smart, N. (2007). *Atlas of world's religions*. New York, NY: Oxford University Press.
- Detenber, B. H., Cenite, M., Ku, M. K. Y., Ong, C. P. L., Tong, H. Y., & Yeow, M. L. H. (2007). Singaporeans' attitudes toward lesbians and gay men and their tolerance of media portrayals of homosexuality. *International Journal of Public Opinion Research*, 19, 367-379.
- de Tocqueville, A. (1969). *Democracy in America* (G. Lawrence, Trans). Garden City, NY: Anchor Books. (Original work published 1835)
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56, 5-18.
- Dillon, M., Wink, P., & Fay, K. (2003). Is spirituality detrimental to generativity? *Journal for the Scientific Study of Religion*, 42, 427-442.
- Donahue, M. J. (1985). Intrinsic and extrinsic religiousness: Review and meta-analysis. *Journal of Personality and Social Psychology*, 48, 400-419.
- Donahue, M. J. (1993). Prevalence and correlates of New Age beliefs in six protestant denominations. *Journal for the Scientific Study of Religion*, 32, 177-184.
- Dovidio, J. F., & Gaertner, S. L. (2004). Aversive racism. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 36, pp. 1-52). San Diego, CA: Academic Press.
- Dovidio, J. F. & Gaertner, S. L. (2010). Intergroup bias. In S. T. Fiske, D. T. Gilbert & G. Lindzey (Eds.), *Handbook of social psychology* (Vol. 2, pp. 1084-1121). New York, NY: Wiley.
- Dovidio, J. F., Hewstone, M., Glick, P., & Esses, V. (Eds.). (2010). *Handbook of prejudice, stereotyping, and discrimination*. Thousand Oaks, CA: Sage.
- Doyen, S., Klein, O., Pichon, C. L., & Cleeremans, A. (2012). Behavioral priming: it's all in the mind, but whose mind? *PLoS One*, 7, e29081.
- Duckitt, J., & Sibley, C. G. (2007). Right wing authoritarianism, social dominance orientation and the dimensions of generalized prejudice. *European Journal of Personality*, 21, 113-130.
- Duckitt, J., & Sibley, C. G. (2010). Personality, ideology, prejudice, and politics: A dual process motivational model. *Journal of Personality*, 78, 1861-1894.
- Duriez, B. (2003). Vivisecting the religious mind: Religiosity and motivated social cognition. *Mental Health, Religion, and Culture*, 6, 79-86.

- Durkheim, E. (1964). *The elementary forms of the religious life*. London, UK: George Allen & Unwin. (Original work published 1915).
- Edgell, P., Gerteis, J., & Hartmann, D. (2006). Atheists as “other”: Moral boundaries and cultural membership in American society. *American Sociological Review*, 71, 211-34.
- Ekehammar, B., & Akrami, N. (2003). The relation between personality and prejudice: A variable- and a person-centered approach. *European Journal of Personality*, 17, 449-464.
- Emmons, C. F., & Sobal, J. (1981). Paranormal beliefs: Functional alternatives to mainstream religion? *Review of Religious Research*, 22, 301-312.
- European Values Study 2008: Integrated Dataset (EVS 2008). GESIS Data Archive, Cologne. ZA4800 Data file Version 3.0.0
- Evans, J. H. (2011). Epistemological and moral conflict between religion and science. *Journal for the Scientific Study of Religion*, 50, 707-727.
- Fazio, R. H. (1993). Variability in the likelihood of automatic attitude activation. *Journal of Personality and Social Psychology*, 64, 753-758.
- Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, 69, 1013-1027.
- Fazio, K. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology*, 54, 297-327.
- Fielder, K., Messner, C., & Bluemke, M. (2006). Unresolved problems with the “I”, the “A”, and the “T”: A logical and psychometric critique of the Implicit Association Test (IAT). *European Review of Social Psychology*, 17, 74-147.
- Fishbach, A., Friedman, R. S., & Kruglanski, A. W. (2003). Leading us not into temptation: Momentary allurements elicit overriding goal activation. *Journal of Personality and Social Psychology*, 84, 296-309.
- Fiske, S. T. (1998). Stereotyping, prejudice and discrimination. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 357-412). New York, NY: McGraw-Hill.
- Fiske, S. T. (2000). Interdependence and the reduction of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 115-135). Mahwah, NJ: Lawrence Erlbaum.
- 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.

References

- Flanagan, O. (2011). *The Bodhisattva's brain: Buddhism naturalized*. Cambridge, MA: MIT Press.
- Flanagan, O. (2013). The view from the East pole: Buddhist and Confucian tolerance. In S. Clarke, R. Powell, & J. Savulescu (Eds.), *Religion, intolerance, and conflict* (pp. 201-220). Oxford, UK: Oxford University Press.
- Frazer, J. G. (1963). *The golden bough: A study in magic and religion*. New York, NY: Maximilian.
- Fujimoto, Y., & Härtel, C. E. J. (2004). Culturally specific prejudices: Interpersonal prejudices of individualists and intergroup prejudices of collectivists. *Cross Cultural Management*, 11, 54-69.
- Funke, F. (2005). The dimensionality of right-wing authoritarianism: Lessons from the dilemma between theory and measurement. *Political Psychology*, 26, 195-218.
- Gaertner, S. L., & McLaughlin, J. P. (1983). Racial stereotypes: Associations and ascriptions of positive and negative characteristics. *Social Psychology Quarterly*, 46, 23-40.
- Galen, L. W. (2012). Does religious belief promote prosociality? A critical examination. *Psychological Bulletin*, 138, 876-906.
- Gervais, W. M. (2008). *Do you believe in atheists? Trust and anti-atheists prejudice*. (Doctoral dissertation). Retrieved from: https://circle.ubc.ca/bitstream/handle/2429/1549/ubc_2008_fall_gervais_will.pdf?sequence=1
- Gervais, W. M. (2013). In Godlessness we distrust: Using social psychology to solve the puzzle of anti-atheist prejudice. *Social and Personality Psychology Compass*, 7, 366-377.
- Gervais, W. M., & Norenzayan, A. (2012). Analytic thinking promotes religious disbelief. *Science*, 336, 493-496.
- Gervais, W. M., Shariff, A. F., & Norenzayan, A. (2011). Do you believe in atheists? Distrust is central to anti-atheist prejudice. *Journal of Personality and Social Psychology*, 101, 1189-1206.
- Ginges, J., Hansen, I., & Norenzayan, A. (2009). Religion and support for suicide attacks. *Psychological Science*, 20, 224-230.
- Gladney, D. C. (2003). Islam in China: Accommodation or Separatism? *The China Quarterly*, 117, 451-467.
- Glendinning, T. (2006). Religious involvement, conventional Christian, and unconventional nonmaterialist beliefs. *Journal for the Scientific Study of Religion*, 45, 585-95.

- Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: An evolutionary analysis and empirical review. *Psychological Bulletin*, 136, 351-374.
- Goldberg, E. (2006). Buddhism in the West: Transplantations and innovations. In S. C. Berkwitz (Ed.), *Buddhism in world cultures: Comparative perspectives*. Santa Barbara, CA: ABC-CLIO.
- Goode, E. (2000). *Paranormal beliefs: A sociological introduction*. Prospect Heights, IL: Waveland Press.
- Goodman, C. (2009). *Consequences of compassion: An interpretation and defense of Buddhist ethics*. New York, NY: Oxford University Press.
- Graham, J., & Haidt, J. (2010). Beyond beliefs: Religions bind individuals into moral communities. *Personality and Social Psychology Review*, 14, 140-150.
- Greenberg, J., Arndt, J., Simon, L., Pyszczynski, T., & Solomon, S. (2000). Proximal and distal defenses in response to reminders of one's mortality: Evidence of a temporal sequence. *Personality and Social Psychology Bulletin*, 26, 91-99.
- Greenwald, A. G., & Banaji, M. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27.
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, 74, 1464-1480.
- Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I An improved scoring algorithm. *Journal of Personality and Social Psychology*, 85, 197-216.
- Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, 97, 17-41.
- Gries, P., Su, J., & Schak, D. (2012). Toward the scientific study of polytheism: Beyond forced-choice measures of religious belief. *Journal for the Scientific Study of Religion*, 51, 623-637.
- Habito, R. L. F., & Inaba, K. (Eds.). (2006). *The practice of altruism: Caring and religion in global perspective*. Cambridge, UK: Cambridge Scholars Press.
- Haidt, J., McCauley, C., & Rozin, P. (1994). Individual differences in sensitivity to disgust: A scale sampling seven domains of disgust elicitors. *Personality and Individual Differences*, 16, 701-713.

References

- Haidt, J., Rozin, P., McCauley, C., & Imada, S. (1997). Body, psyche, and culture: The relationship between disgust and morality. *Psychology and Developing Societies*, 9, 107-131.
- Hall, D., Matz, D. C., & Wood, W. (2010). Why don't we practice what we preach? Social-cognitive motives behind religious racism. *Personality and Social Psychology Review*, 14, 126-139.
- Hamamura, T., (2012). Are cultures becoming individualistic? A cross-temporal comparison of individualism-collectivism in the U.S. and Japan. *Personality and Social Psychology Review*, 16, 3-24.
- Hansen, C. (1992). *A Daoist theory of Chinese thought: A philosophical interpretation*. New York, NY: Oxford University Press.
- Haraldsson, E., & Houtcooper, J. M. (1996). Traditional Christian beliefs, spiritualism, and the paranormal: An Icelandic-American comparison. *The International Journal for the Psychology of Religion*, 6, 51-64.
- Harris, S. (2004). *The end of faith: Religion, terror and the future of reason*. New York, NY: Norton.
- Harvey, P. (1990). *An introduction to Buddhism: Teachings, history, and practices*. Cambridge, UK: Cambridge University Press.
- Hayes, A.F. (2013). *An introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Hayes, A. F., & Preacher, K., J. (2013). Statistical mediation analysis with a multicategorical independent variable. Unpublished white paper.
- Heft, J. L. (2002). Catholicism and science: Renewing the conversation. *Journal of Ecumenical Studies*, 39, 376-380.
- Heine, S. J. (2012). Emotions. In S. J. Heine (Ed.), *Cultural psychology* (pp. 528-567). New York, NY: Norton.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33, 61-83.
- Hess, D. J. (1993). *Science in the New Age: The paranormal, its defenders and debunkers, and American culture*. Madison, WI: University of Wisconsin Press.
- Hewstone, M., Islam, M. R., & Judd, C. M. (1993). Models of crossed categorization and intergroup relations. *Journal of Personality and Social Psychology*, 64, 779-793.
- Hill, E. D., Cohen, A. B., Terrell, H. K., & Nagoshi, C. T. (2010). The role of social cognition in the religious fundamentalism-prejudice relationship. *Journal for the Scientific Study of Religion*, 49, 724-739.

- Hodson, G., & Costello, K. (2007). Interpersonal disgust, ideological orientations, and dehumanization as predictors of intergroup attitudes. *Psychological Science*, 18, 691-698.
- Hofstede, G. H. (1984). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hood, R. W., Jr., Hill, P. C., & Spilka, B. (2009). *The psychology of religion: An empirical approach* (4th ed.). New York, NY: Guilford Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Hunsberger, B. (1996). Religious fundamentalism, right-wing authoritarianism, and hostility toward homosexuals in non-Christian religious groups. *The International Journal for the Psychology of Religion*, 6, 39-49.
- Hunsberger, B., & Jackson, L. M. (2005). Religion, meaning, and prejudice. *Journal of Social Issues*, 61, 807-826.
- Hwang, K. K. (1999). Filial piety and loyalty: Two types of social identification in Confucianism. *Asian Journal of Social Psychology*, 2, 163-183.
- Hwang, K. K. (2012). *Foundations of Chinese psychology: Confucian social relations*. New York, NY: Springer.
- Inbar, Y., Pizarro, D. A., Knobe, J., & Bloom, P. (2009). Disgust sensitivity predicts intuitive disapproval of gays. *Emotion*, 9, 435-439.
- Inglehart, R., & Baker, W. E. (2000). Modernization, globalization and the persistence of tradition: Empirical evidence from 65 societies. *American Sociological Review*, 65, 19-55.
- Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change and democracy: The human development sequence*. New York: Cambridge University Press.
- International Social Survey Program. (2008). ISSP: Religion III, 2008. GESIS Cologne, Germany ZA4950 Data file Version 2.0.0.
- Inzlicht, M., & Tullet, A. M. (2010). Reflecting on God: Religious primes can reduce neurophysiological response to errors. *Psychological Science*, 21, 1-7.
- Ito, T. A., & Cacioppo, J. T. (2007). Attitudes as mental and neural states of readiness: Using physiological measures to study implicit attitudes. In B. Wittenbrink & N. Schwarz (Eds.), *Implicit measures of attitudes* (pp. 125-158). New York, NY: Guilford Press.
- Jackson, L. M., & Hunsberger, B. (1999). An intergroup perspective on religion and prejudice. *Journal for the Scientific Study of Religion*, 38, 509-523.

References

- Jayatilake, K. N. (1975). *The Buddhist attitude to other religions*. Kandy, Sri Lanka: Buddhist Publication Society (Original work published 1966).
- Ji, L. J. (2008). The leopard cannot change his spots, or can he? Culture and the development of lay theories of change. *Personality and Social Psychology Bulletin*, 34, 613-622.
- Ji, L. J., Lee, A., & Guo, T. (2010). The thinking style of Chinese people. In M. H. Bond (Ed.), *The Oxford handbook of Chinese psychology* (pp. 155-167). New York, NY: Guilford Press.
- Ji, L.-J., Peng, K., & Nisbett, R. E. (2000). Culture, control, and perception of relationships in the environment. *Journal of Personality and Social Psychology*, 78, 943-955.
- Johnson, K. A., & Cohen, A. B. (2013). The relation between religious and national cultures. In V. Saroglou (Ed.), *Religion, personality, and social behavior*. New York, NY: Psychology Press.
- Johnson K. A., Li, Y. J., Cohen, A. B., & Okun, M. A. (2013). Friends in high places: The influence of authoritarian and benevolent god-concepts on social attitudes and behaviors. *Psychology of Religion and Spirituality*, 5, 15-22.
- Johnson, M. K. (2012). *Better understanding the paradoxical relationship between religiosity and prejudice through priming religious concepts: An intergroup bias perspective* (Doctoral dissertation). Retrieved from <http://hdl.handle.net/2104/8437>
- Johnson, M. K., Rowatt, W. C., Barnard-Brak, L. M., Patock-Peckham, J. A., LaBouff, J., & Carlisle, R. D. (2011). A mediational analysis of the role of right-wing authoritarianism and religious fundamentalism in the religiosity-prejudice link. *Personality and Individual Differences*, 50, 851-856.
- Johnson, M. K., Rowatt, W. C., & LaBouff, J. (2010). Priming Christian religious concepts increases racial prejudice. *Social Psychological and Personality Science*, 1, 119-126.
- Johnson, M. K., Rowatt, W. C., & LaBouff, J. P. (2012). Religiosity and prejudice revisited: In-group favoritism, out-group derogation, or both? *Psychology of Religion and Spirituality*, 4, 154-168.
- Kahneman, D. (2012). A proposal to deal with questions about priming effects. *Nature*. Retrieved from: http://www.nature.com/polopoly_fs/7.6716.1349271308!/suppinfoFile/Kahneman%20Letter.pdf
- Kanagawa, C., Cross, S. E., & Markus, H.R. (2001). "Who am I?" The cultural psychology of the conceptual self. *Personality and Social Psychology Bulletin*, 27, 90-103.

- Karpinski, A., & Hilton, J. L. (2001). Attitudes and the Implicit Association Test. *Journal of Personality and Social Psychology*, 81, 774-778
- Kashima, Y. (2009). Culture comparison and culture priming: A critical analysis. In R. S. Wyer, C. Y. Chiu, & Y. Y. Hong (Eds.), *Understanding culture: Theory, research, and application* (pp. 53-77). New York, NY: Psychology Press.
- Keinan, G. (1994). Effects of stress and tolerance of ambiguity on magical thinking. *Journal of Personality and Social Psychology*, 67, 48-55.
- King, M., Speck, P., & Thomas, A. (1999). The effect of spiritual beliefs on outcome from illness. *Social Science and Medicine*, 48, 1291-1299.
- Kitayama, S., & Cohen, D. (Eds.). (2007). *Handbook of cultural psychology*. New York, NY: Guilford Press.
- Kitayama, S., Duffy, S., & Uchida, Y. (2007). Self as cultural mode of being. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 136-174). New York: Guilford.
- Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Emotional bases of independent and interdependent selves: Intensity of experiencing engaging and disengaging emotions in the US and Japan. *Journal of Personality and Social Psychology*, 91, 890-903.
- Kohn, L. (1991). *Taoist mystical philosophy: The scripture of Western ascension*. Albany, NY: Suny Press.
- Koenig, H., King, D., & Carson, V. B. (2012). *Handbook of religion and health* (2nd ed.). New York, NY: Oxford University Press.
- Koenig, H. G., McCullough, M. E., & Larson, D. B. (2001). *Handbook of religion and health*. New York, NY: Oxford University Press.
- Kosmin, B. A., & Keysar, A. (2009). *American Religious Identification Survey (ARIS 2008): Summary report*. Hartford, CT: Institute for the Study of Secularism in Society & Culture.
- Kuo, C-T. (2008). *Religion and democratisation in Taiwan*. Albany, NY: State University of New York Press.
- LaBouff, J. P., Rowatt, W. C., Johnson, M. K., & Finkle, C. (2012). Differences in attitudes toward outgroups in religious and nonreligious contexts in a multinational sample: A situational context priming study. *International Journal for the Psychology of Religion*, 22, 1-9.
- Leak, G. K., & Finken, L. L. (2011). The relationship between the constructs of religiousness and prejudice: A structural equation model analysis. *The International Journal for the Psychology of Religion*, 21, 43-62.

References

- Leung, A. K.Y., & Chiu, C.-Y. (2010). Multicultural experience, idea receptiveness, and creativity. *Journal of Cross-Cultural Psychology*, 41, 723-741.
- Lopez, D. S. Jr. (1996). *Religions of China in practice*. Princeton, NJ: Princeton University Press.
- Lopez, D. S. Jr. (2008). *Buddhism and science: A guide for the perplexed*. Chicago, IL: University of Chicago Press.
- Luminet, O. (Ed.). (2012). *Belgique-België: Un état, deux mémoires collectives? [Belgium-Belgium: One state, two collective memories?]*. Wavre, BE: Mardaga.
- MacDonald, D. A. (2000). Spirituality: Description, measurement, and relation to the five-factor model of personality. *Journal of Personality*, 68, 153-197.
- Maciocia, G. (2005). *The foundations of Chinese medicine*. London, UK: Churchill Livingstone.
- Maddux, W. W., & Yuki, M. (2006). The “ripple effect”: Cultural differences in perceptions of the consequences of events. *Personality and Social Psychology Bulletin*, 32, 669-683.
- Ma-Kellams, C., Spencer-Rodgers, J., & Peng, K. (2011). I am against us? Unpacking cultural differences in ingroup favoritism via dialecticism. *Personality and Social Psychology Bulletin*, 37, 15-27.
- Malhotra, D. (2010). (When) are religious people nicer? Religious salience and the “Sunday effect” on pro-social behavior. *Judgment and Decision Making*, 5, 138-143.
- Malinowski, B. (1984). *Magic, science, and religion*. Garden City, NY: Doubleday. (Original work published 1948).
- Markstrom, C. A., Huey, E., Stiles, B. M., & Krause, A. L. (2010). Frameworks of caring and helping in adolescence: Are empathy, religiosity, and spirituality related constructs? *Youth and Society*, 42, 59-80.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Marsh, H. W., Hau, Kit-Tai, & Wen, Z. (2004). In search of golden rules: comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler’s (1999) findings. *Structural Equation Modeling*, 11, 320-341.
- Masuda, T., & Nisbett, R. E. (2001). Attending holistically versus analytically: Comparing the context sensitivity of Japanese and Americans. *Journal of Personality and Social Psychology*, 81, 922-934.
- Mauss, M. (2001). *A general theory of magic*. London, UK: Routledge. (Original work published 1950).

- Mavor, K. I. (2004). *Religious orientation, social identity and attitudes to homosexuality* (Doctoral dissertation). Retrieved from <http://espace.library.uq.edu.au/view/UQ:106839>
- Mavor, K. I., & Gallois, C. (2008). Social group and moral orientation factors as mediators of religiosity and multiple attitude targets. *Journal for the Scientific Study of Religion*, 47, 361-377.
- Mavor, K. I., Macleod, C., Boal, M., & Louis, W. (2009). Right-wing authoritarianism, fundamentalism and prejudice revisited: Removing suppression and statistical artifact. *Personality and Individual Differences*, 46, 592-597.
- Maynard, E. A., Gorsuch, R. L., & Bjorck, J. P. (2001). Religious coping style, concept of God, and personal religious variables in threat, loss, and challenge situations. *Journal for the Scientific Study of Religion*, 40, 65-74.
- McConahay, J. B. (1986). Modern racism, ambivalence, and the modern racism scale. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 91-125). Orlando, FL: Academic Press.
- McCullough, M. E., Emons, R.A., & Tsang, J. (2002). A grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 112-127.
- McCullough, M. E., & Worthington, E. L., Jr. (1999). Religion and the forgiving personality. *Journal of Personality*, 67, 1141-1164.
- McCullough, M. E., & Willoughby, B. L. B. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin*, 135, 69-93.
- McFarland, T. J. (2002). *Einstein and the Buddha: Parallel sayings*. Berkeley, CA: Ulysses Press.
- McKay, R., Efferson, C., Whitehouse, H., & Fehr, E. (2011). Wrath of God: Religious primes and punishment. *Proceedings of the Royal Society of London Series B-Biological Sciences*, 278 (1713), 1858-1863.
- McMahan, D. L. (2004). Modernity and the early discourse of scientific Buddhism. *Journal of the American Academy of Religion*, 72, 897-933.
- Meier, B. P., Robinson, M. D., & Wilkowski, B. M. (2006). Turning the other cheek: Agreeableness and the regulation of aggression-related primes. *Psychological Science*, 17, 136-142.
- Meredith, K. L., Jeffe, D. B., Mundy, L. M., & Fraser, V. J. (2001). Sources influencing patients in their HIV medication decisions. *Health Education and Behavior*, 28, 40-50.

References

- Michalak, L., Trocki, K., & Bond, J. (2007). Religion and alcohol in the U. S. National Alcohol Survey: How important is religion for abstention and drinking? *Drug and Alcohol Dependence*, 87, 268-280.
- Miller, L., & Kelley, B. S. (2005). Relationships of religiosity and spirituality with mental health and psychopathology. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 460-478). New York, NY: Guilford Press.
- Miyamoto, Y., & Kitayama, S. (2002). Cultural variation in correspondence bias: The critical role of attitude diagnosticity of socially constrained behavior. *Journal of Personality and Social Psychology*, 83, 1239-1248.
- Monin, B., & Miller, T. (2001). Moral credentials and the expression of prejudice. *Journal of Personality and Social Psychology*, 81, 33-45.
- Mooney, C. (2005). *The Republican war on science*. New York, NY: Basic Books.
- Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices emphasize influence in the United States and adjustment in Japan. *Personality and Social Psychology Bulletin*, 28, 311-323.
- Morris, M. W., & Leung, K. (2000). Justice for all? Progress in research on cultural variation in the psychology of distributive and procedural justice. *Applied Psychology: An International Review*, 49, 100-132.
- 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.
- Navarrete, C. D., & Fessler, D. M. T. (2006). Disease avoidance and ethnocentrism: The effects of disease vulnerability and disgust sensitivity on intergroup attitudes. *Evolution and Human Behavior*, 27, 270-282.
- Nemeroff, C., & Rozin, P. (2000). The makings of the magical mind: The nature and function of sympathetic magical thinking. In K. S. Rosengren, C. N. Johnson, & P. L. Harris (Eds.), *Imagining the impossible: Magical, scientific, and religious thinking in children* (pp. 1-34). New York, NY: Cambridge University Press.
- Neumann, R., Steinhäuser, N., & Roeder, U. R. (2009). How self-construal shapes emotion: Cultural differences in the feeling of pride. *Social Cognition*, 27, 327-337.
- Neusner, J., & Chilton, B. D. (Eds.). (2005). *Altruism in world religions*. Washington, DC: Georgetown University Press.
- Newton, A. T., & McIntosh, D. N. (2009, February). Is the cookie good or is it "good"? The effect of religious imperatives on willingness to pay for a virtuous option. Poster session at the annual Psychology of Religion & Spirituality Preconference of the Society for Personality and Social Psychology, Tampa, FL.

- Nisbett, R. E. (2003). *The geography of thought: How Asian and Westerners think differently...and why*. New York, NY: Free Press.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, 108, 291-310.
- Nonnemaker, J. M., McNeely, C. A., & Blum, R. W. (2003). Public and private domains of religiosity and adolescent health risk behaviors: Evidence from the National Longitudinal Study of Adolescent Health. *Social Science and Medicine*, 57, 2049-2054.
- Norenzayan, A. (2006). Cultural variation in reasoning. In V. Riccardo, A. Daniel, & H. Lawrence (Eds.), *Biological and cultural bases of human inference* (pp. 71-95). Mahwah, NJ: Lawrence Erlbaum.
- Norenzayan, A., Choi, I., & Peng, K. (2007). Cognition and perception. In S. Kitayama & D. Cohen (Ed.), *Handbook of cultural psychology* (pp. 569-594). New York, NY: Guilford Press.
- Norenzayan, A., & Hansen, I. G. (2006). Belief in supernatural agents in the face of death. *Personality and Social Psychology Bulletin*, 32, 174-187.
- Norenzayan, A., & Shariff, A. F. (2008). The origin and evolution of religious prosociality. *Science*, 322, 58-62.
- Norris, P., & Inglehart, R. (2004). *Sacred and secular: Religion and politics worldwide*. Cambridge, UK: Cambridge University Press.
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration website. *Group Dynamics*, 6, 101-115.
- Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2007). The implicit association test at age 7: A methodological and conceptual review. In J. A. Bargh (Ed.), *Social psychology and the unconscious: The automaticity of higher mental processes* (pp. 265-299). New York, NY: Psychology Press.
- Obadia, L. (2007). *Le Bouddhisme en Occident*. Paris, France : La Découverte.
- Olatunji, B. O. (2008). Disgust, scrupulosity and conservative attitudes about sex: Evidence for a mediational model of homophobia. *Journal of Research in Personality*, 42, 1364-1369.
- Olatunji, B. O., Williams, N. L., Tolin, D. F., Abramowitz, J. S., Sawchuk, C. N., Lohr, J. M., & Elwood, L. S. (2007). The Disgust Scale: Item analysis, factor structure, and suggestions for refinement. *Psychological Assessment*, 19, 281-297.

References

- Olson, M. A., & Fazio, R. H. (2004). Reducing the Influence of Extrapersonal Associations on the Implicit Association Test: Personalizing the IAT. *Journal of Personality and Social Psychology*, 86, 653-667.
- Oman, D., & Thoresen, C. E. (2005). Do religiosity and spirituality influence health? In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 435-459). New York, NY: The Guilford Press.
- Orenstein, A. (2002). Religion and paranormal belief. *Journal for the Scientific Study of Religion*, 41, 301-311.
- Oyserman, D., Coon, H., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, 128, 3-72.
- Oyserman, D., & Lee, S. W. S. (2007). Priming "culture": Culture as situated cognition. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 255-279). New York, NY: Guilford Press.
- Oyserman, D., & Lee, S. W. S. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin*, 134, 311-342.
- Oyserman, D., & Sorensen, N. (2009). Understanding cultural syndrome effects on what and how we think: A situated cognition model. In R. S. Wyer, C. Y. Chiu, & Y. Y. Hong (Eds.), *Understanding culture: Theory, research, and application* (pp. 25-52). New York, NY: Psychology Press.
- Padgett, V. R., & Jorgenson, D. O. (1982). Superstition and economic threat: Germany, 1918-1940. *Personality and Social Psychology Bulletin*, 8, 736-741.
- Pargament, K. I. (2002). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, 13, 168-181.
- Pargament, K. I., Exline, J. J., & Jones, J. W. (2013). *APA Handbook of psychology, religion and spirituality*. Washington, DC: American Psychological Association.
- Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2001). Religious struggle as a predictor of mortality among medically ill elderly patients. *Archives of Internal Medicine*, 161, 1881-1885.
- Parsons, T., & Shils, E. A. (1951). *Toward a general theory of action*. Cambridge, MA: Harvard University Press.
- Patock-Peckham, J. A., Hutchinson, G. T., cheong, J., & Nagoshi, C. T. (1998). Effect of religion and religiosity on alcohol use in a college student sample. *Drug and Alcohol Dependence*, 49, 81-88.

- Payne, B. K., Cheng, C. M., Govorum, O., & Stewart, B. D. (2004). An inkblot for attitudes: affect misattribution as implicit measurement. Unpublished manuscript.
- Peng, K., Ames, D., & Knowles, E. D. (2001). Culture and human inference: Perspectives from three traditions. In D. R. Matsumoto (Ed.), *Handbook of culture and psychology* (pp. 245-264). New York, NY: Oxford University Press
- Peng, K., & Nisbett, R. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist*, 54, 741-754.
- Peng, K., Spencer-Rodgers, J., & Zhong, N. (2006). Naïve dialecticism and the Tao of Chinese thought. In U. Kim, K.-S. Yang, & K.-K. Hwang (Eds.), *Indigenous and cultural psychology: Understanding people in context* (pp. 247-262). New York, NY: Springer.
- Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2007). Prosocial Behavior: Multilevel Perspectives. *Annual Review of Psychology*, 56, 365-392.
- Pichon, I., Boccato, G., & Saroglou, V. (2007). Nonconscious influences of religion on prosociality: A priming study. *European Journal of Social Psychology*, 37, 1032-1045.
- Pichon, I., & Saroglou, V. (2009). Religion and helping: Impact of target, thinking styles and just-world beliefs. *Archive for the Psychology of Religion*, 31, 215-236.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, 67, 985-1013.
- Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, 75, 811-32.
- Poole, M. (2008). Creationism, intelligent design, and science education. *School Science Review*, 90, 123-129.
- Powell, L. H., Shahabi, L., & Thoresen, C. E. (2003). Religion and spirituality: Linkages to physical health. *American Psychologist*, 58, 36-52.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227.
- Preston, J., & Epley, N. (2005). The explanatory value of meaningful beliefs. *Psychological Science*, 16, 826-832.

References

- Preston, J., & Epley, N. (2009). Science and God: An automatic opposition between ultimate explanations. *Journal of Experimental Social Psychology*, 45, 238-241.
- Preston, J. L., & Ritter, R. S (2012). God or religion? Divergent effects on ingroup and outgroup altruism. Unpublished manuscript.
- Preston, J. L., Ritter, R. S., & Hernandez, J. I. (2010). Principles of religious prosociality: A review and reformulation. *Social and Personality Psychology Compass*, 4, 574-590.
- Ramsay, J. E., Pang, J. S., Johnson Shen, M., & Rowatt, W. C. (2013). Rethinking value violation: Priming religion increases prejudice in Singaporean Christians and Buddhists. *International Journal for the Psychology of Religion*. Advance online publication.
- Randolph-Seng, B., & Nielsen, M. E. (2007). Honesty: One effect of primed religious representations. *The International Journal for the Psychology of Religion*, 17, 303-315.
- Reischauer, E. O. (1974). The Sinic world in perspective. *Foreign Affairs*, 52, 341-348.
- Rice, T. W. (2003). Believe it or not: Religious and other paranormal beliefs in the United States. *Journal for the Scientific Study of Religion*, 42, 95-106.
- Robinet, I. (1997). *Taoism: Growth of a Religion*. Stanford, CA: Stanford University Press.
- Rothschild, Z. K., Abdollahi, A., & Pyszczynski, T. (2009). Does peace have a prayer? The effects of mortality salience, compassionate values, and religious fundamentalism on hostility toward out-groups. *Journal of Experimental Social Psychology*, 45, 816-827.
- Rowatt, W. C., Carpenter, T., & Haggard, M. (2013). Religion, prejudice, and intergroup relations. In V. Saroglou (Ed.), *Religion, personality, and social behavior*. New York, NY: Psychology Press.
- Rowatt, W. C., & Franklin, L. (2004). Christian orthodoxy, religious fundamentalism, and right-wing authoritarianism as predictors of implicit racial prejudice. *International Journal for the Psychology of Religion*, 14, 125-138.
- Rowatt, W. C., Franklin, L., & Cotton, M. (2005). Patterns and personality correlates of implicit and explicit attitudes toward Christians and Muslims. *Journal for the Scientific Study of Religion*, 44, 29-43.
- Rowatt, W. C., Johnson, M. K., LaBouff, J. P., & Gonzalez, A. (2013). Religious fundamentalism, right-wing authoritarianism, and prejudice: Insights from meta-analyses, implicit social cognition, and social neuroscience. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (2nd ed., pp. 457-475). New York, NY: Guilford Press.

- Rowatt, W. C., LaBouff, J. P., Johnson, M., Froese, P., & Tsang, J. (2009). Associations among religiousness, social attitudes, and prejudice in a national sample of American adults. *Psychology of Religion and Spirituality*, 1, 14-24.
- Rowatt, W. C., Tsang, J., Kelly, J., LaMartina, B., McCullers, M., & McKinley, A. (2006). Associations between religious personality dimensions and implicit homosexual prejudice. *Journal for the Scientific Study of Religion*, 45, 397-406.
- Rozin, P., Haidt, J., & McCauley C. R. (2008). Disgust. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (pp. 757-776). New York, NY: Guilford Press.
- Rozin, P., Lowery, L., Imada, S., & Haidt, J. (1999). The moral/emotion (CAD) triad hypothesis: A mapping between the other-directed moral emotions, disgust, contempt, and anger, and Shweder's three universal moral codes. *Journal of Personality and Social Psychology*, 76, 574-586.
- Rudski, J. (2003). What does a "superstitious" person believe? Impressions of participants. *The Journal of General Psychology*, 130, 431-445.
- Sagiv, L., & Schwartz, S. H. (1995). Value priorities and readiness for out-group social contact. *Journal of Personality and Social Psychology*, 69, 437-448.
- Saroglou, V. (2002). Beyond dogmatism: The need for closure as related to religion. *Mental Health, Religion, and Culture*, 5, 183-194.
- Saroglou, V. (2006). Religion's role in prosocial behavior: Myth or reality? *Psychology of Religion Newsletter: American Psychological Association Division 36*, 31, 1-8
- Saroglou, V. (2010). Religiousness as a cultural adaptation of basic traits: A five-factor model perspective. *Personality and Social Psychology Review*, 14, 108-125.
- Saroglou, V. (2011). Believing, bonding, behaving, and belonging: The big four religious dimensions and cultural variation. *Journal of Cross-Cultural Psychology*, 42, 1320-1340.
- Saroglou, V. (2013). Religion, spirituality, and altruism. In K. I. Pargament, J. J. Exline, & J. W. Jones (Eds.), *APA Handbook of psychology, religion and spirituality* (Vol. 1, pp. 439-457). Washington, DC: American Psychological Association.
- Saroglou, V. (Ed.). (2014). *Religion, personality, and social behavior*. New York, NY: Psychology Press.
- Saroglou, V., & Cohen, A. B. (2011). Psychology of culture and religion: Introduction to the JCCP special issue. *Journal of Cross-Cultural Psychology*, 42, 1309-1319.

References

- Saroglou, V., & Cohen, A. B. (2013). Cultural and cross-cultural psychology of religion. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (2nd ed.). New York, NY: Guilford Press.
- Saroglou, V., Corneille, O., & Van Cappellen, P. (2009). "Speak, Lord, your servant is listening": Religious priming activates submissive thoughts and behaviors. *International Journal for the Psychology of Religion*, 19, 143-154.
- Saroglou, V., Delpierre, V., & Dernelle, R. (2004). Values and religiosity: A meta-analysis of studies using Schwartz's model. *Personality and Individual Differences*, 37, 721-734.
- Saroglou, V. & Dupuis, J. (2006). Being Buddhist in Western Europe: Cognitive needs, prosocial character, and values. *International Journal for the Psychology of Religion*, 16, 163-179.
- Saroglou, V., & Muñoz-García, A. (2008). Individual differences in religion and spirituality: An issue of personality traits and/or values. *Journal for the Scientific Study of Religion*, 47, 83-101.
- Saroglou, V., Pichon, I., Trompette, L., Verschueren, M., & Dernelle, R. (2005). Prosocial behavior and religion: New evidence based on projective measures and peer ratings. *Journal for the Scientific Study of Religion*, 44, 323-348.
- Saroglou, V., and 13 co-authors from the International Project on Fundamentalism (2012, July). Fundamentalism vs. spirituality and readiness for existential quest: Do religions and cultures differ? Paper presented at the 21st International Association for Cross-Cultural Psychology Congress, Stellenbosch, South Africa.
- Sasaki, J. Y., & Kim, H. S. (2011). At the intersection of culture and religion: A cultural analysis of religion's implications for secondary control and social affiliation. *Journal of Personality and Social Psychology*, 101, 401-414.
- Sasaki, J. Y., Kim, H. S., Mojaverian, T., Kelley, L. D. S., Park, I. Y., & Janusonis, S. (2013). Religion priming differentially increases prosocial behavior among variants of the dopamine D4 receptor (DRD4) gene. *Social Cognitive and Affective Neuroscience*, 8, 209-215.
- Sasaki, J. Y., Kim, H. S., & Xu, J. (2011). Religion and well-being: An analysis of an oxytocin receptor polymorphism (OXTR) and culture. *Journal of Cross-Cultural Psychology*, 42, 1394-1405.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1-65). Orlando, FL: Academic Press.

- Schwartz, S. H. (2006). Value orientations: Measurement, antecedents, and consequences across nations. In R. Jowell, C. Roberts, R. Fitzgerald, & G. Eva (Eds.), *Measuring attitudes cross-nationally: Lessons from the European Social Survey* (pp. 161–193). London, UK: Sage.
- Sedikides, C., & Gebauer, J. E. (2010). Religiosity as self-enhancement: A meta-analysis of the relation between socially desirable responding and religiosity. *Personality and Social Psychology Review*, 14, 17-36.
- Shariff, A. F., & Norenzayan, A. (2007). God is watching you: Priming God concepts increases prosocial behavior in an anonymous economic game. *Psychological Science*, 18, 803-809.
- Shweder, R. A., & Bourne, E. J. (1982). Does the concept of person vary cross-culturally? In A. J. Marsella & G. M. White (Eds.), *Cultural conceptions of mental health and therapy* (pp. 130-204). London, GB: Reidel.
- Siker, J. S. (Ed.). (2007). *Homosexuality and religion: An encyclopedia*. Westport, CT: Greenwood Press.
- Sjöberg, L., & Af Wåhlberg, A. (2002). Risk perception and New Age beliefs. *Risk Analysis*, 22, 751-764.
- Sjodin, U. (2002). The Swedes and the paranormal. *Journal of Contemporary Religion*, 17, 75-85.
- Smith, T. W. (2009). Loving and caring in the United States: Trends and correlates of empathy, altruism, and related constructs. In B. Fehr, S. Sprecher, & L. G. Underwood (Eds.), *The science of compassionate love: Theory, research, and applications* (pp. 81-119). Chichester, UK: Wiley-Blackwell.
- Smith, E. R., & Mackie, D. M. (2010). Affective processes. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The SAGE handbook of prejudice, stereotyping and discrimination* (pp. 131-145). London, UK: Sage.
- Snibbe, A. C., Kitayama, S., Markus, H. R., & Suzuki, T. (2003). They saw a game: A Japanese and American (football) field study. *Journal of Cross-Cultural Psychology*, 34, 581-595.
- Sosis, R. (2005). Does religion promote trust? The role of signaling, reputation, and punishment. *Interdisciplinary Journal of Research on Religion*, 1, 1-30.
- Spencer-Rodgers, J., Williams, M., & Peng, K. (2010). Cultural differences in expectations of change and tolerance for contradiction: A decade of empirical research. *Personality and Social Psychology Review*, 14, 296-312.
- Spencer-Rodgers, J., Williams, M., & Peng, K. (2012). Culturally based lay beliefs as a tool for understanding intergroup and intercultural relations. *International Journal for Intercultural Relations*, 36, 169-178.

References

- Spilka, B., Hood, R.W., Hunsberger, B., & Gorsuch, R.L. (2003). *The psychology of religion: An empirical approach* (3rd ed.). New York, NY: Guilford Press.
- Sprecher, S., & Fehr, B. (2005). Compassionate love for close others and humanity. *Journal of Social and Personal Relationships*, 22, 629-651.
- Sober, E., & Wilson, D. S. (1998). *Unto others: The evolution and psychology of unselfish behavior*. Cambridge, MA: Harvard University Press.
- Stark, R. (2001). Gods, rituals, and the moral order. *Journal for the Scientific Study of Religion*, 40, 619-636.
- Stark, R. (2008). *What Americans really believe*. Waco, TX: Baylor University Press.
- Stark, R., Iannaccone, L. R., & Finke, R. (1996). Religion, science, and rationality. *The American Economic Review*, 86, 433-437.
- Stephan, W. G., & Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 23– 45). Mahwah, NJ: Erlbaum.
- Subach, R. A., & Abul-Ezz, S. R. (1999). Case report: religious reasons for discontinuation of immunosuppressive medication after renal transplant. *Renal Failure*, 21, 223-226.
- Suh, E. M. (2002). Culture, identity consistency, and subjective well-being. *Journal of Personality and Social Psychology*, 83, 1378-1391.
- Thagard, P. (2006). Evaluating explanations in law, science, and everyday life. *Current Directions in Psychological Science*, 15, 141-145.
- Toburen, T., & Meier, B. P. (2010). Priming God-related concepts increases anxiety and task persistence. *Journal of Social and Clinical Psychology*, 29, 127-143.
- Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology*, 90, 288-307.
- Tsai, J. L., Miao, F., & Seppala, E. (2007). Good feelings in Christianity and Buddhism: Religious differences in ideal affect. *Personality and Social Psychology Bulletin*, 33, 409-421.
- Tsang, J., & McCullough, M. E. (2003). Measuring religious constructs: A hierarchical approach to construct organization and scale selection. In C. R. Snyder (Ed.), *Handbook of positive psychological assessment* (pp. 345-360). Washington, DC: American Psychological Association.

- Tsang, J., & Rowatt, W. C. (2007). The relationship between religious orientation, right-wing authoritarianism, and implicit sexual prejudice. *International Journal of the Psychology of Religion*, 17, 99-120.
- Tsang, J.-A., Schulwitz, A., & Carlisle, R. D. (2012). An experimental test of the relationship between religion and gratitude. *Psychology of Religion and Spirituality*, 4, 40-55.
- Uhlmann, E. L., Poehlman, T. A., & Bargh, J. A. (2008). Implicit theism. In R. Sorrentino (Ed.), *Motivation and cognition within and across cultures* (pp. 71-94). New York, NY: Guilford Press.
- Van Cappellen, P., Corneille, O., Cols, S., & Saroglou, V. (2011). Beyond mere compliance to authoritative figures: Religious priming increases conformity to informational influence among submissive people. *International Journal for the Psychology of Religion*, 21, 97-105.
- Van Cappellen, P., & Saroglou, V. (2012). Awe activates religious and spiritual feelings and behavioral intentions. *Psychology of Religion and Spirituality*, 4, 223-236.
- Van Cappellen, P., & Saroglou, V. (2012). Awe activates religious and spiritual feelings and behavioral intentions. *Psychology of Religion and Spirituality*, 4, 223-236.
- Van de Vijver, F. J. R., & Leung, K. (1997). *Methods and data analysis for cross-cultural research*. Newbury Park, CA: Sage.
- Van de Vijver, F., & Poortinga, Y. (1994). Methodological issues in cross-cultural studies on parental rearing behavior and psychopathology. In C. Perris, W. A. Arrindel, & M. Eisemann (Eds.), *Parental rearing and psychopathology* (pp. 173-197). Chichester, UK: Wiley.
- Vanman, E. J., Saltz, J. L., Nathan, L. R., & Warren, J. A. (2004). Racial discrimination by low-prejudiced Whites facial movements as implicit measures of attitudes related to behavior. *Psychological Science*, 15, 711-714.
- Van Norden, B. W. (2011). *Introduction to classical Chinese philosophy*. New York, NY: Hackett.
- Van Pachterbeke, M., Freyer, C., & Saroglou, V. (2011). When authoritarianism meets religion: Sacrificing others in the name of abstract deontology. *European Journal of Social Psychology*, 41, 898-903.
- Van Pachterbeke, M., Keller, J., & Saroglou, V. (2012). Flexibility in existential beliefs and worldviews. *Journal of Individual Differences*, 33, 2-16.
- Vauclair, C. M., & Fischer, R. (2011). Do cultural values predict individuals' moral attitudes? A cross-cultural multi-level approach. *European Journal of Social Psychology*, 41, 645-657.

References

- Verplanken, B., & Holland, R. W. (2002). Motivated decision making: Effects of activation and self-centrality of values on choices and behaviors. *Journal of Personality and Social Psychology*, 82, 434-447.
- Vilaythong, O. T., Lindner, N. M., & Nosek, B. A. (2011). "Do unto others": Effects of priming the Golden Rule on Buddhists' and Christians' attitudes toward gay people. *Journal for the Scientific Study of Religion*, 49, 494-506.
- Voas, D. (2007). Surveys of behaviour, beliefs and affiliation: Micro-quantitative. In J. A. Beckford & N. J. Demerath, III (Eds.), *The SAGE Handbook of the sociology of religion* (pp. 144-166). London, UK: Sage.
- Wald, K. D. (2003). *Religion and politics in the United States*. Lanham, MD: Rowman and Littlefield Publishers.
- Wallace, A. B. (2003). *Buddhism and science: Breaking new ground*. New York, NY: Columbia University Press.
- Welkenhuysen-Gybels, J., & van de Vijver, F. (2001). Methods for the evaluation of construct equivalence in studies involving many groups. *Paper presented at the 56th annual conference of the American Association for Public Opinion Research*, Montreal, Canada.
- Wenger, J. L. (2003). Implicit components of religious beliefs. *Journal of Psychology and Christianity*, 22, 223-229.
- Wenger, J. L. (2004). The automatic activation of religious concepts: Implications for religious orientations. *International Journal for the Psychology of Religion*, 14, 109-123.
- Whitley, B. E. (1999). Right-wing authoritarianism, social dominance orientation, and prejudice. *Journal of Personality and Social Psychology*, 77, 126-134.
- Whitley, B. E., Jr. (2009). Religiosity and attitudes toward lesbians and gay men: A meta-analysis. *The International Journal for the Psychology of Religion*, 19, 21-38.
- Wiegand, K. E., & Weiss, H. M. (2006). Affective reactions to the thought of "God": Moderating effects of image of God. *Journal of Happiness Studies*, 7, 23-40.
- Wilson, T. D., Lindsey, S., & Schooler, T. (2000). A model of dual attitudes. *Psychological Review*, 107, 101-126.
- Wittenbrink, B., Judd, C. M., & Park, B. (1997). Evidence for racial prejudice at the implicit level and its relationship with questionnaire measures. *Journal of Personality and Social Psychology*, 72, 262-274.

East Asian religions, prejudice, and prosociality

- Wolf, A. P. (1974). Gods, ghosts and ancestors. In E. M. Ahern & A. P. Wolf (Eds.), *Religion and ritual in Chinese society* (pp. 131-82). Palo Alto, CA: Stanford University Press.
- Wright, S. C., Aron, A., & Tropp, L. R. (2002). Including others (and groups) in the self: Self-expansion and intergroup relations. In J. P. Forgas & K. D. Williams (Eds.), *The social self: Cognitive, interpersonal, and intergroup perspectives* (pp. 343-363). New York, NY: Psychology Press.
- Yamagishi, T., Hashimoto, H., Cook, K. S., Kiyonari, T., Shinada, M., Mifune, N., ... Li, Y. (2012). Modesty in self-presentation: A comparison between the USA and Japan. *Asian Journal of Social Psychology*, 15, 60-68.
- Yang, C. K. (1961). *Religion in Chinese society: A study of contemporary social functions of religion and some of their historical factors*. Berkeley, CA: University of California Press.
- Zukav, G. (2001). *The dancing Wu Li masters: An overview of the new physics*. New York, NY: Harper Collins.