

Does religious priming make people more moral?

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Abstract

Using priming to activate participants' religious belief states and thereby investigate religion's influence on individual morality has become a prominent topic in religious psychology research in recent years; however, research conclusions on this issue remain inconsistent. Some studies have found that religious priming can enhance individuals' morality, while other research indicates that religious priming can make individuals less moral. The effect of religious priming on morality is mediated through religious beliefs, while participants' faith types, gender, the methods and content of experimental priming, and their personality tendencies moderate the relationship between religious priming and morality by influencing the activation of these mediating beliefs. Future research should further innovate priming experimental methodologies, explore moderating variables affecting the relationship between religion and morality, and incorporate cross-cultural and interdisciplinary perspectives to investigate this issue more deeply.

Full Text

Does Religious Priming Make People More Moral?

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Abstract: By activating participants' religious belief states, researchers have explored how religion influences individual morality—a hot topic in religious psychology in recent years. However, findings remain inconsistent. Some studies show that religious priming enhances morality, while others suggest it makes individuals less moral. The effect of religious priming on morality is mediated

by religious beliefs, with participants' belief type, gender, priming method and content, and personality traits moderating this relationship by influencing the activation of mediating beliefs. Future research should innovate priming methodologies, explore moderating variables affecting the religion-morality relationship, and adopt cross-cultural and interdisciplinary perspectives to investigate this issue more deeply.

Keywords: religion, morality, priming

What role does religion play in human development? Does it promote moral behavior and provide beneficial support for societal progress? These questions have long interested psychologists. Generally, people assume that the doctrines of major world religions emphasize virtue and self-discipline, and that religious believers should be more benevolent and kind than others. Numerous correlational studies have demonstrated significant positive relationships between religious belief and prosocial behavior (Dong, Wu, Zhu, Guo, & Jin, 2015; Yu, Peng, Dou, Dong, & Han, 2014). However, recent findings suggest that the relationship between religion and morality is not as straightforward as it appears.

To understand religion's influence on morality, we must first recognize the complexity of the concept of religion itself. Religion encompasses beliefs in supernatural powers, behavioral codes about virtue, specific rituals, experiences of self-transcendence, and a sense of belonging to religious communities (Saroglou, 2011). Morality similarly comprises multi-dimensional judgments of right and wrong and norms for interpersonal behavior. Both concepts are vast and complex. So can religion actually promote moral behavior? Correlational research finds that religious identity as a demographic variable positively correlates with certain moral behaviors like prosociality and cooperation, though some researchers argue this reflects a public stereotype about religion and morality, or that these phenomena result from other underlying psychological mechanisms (Galen, 2012). Many surveys also link religious belief to immoral behaviors such as crime and extreme violence, though whether religion causes suffering or whether suffering drives people to seek religious comfort remains unclear (Jackson & Gray, 2018). Evidently, correlational studies alone are insufficient to reveal the predictive effect of religious belief on morality.

Since experimental research better establishes causal relationships between variables and uncovers underlying psychological mechanisms, numerous studies have recently emerged using religious priming to explore religion's influence on morality. In religious priming experiments, researchers manipulate participants' religious belief states through different priming conditions and content, attempting to isolate religion's effect on dependent variables from other relevant variables (such as personality traits and demographic variables). Based on these advantages, this research approach has gained increasing attention among religious psychology scholars. Therefore, this article examines the complex influence of religion on morality through the lens of religious priming research.

2.1 Religious Priming Paradigms

The internal logic of priming paradigms used in religious experimental research is consistent: priming group participants are presented with religion-related cues to complete religious priming, while control group participants receive similar but religion-neutral cues for comparison, followed by observation of differences between groups on dependent variables. Current research commonly employs four religious priming paradigms: explicit semantic priming paradigm, implicit lexical priming paradigm, subliminal visual priming paradigm, and contextually signal priming paradigm.

In the explicit semantic priming paradigm, priming cues have obvious religious characteristics, and researchers do not disguise these features. Various methods make participants aware of religion-related concepts, such as directly asking participants about religious issues like belief types and characteristics of deities they worship (e.g., Rand et al., 2014; Schumann, McGregor, Nash, & Ross, 2014; Purzycki et al., 2017), or having participants read classic religious scriptures (Tongren, Newbound, & Johnson, 2016), thereby simply and directly inducing participants' religious belief states.

In the implicit lexical priming paradigm, researchers hope participants remain unaware of receiving religion-related stimuli. For example, the scrambled sentence task is a common method in this paradigm. Participants face ten groups of five words each, removing one word from each group and arranging the remaining four into a coherent sentence. Experimental group materials contain religious meaning words like "spirit," "sacred," and "God," with each word necessarily included in the sentence construction. Control group materials contain no religion-related words. This priming paradigm's effect is somewhat implicit—although experimental group participants process religious words semantically, post-experiment interviews reveal they were basically unaware of encountering religion-related stimuli (Shariff & Norenzayan, 2007). To avoid additional influence from sentence meaning, some researchers use only the single word "GOD" for priming, presenting it on printed materials (like commonly used notebooks) placed in laboratory corners or behind computers (e.g., Lin, Tong, Lee, Low, & Gomes, 2016; Tong & Teo, 2018). Such priming materials strive to make participants unaware they have been exposed to religious stimuli.

Subliminal visual priming paradigm studies typically implement decision-making tasks via computer screens, generally requiring participants to fixate on a point on the screen and identify properties of targets that will appear at that point, with religious words flashed before or after target appearance (generally less than 40ms). Due to the brief presentation time, participants remain absolutely unaware of receiving related religious stimuli (e.g., Chan, Tong, & Tan, 2014; Tong & Teo, 2018).

Contextually signal priming paradigm studies typically complete implicit religious priming by presenting participants with religious symbols, such as Aveyard (2014) using prayer reminder bells to prime Islamic religious concepts. Other

researchers have used religious buildings as priming stimuli (e.g., Sagioglou & Forstmann, 2013; Xygalatas, 2012) or religious lyrics as priming stimuli (Batara, 2016). Shariff, Willard, Andersen, and Norenzayan (2016) noted that among various religious priming paradigms, this contextually signal priming paradigm demonstrates relatively better priming effects and greater ecological validity.

2.2 Religious Priming Content

Religion encompasses broad connotations, and priming different parts of religion may activate different psychological structures. Therefore, besides classifying priming paradigms by presentation method, classification by priming content is also important. Ritter and Preston (2013) investigated mental representations of religious stimuli among ordinary people, dividing religious priming content into three categories: agents (e.g., God, angels), spiritual/abstract (e.g., faith, belief), and institutional/concrete (e.g., holy sites, scripture) priming.

Agents mainly refer to transcendent entities in religion, such as God, deities, and prophets worshipped in religions. For example, when studying the relationship between religion and prosocial behavior, the commonly used implicit priming word “God” (Lin et al., 2016), and when studying deity images and moral behavior (Purzycki et al., 2017), researchers asked participants to list the deity that most influenced them and then assessed the extent to which these deities were omniscient and administered punishment and reward—here, God and deities are the most typical “agent” objects.

Spiritual mainly refers to abstract beliefs and principles, representing abstract concepts connecting believers with sacred transcendent entities, such as faith, miracles, revelation, and bliss. For example, researchers asking participants about their frequency of solitary prayer (Ginges, Hansen, & Norenzayan, 2009) or presenting participants with dove images (Batara, Quiachon, & Sembrero, 2016) both aim to prime the “spiritual” level of religious content.

Institutional mainly refers to concepts related to religious rituals and organizations, such as churches and religious ceremonies. When priming this aspect, researchers can present participants with churches (e.g., Sagioglou & Forstmann, 2013; Xygalatas, 2012), ask about church attendance frequency (Ginges et al., 2009), or present concepts related to local parishes (Preston & Ritter, 2013).

Of course, Ritter and Preston’s (2013) classification of religious priming content represents only a rough categorization method that cannot cover all priming content. Some priming stimuli simultaneously involve multiple categories, such as studies simply asking participants which religion they believe in (Schumann et al., 2014), which are difficult to classify into one of the above three categories. Religious-related psychological structures are not clearly demarcated after all. Additionally, further subdivisions exist within each category. For example, priming the concept of “God” alone, researchers can prime different traits of God according to different research topics. For instance, researchers found that participants who read passages about God forgiving others cheated more

in games and tests than those who read about God punishing others (Debono, Shariff, & Muraven, 2017). In summary, according to different research questions, researchers can flexibly choose religious priming presentation methods and content to achieve their research objectives.

3.1 Prosocial Behavior

Among research topics on religion and morality, the most studied is the relationship between religion and prosocial behavior. Since Shariff and Norenzayan (2007) used scrambled sentence paradigm experiments to demonstrate causal relationship between religious priming and prosocial behavior, numerous experimental studies exploring this relationship have emerged. These studies use economic game decisions or donation and helping intentions and behaviors in virtual scenarios as dependent variables, revealing causal relationships between religious priming and various prosocial behaviors.

Shariff and Norenzayan (2007) found that participants receiving religious priming and moral word priming allocated more money to strangers in dictator games compared to control group participants. Ahmed and Salas (2011) obtained similar conclusions in a Chilean study, finding that participants receiving religious priming in scrambled sentence tasks demonstrated more prosocial behavior in dictator games and prisoner's dilemma decisions. Other researchers have examined religious priming's effect on other prosocial behaviors, such as donation behavior to institutions aiding infectious disease victims (Preston & Ritter, 2013). Lin et al. (2016) found in a Singaporean sample that participants receiving implicit religious priming showed stronger intentions to participate in community volunteer activities and donate organs, and endured pain from placing hands in ice water longer for charitable activities. These results all demonstrate religious priming's promoting effect on prosocial behavior. Purzycki et al. (2017) further investigated cross-cultural consistency of this religious priming effect, selecting eight groups from different cultures with different religious beliefs, with results similarly showing religion's predictive effect on prosocial behavior: the more people believed their deities were omniscient and administered rewards and punishments, the more they tended to follow rules, showed less ingroup preference, and treated geographically distant co-religionists more fairly. The authors argued that this fair attitude toward outgroups promoted intergroup cooperation, increasing chances of cultural evolution and prosperity and enabling formation of large-scale social organizations.

Why does religion promote prosocial behavior? Some researchers propose that religious priming triggers automatic activation of related beliefs, thereby promoting corresponding behaviors (Randolph-Seng & Nielsen, 2007, 2008). Research on automatic thinking finds that people automatically process a considerable portion of external stimuli, with some stimuli corresponding to individuals' internal belief structures, thereby activating beliefs unconsciously and influencing related behaviors. The entire process from stimulus reception to behavior production can be unconscious. Researchers believe religious priming, as an

external stimulus, activates religious mental representations consciously or unconsciously, thereby influencing related prosocial behavior (Randolph-Seng & Nielsen, 2007, 2008). In this theoretical explanation, researchers assume an inherent association between religion and prosocial behavior, with religious belief activation triggering prosocial motivation, forming a causal phenomenon between religious priming and prosocial behavior. However, this view does not explicitly explain whether the essential connection between religion and prosocial behavior is real or merely exists in people' s stereotypes.

3.2 Non-normative Behavior

Religious priming not only promotes prosocial behavior but also reduces people' s non-normative behavior, urging them to avoid immoral actions. For example, Chan, Tong, and Tan (2014) studied the relationship between religion and risk-taking behavior, finding that religious priming increased participants' risk-taking in economic games, but when risk-taking behaviors violated social norms (such as crime), religious priming reduced participants' risk-taking. Other studies found that religious priming reduced self-reported alcohol consumption, with participants receiving religious priming reporting less frequent drinking and lower consumption in various situations (Rodriguez, Neighbors, & Foster, 2014). Religious priming also affects moral emotions. Researchers experimenting with people who violated their sexual values found that the stronger participants' religious belief, the more pain they perceived their partners experienced due to their behavior after religious priming, the higher their evaluation of their behavior' s wrongness, and the worse their satisfaction with intimate relationships (Tongeren, Newbound, & Johnson, 2016). Religious priming can also reduce anger toward others. For instance, research shows that priming "God" does not reduce blame toward others but reduces anger toward others, weakening the association between "blame" and anger (Tong & Teo, 2018).

Why does religious priming reduce non-normative behavior? The supernatural monitoring hypothesis provides a theoretical explanation. This hypothesis suggests that religious priming activates the feeling of being monitored by supernatural entities (like God). When people believe their behavior is constantly and unavoidably observed by a morally perfect supernatural entity, their awareness and control of their own behavior increase—this expectation of approval and fear of punishment triggered by the presence of a moral observer inhibits non-normative behavior (Purzycki et al., 2016). The supernatural monitoring hypothesis helps explain why people who believe in punitive deities comply more with social norms than those who believe in rewarding deities. Research found that participants who believed in an angry God showed more social norm compliance than those who believed in a loving God (Shariff & Norenzayan, 2011), supporting the supernatural monitoring hypothesis.

3.3 Moral Judgment

Beyond the above effects, religious priming can also influence moral judgment because, from believers' perspective, divine judgment is moral judgment itself. Researchers found that religious priming changes people's cognitive style regarding moral judgment. Since believers view divine judgment as the foundation of morality, religion generally correlates positively with moral objectivism (Goodwin & Darley, 2008). Yilmaz and Bahçekapili (2015) also found that participants receiving religious priming made more moral objectivist judgments and fewer moral relativist judgments. Due to firm belief in divine judgment, religious believers make fewer moral judgments based on utilitarian thinking (Piazza & Landy, 2013). Further research found that after subliminal religious priming, participants punished others' unjust behaviors more severely (McKay, Efferson, Whitehouse, & Fehr, 2011).

Why does religious priming affect moral judgment? Among religious-related psychological structures activated by religious priming, activation of religious behavioral rule-related beliefs may explain priming's influence on moral judgment (Randolph-Seng & Nielsen, 2007). Morality comprises rules for human behavior, with each religion having specific behavioral rule systems for believers derived from divine requirements. When people evaluate interpersonal behaviors, different behavioral rules yield different judgments. When priming activates religious behavioral rules, people's cognitive judgment styles may differ from secular moral judgments (Yilmaz & Bahçekapili, 2015). Research shows that religious believers have broader moral norm scopes and place greater importance on moral rules such as obedience to authority, ingroup loyalty, and sexual purity (Shariff, Piazza, & Kramer, 2014).

4.1 Outgroup Aggression

Although substantial research demonstrates relationships between religion and certain moral behaviors, some researchers point out that, at the behavioral level, religious priming does not necessarily make people more moral. Even when it does, such effects are directed toward ingroup moral behavior. Due to religious ingroup preference, religious belief also associates with negative behavioral consequences such as outgroup prejudice, discrimination, deception, and aggression (Galen, 2012).

Prejudice research finds that religious people show greater outgroup prejudice than non-religious people (Hall, Matz, & Wood, 2010). In perceiving others, believers prefer those who openly share the same belief identity, considering them more likable and trustworthy, whereas non-believers do not evaluate others' likability and trustworthiness through religious identity (Bobkowski & Kalyanaraman, 2010). Preston and Ritter (2013) speculated that most religions initially formed special rituals and daily behavior patterns to distinguish believers' identities and enhance ingroup belonging, so many studies' religious priming may directly activate identity distinction.

If this identity distinction further involves value conflicts, religious priming can trigger aggressive emotions and behaviors. For example, when Christians see text passages describing atheism or Islam, they experience disgust due to violated spiritual purity (Ritter & Preston, 2011). Studies priming religious buildings found that participants passing religious buildings held more negative attitudes toward outgroups inconsistent with their religious values (atheists, Muslims, homosexuals) (Johnson, Rowatt, & Labouff, 2012). Religious priming of Christians increased participants' prejudice and negative emotions toward African Americans (Johnson, Rowatt, & LaBouff, 2010). Neuberg et al. (2014) further found that the greater religion's influence on believers' daily behavior, the more likely the group would engage in conflict with other groups with conflicting values, regardless of power comparisons. Additionally, research found that religious priming makes people feel supernatural allies are with them, thereby reducing risk perception (Kupor, Laurin, & Levav, 2015) and death anxiety (Jackson et al., 2018), which may both contribute to intense intergroup conflict.

Which aspect of religious psychological structure relates to outgroup prejudice and aggression? Researchers believe that connotations related to religious organizations and institutions more strongly arouse believers' ingroup preference and outgroup discrimination. Studies using institutional religious concepts as priming support this view. For example, in Ginges et al. (2009), participants primed with church attendance frequency showed higher support for suicide attacks than those primed with prayer frequency to God. Other research found that when religious priming words were "church, bible, sermon," student participants showed stronger racial discrimination (Johnson et al., 2010). Preston and Ritter (2013) distinguished between "religion" priming and "god" priming, finding across three experiments that participants receiving religion priming showed more prosocial behavior toward ingroup members, such as greater willingness to donate to ingroup charities and more cooperation with ingroup members in prisoner's dilemmas, whereas "god-primed" participants more often provided donations and cooperation to outgroup members. The researchers argued that priming different religious connotations activates different psychological structures. Research on spirituality shows that spirituality both connects with and differs from religion (Lu & Guo, 2014). Batara et al. (2016) found that spiritual priming with Filipino participants could simultaneously promote prosocial behavior toward both ingroup and outgroup members. However, priming institutional religious concepts like "church, ritual" promoted prosocial behavior mainly toward ingroup members, producing so-called parochial altruism.

Additionally, priming God's aggressive side toward outgroups can also promote participants' aggression toward outgroups. For example, some research found that priming God as a supernatural ally affects participants' threat perception (Holbrook, Fessler & Pollack, 2016). Saroglou, Corneille, and Cappellen (2009) found that participants with high religious obedience, after religious priming, were more easily persuaded by experimenters to retaliate against those who allegedly criticized them.

4.2 Passive Immorality

Regarding religion' s influence on immoral behavior, beyond negative behaviors toward outgroups, Jackson and Gray (2018) proposed a new perspective, arguing that religious belief can promote passive immorality. Passive immorality refers to behavior that harms others for personal gain through inaction, such as not returning a found wallet. The main psychological mechanism is that when people encounter situations where victims are ambiguous and passive inaction can yield profit, they use the excuse that this profit is a gift from God to justify their passive inaction. Jackson and Gray (2018) found that people who attributed events to God' s arrangement judged their own past morally questionable behavior more leniently; compared to non-believers, believers more often rationalized their passive immoral behavior and exhibited more passive immoral behavior in daily life. Earlier research proposed similar views. Carpenter and Marshall (2009) found in studies on moral hypocrisy that religious belief could not reduce moral hypocrisy. Galen (2012) also argued that because believers easily rationalize their behavior in God' s name, they have greater difficulty recognizing their own behavior as immoral.

However, it should be noted that regarding religious priming' s influence on passive immorality, this perspective has only recently been explicitly proposed. Current research evidence is not only scarce but also lacks representativeness and persuasiveness. Future research should further explore this issue.

5 Mediating Mechanisms and Moderating Variables in Religious Priming Effects on Morality

In numerous studies using religious priming as an independent variable, some show significant experimental effects while others do not, leading researchers to debate religious priming effects (Gomes & McCullough, 2015; Willard, Shariff, & Norenzayan, 2016). These inconsistent results may partly stem from moderating variables—under different levels of moderating variables, religious priming shows different effects on morality, leading to uncertain conclusions about their relationship. Based on this reasoning, this article first analyzes the mediating mechanism of religious priming' s influence on morality—religious beliefs—and then, building on this mechanism, analyzes potential moderating variables affecting the religion-morality relationship.

5.1 Religious Beliefs as a Mediating Mechanism

Shariff et al. (2016) proposed through meta-analysis that religious priming effects depend on participants' pre-existing, culturally influenced religious-related beliefs. Since religious priming influences morality-related cognitive behavior through specific religious beliefs, exploring variables that affect this psychological mechanism can moderate religious priming effects. Therefore, revealing specific religious beliefs that mediate the religion-morality relationship becomes particularly important. It should be emphasized that religious beliefs discussed

here differ from general religious belief (religion), which usually concerns which religion individuals believe in or how deeply they believe. Instead, Shariff et al. (2016) refer to specific cognitive beliefs (belief) that religious belief brings to believers.

The supernatural monitoring hypothesis, which explains religion's promotion of prosocial behavior, posits that the belief "I am being watched by an omniscient and omnipotent God" promotes moral behavior. Within this abstract belief framework, the belief "God is punitive" more strongly inhibits non-normative behavior than the belief "God is benevolent" (Good, Inzlicht, & Larson, 2015). Schumann et al. (2014) found that the belief that people should be magnanimous mediated the relationship between religious priming and magnanimous behavior, with people who held this belief and were more loyal to it showing higher magnanimity. Research on religious priming and threat perception/risk-taking found that religious priming reduces threat perception and increases risk-taking, with the psychological mechanism being activation of participants' belief in "God's omnipresent and omnipotent support" (e.g., Chan et al., 2014; Eugenia & Keisham, 2017). Thus, exploring religious priming's psychological mechanisms requires revealing specific religious beliefs one by one. Only after identifying specific mediating beliefs can discussions of moderating variables for religious priming effects become clearer.

5.2 Moderating Variables in Religious Priming Effects on Morality

After revealing the psychological mechanism through which religious priming influences morality—religious beliefs—researchers have explored demographic moderating variables based on whether participants possess relevant mediating beliefs; examined priming method and content moderating variables based on whether experimental priming activates relevant beliefs; and investigated personality moderating variables based on participant traits related to these beliefs. The following sections discuss these three aspects sequentially.

5.2.1 Demographic Variables

Among demographic moderating variables, participants' own belief type is the first concern. In religious priming experiments, participants may believe in the primed religion, believe in other religions, claim to believe in the primed religion but not deeply, or be atheists. Logical inference suggests that participants who do not believe in the primed religion should not hold religious beliefs affecting experimental conclusions—that is, the mediating mechanism described above does not exist. Therefore, when conducting demographic surveys, participants' self-reported original religious belief (intrinsic religion) is an important variable researchers must focus on.

Although scholars widely attend to whether participants believe in the primed religion, research finds that due to complex relationships between culture and religion, whether this variable moderates effects remains inconclusive. Studies

using Christianity as the primed religion found that participants' reported belief did not moderate results for outcome variables like obedience (Saroglou et al., 2009) and punishment behavior (McKay et al., 2011). However, in studies of moral hypocrisy (Carpenter & Marshall, 2009) and certain prosocial behaviors (Lin et al., 2016), participants' belief level did moderate priming effects. Preston and Ritter (2013) argued that people claiming to be atheists in Western religious cultures may still absorb some religious concepts. As seen above, most experiments use abstract concepts like "GOD" as priming content, some of which may be shared by believers and non-believers. If mediating beliefs in experiments are shared by believers and non-believers, belief status would not be a moderating variable; otherwise, it would be.

Additionally, researchers attend to participants' religious type because believers of different religions likely hold different religious-related beliefs. Research on Buddhism and outgroup prejudice shows that Buddhism, unlike monotheistic religions, is more inclusive and emphasizes intergroup differences less, with Buddhist priming not activating outgroup prejudice (Clobert, Saroglou, & Hwang, 2015, 2017), yielding conclusions inconsistent with similar Christian research. Of course, due to limited cross-cultural and cross-religious research, religion type's moderating role as a demographic variable requires further analysis.

Gender, as an important demographic variable representing not only biological characteristics but also sociocultural attributes, has also attracted researchers' attention. Because religious doctrines and behavioral rules may differ for believers of different genders, and the same rules may affect them differently. McCullough, Carter, DeWall, and Corrales (2012) argued that compared to women, men's biological motivation to reproduce offspring is stronger, leading them to display their strength, take risks, and act more impulsively to gain more female favor, while Western religions emphasize monogamy and high-quality paternal investment in child-rearing. Therefore, religious priming may inhibit men's impulsivity and display motivation. Their research confirmed this logic: religious priming reduced men's impulsivity toward money and endurance in grip tasks but did not affect female participants' task performance. Farid, Margarida, and Joana (2017) conducted a field experiment in shopping centers on religious priming and prosocial behavior, finding that women showed more prosocial behavior than men in religious priming contexts. Researchers argued this may be because women have stronger religious attachment, making prosocial behavior-related religious beliefs more important to them. Thus, when gender influences mediating religious beliefs, it becomes an important moderating variable.

5.2.2 Priming Methods and Content

Due to the complexity of religious psychological structures, whether priming methods and content can activate important mediating religious beliefs constitutes a major challenge in experimental design. If priming methods cannot trigger relevant religious beliefs, or if priming content is unrelated to mediating beliefs, religious priming cannot affect relevant cognitive-behavioral dependent

variables. Aveyard (2014) studied the relationship between religious priming and honesty behavior with Muslim believers. Study 1 used scrambled sentence tasks as the priming method, finding no significant relationship between religious priming and honesty. Study 2 changed the priming method to having participants listen to busy street audio, with the experimental task being to evaluate the number of car horn sounds in the street. The priming group's audio inserted prayer reminder bells for Muslim believers, with results showing the religious priming group's honesty ratio in subsequent tasks significantly higher than the control group. These results indicate that priming methods may moderate the religion-morality relationship, with prayer reminder bells more likely triggering honesty-related religious beliefs than religious word scrambling tasks. Good, Inzlicht, and Larson (2015) found that priming content may also moderate effects, with priming God's punitive versus benevolent nature producing completely different psychological aftereffects. Building on these studies, Van (2017) argued that religious priming stimuli should connect with participants' daily, realistic religious beliefs to smoothly and quickly activate relevant religious psychological structures.

5.2.3 Personality Traits

Religious priming's influence on morality must trigger specific religious beliefs to manifest. Therefore, certain personality traits connected to religious beliefs or morality may also affect the religion-morality relationship. For example, research shows that religious priming correlates with obedience and compliance, promoting participants' compliance with authority instructions to implement retaliatory behavior or internalize others' opinions. However, this effect is significant only among participants with high compliance tendencies (e.g., Saroglou, Corneille, & Cappellen, 2009; Cappellen, Corneille, Cols, & Saroglou, 2011). Researchers explain that for individuals with high compliance tendencies, religious priming better evokes obedience-related religious beliefs, leading them to more strongly internalize authority instructions. Other research found that when facing conflict, highly authoritarian participants under religious priming were more likely to harm others' welfare and lives in the name of morality, regardless of whether these people were close or distant (Pachterbeke, Freyer, & Saroglou, 2011). When threatened, people with originally strong magnanimity tendencies showed more magnanimous behavior under religious priming conditions (Schumann et al., 2014). Thus, participants' certain personality tendencies, when combined with priming-activated religious beliefs, more strongly affect dependent variables.

5.2.4 Summary of Moderating Effects

The above analysis has identified variables that can moderate the religion-morality relationship in existing research. This shows that how religious priming affects morality and how strong the effect is depends on many complex moderating variables. Of course, we must acknowledge that existing research

on moderating variables cannot fully explain when religious priming promotes morality and when it inhibits it. However, based on existing research focusing on moderating variables and their mediating mechanisms, we can still see clues worth exploring in future research. For example, religious priming's promotion of morality mainly refers to increased suppression of selfishness and advocacy of justice (e.g., Purzycki et al., 2016). Therefore, we can infer that when priming content connects with religious beliefs about justice and impartiality, religious priming more corresponds to moral outcomes (e.g., Ritter & Preston, 2013). Conversely, religious priming's inhibition of morality refers to increased ingroup maintenance and outgroup suppression (e.g., Bobkowski & Kalyanaraman, 2010; Ginges et al., 2009). Therefore, when priming content relates to ingroup preference and outgroup prejudice (as often occurs when using religious institutions as priming materials), it more likely leads to immoral outcomes (e.g., Batara et al., 2016). Although few researchers have discovered both conditions promoting and inhibiting morality in a single study, thereby providing comprehensive explanations of religious priming's effects, as research on moderating effects and mechanisms deepens in this field, future studies should better answer this question.

6 Summary and Future Directions

The relationship between religious priming and morality is complex. On one hand, some studies find that religious priming can promote moral behavior and urge strict adherence to moral principles. On the other hand, some studies find that religious priming intensifies group boundaries and exacerbates intergroup conflict when group values clash. In continuously exploring these psychological effects, numerous replication studies challenge previous conclusions, while unstable findings drive innovation in experimental paradigms and expansion of research topics. It is foreseeable that future research in this field will continue to expand in multiple directions.

First, we must improve and innovate religious priming experimental methods, developing relatively stable experimental tools to explore religion's influence on morality and other psychological structures, while also subdividing religious elements to focus priming-activated concepts and study relationships between specific religious elements and specific moral variables. Existing research shows controversial religious priming effects. The primary difficulty in priming experimental design is that priming effect sizes are themselves complexly influenced by numerous factors, such as priming presentation methods, relationships between priming concepts and participants' self-concepts, and experimental control precision. Improving priming methods requires further exploring which religious symbols have strong priming effects and what presentation methods are more effective, while also connecting religious symbols with specific religious elements to distinguish specific content represented by different symbols. Both religion and morality are broad concepts. The religious research field contains numerous categories of religious denominations, orientations, belief systems, and psycho-

logical manifestations (religious cognition, emotion, behavior), while morality also encompasses broad research domains. Psychological research has long used relatively vague concepts to study relationships between them, and subdividing subordinate concepts in both fields to study their relationships represents a trend (Mckay & Whitehouse, 2015). Recent priming experiments have begun distinguishing psychological representations of different religious priming cues (e.g., Ritter & Preston, 2013; Batara et al., 2016). Future research needs more focused studies on specific concepts, developing targeted priming methods, and determining differences in effectiveness and nature among different symbolic priming. Only then can future research on religion' s influence on other psychological variables become more stable and accurate.

Second, we must continue to deeply explore mediating and moderating variables affecting the religion-morality relationship. Academia enthusiastically discusses religion' s direct influence on morality-related behavior, yet excavates few psychological variables mediating this relationship, and even fewer studies distinguish how their relationship changes under other factors' influence. Although previous sections introduced some specific mediating religious beliefs and moderating variables affecting mediating beliefs, these beliefs are relatively fragmented, with insufficiently clear distinctions from similar secular beliefs, and moderating variable research is even less deep, with conclusions far from unified. More potential mediating and moderating variables await discovery. For example, group identity may be a noteworthy potential moderating variable, where religious priming may only enhance ingroup morality while weakening outgroup morality. However, so far, only minimal research has comprehensively examined ingroup and outgroup morality when exploring religion-morality relationships (e.g., Batara et al., 2016). This insufficient research quantity hinders establishment of research conclusions. Future research exploring mediating and moderating variables remains a valuable direction.

Finally, strengthening and deepening research in this field can draw on cross-cultural and cross-disciplinary macro perspectives. Regarding cross-cultural aspects, existing research participants are mostly Western individuals, and studied religions are mostly Christianity, with only 少量 studies involving Muslims, Hindus, or other denominations. Therefore, existing conclusions require cross-cultural and cross-regional validation. For example, regarding relationships between religious priming and prejudice, experimental results using Buddhism as the primed religion differ from conclusions using Christianity (Clobert, Saroglou, & Hwang, 2015, 2017). We can infer that due to different religious doctrines, previous religious priming conclusions require testing under broader religious denominations. Regarding interdisciplinary aspects, in-depth exploration of religious priming' s influence on morality must strengthen communication between psychology, religious studies, ethics, and other disciplines. Future research requires more specific divisions of different religions, denominations, and doctrines, and more detailed discrimination of different morality components, before specifically discussing which aspects of religion influence which parts of morality. Obviously, these tasks cannot be completed by psychological researchers alone;

they require collaborative innovation and joint efforts from multiple disciplines.

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