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Running head: RELIGIOUS HYPOCRISY

The emotional and attitudinal consequences of religious hypocrisy: Experimental evidence using
a cognitive dissonance paradigm

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Abstract

We explored the emotional and attitudinal consequences of personal attitude-behaviour discrepancies using a religious version of the hypocrisy paradigm. We induced cognitive dissonance in participants ($n = 206$) by making them feel hypocritical for advocating certain religious behaviours that they had not recently engaged in to their own satisfaction. In Experiment 1, this resulted in higher levels of self-reported guilt and shame compared to the control condition. Experiment 2 further showed that a religious self-affirmation task eliminated the guilt and shame. In Experiment 3, participants boosted their religious attitudes as a result of dissonance, and both religious and non-religious self-affirmation tasks eliminated this effect. The findings provide evidence that dissonance induced through religious hypocrisy can result in guilt and shame as well as an attitude bolstering effect, as opposed to the attitude reconciliation effect which is prevalent in previous dissonance research.

Word count: 6,801

Keywords: Cognitive dissonance, hypocrisy, religion, self-affirmation, attitude change

In recent years, the amount of attention and scrutiny directed at religious individuals and their beliefs, motivations, and behaviour has increased dramatically. This tendency has accelerated research on this topic from a number of perspectives. These include, but are not limited to, cognitive science, social psychology, and sociology (e.g., Barrett, 2000; Cohen, Hall, Koenig, & Meador, 2005; Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005; Shariff, Cohen, & Norenzayan, 2008; Slone, 2006). While a few studies have been carried out on religious cognitive dissonance (Burris, Harmon-Jones, & Tarpley, 1997; Dunford & Kunz, 1973; Mahaffy, 1996), no research to date has investigated religious hypocrisy experimentally. Examining this will not only inform our understanding of how personal inconsistencies affect religious individuals emotionally and attitudinally, but will also potentially identify key motivations in religious individuals.

Cognitive dissonance theory (Festinger, 1957) proposes that when individuals realise a discrepancy between two of their cognitions (e.g., two attitudes that they hold) or between these and their behaviour, they experience a sense of *dissonance*, or emotional discomfort. Previous research has shown that this discomfort can be measured physiologically as arousal (Croyle & Cooper, 1983), and that individuals subsequently strive to eliminate the discrepancy and arousal through a reconciliatory attitude change. For example, when individuals are asked to voluntarily advocate a cause that clashes with their own attitudes (known as the *induced compliance* paradigm), they show a shift in their attitudes toward the advocated cause (for a review of key studies, and for a detailed outline of the moderators of this effect, refer to Cooper, 2007). One

particularly useful paradigm for investigating inconsistencies between individuals' attitudes and their behaviour is the *hypocrisy paradigm* (Aronson, Fried, & Stone, 1991). The paradigm is valuable to the study of cognitive dissonance because it studies naturally-occurring personal discrepancies, as opposed to the artificially-induced ones that are characteristic of much cognitive dissonance research such as the induced compliance paradigm where participants are asked to engage in a task that they are unlikely to do under normal circumstances, for example by writing counter-attitudinal essays (Cooper, 2007).

The hypocrisy paradigm works by inducing cognitive dissonance in participants by first asking them to think of past failures to perform a given behaviour (in the original study, the behaviour was condom use), and then asking them to advocate why it is important to perform that behaviour. In the original study, Aronson, Fried, and Stone (1991) showed that this resulted in higher intentions to perform that behaviour in the future. Later studies, which changed the order of the tasks so that participants were asked to advocate the behaviour *before* thinking about past failures, showed that inducing cognitive dissonance in this way can also increase actual performance of pro-social behaviours, such as volunteering one's time for a good cause (Fried, 1998; Fried & Aronson, 1995). However, studies using the hypocrisy paradigm have not directly measured emotions, so the nature of the feelings that arise in individuals as a result of this kind of cognitive dissonance-induction remains to be investigated. Moreover, despite its aptness to measure the consequences of religious hypocrisy, this paradigm has not been used in this context.

Based on previous work that argues that religious people often battle with personal distress as a result of inconsistencies between their religious beliefs and their behaviour (e.g., Exline, 2002), there is reason to experimentally investigate the nature and consequences of such inconsistencies. Religious individuals who realise personal inconsistencies with regard to their religion are more likely to feel stronger emotions, such as guilt and shame, than what general cognitive dissonance (e.g., regarding general behaviour) elicits. Indeed, previous research has identified shame and guilt as the key emotions that religious individuals feel in a number of contexts, such as coming to terms with their homosexuality (Sherry, Adelman, Whilde, & Quick, 2012), mental health (Luyten, Corveleyn, & Fontaine, 1998), and health-seeking behaviours (Park, Edmondson, Hale-Smith, & Blank, 2009). What all these contexts have in common is that they represent discrepancies between religious beliefs and other aspects of social life. Hence, we predict in the present investigation that religious dissonance, too, is of a more specific affective nature (namely, guilt and shame), compared to the generalised discomfort found in cognitive dissonance research generally (Croyle & Cooper, 1983; Senemeaud & Somat, 2009). If this is true, it will be a notable exception to cognitive dissonance research generally, and research on hypocrisy specifically.

Apart from examining the emotional consequences of religious dissonance, the hypocrisy paradigm also seems suitable to study attitudinal consequences of this kind of cognitive dissonance. Indeed, using this paradigm, McConnell and Brown (2010) found that individuals changed their attitudes about study habits as a result of dissonance. However, the direction in

which this change occurred was moderated by the personality trait of self-complexity – the extent to which one’s self-concept is comprised of numerous, separate roles/attributes (e.g., parent, athlete, or social activist). Individuals who had high self-complexity became more in favour of good study habits, whereas those who were low on self-complexity became less in favour of same. One of the explanations given for this finding was that the latter group felt more negativity as a result of the dissonance because of their relatively fewer self-facets compared to the other group who had a larger buffer to protect the self-concept as a whole. One of the questions that arise from this finding is whether there are contexts in which dissonance generally leads to a boost, rather than a reduction, in attitude strength as a consequence of dissonance. In fact, before Festinger (1957) published a full account of his theory and supporting evidence, he had already written a book about a case in which cognitive dissonance led to bolstering of attitudes (Festinger, Riecken, & Schachter, 1956). The case was on a UFO cult who believed that the world would end on a given day. When this did not happen, the cult unexpectedly became even stronger in their belief that their predictions were correct; they came up with far-fetched ideas about why the end of the world did not happen on that particular day. Similarly, Batson (1975) did a quasi-experiment in which he presented anti-Christian material to Christians (this cognitive dissonance-induction technique is called the *belief-disconfirmation paradigm*). As a result, the participants became even stronger in their religious attitudes. A similar attitude bolstering effect was demonstrated by Sherman and Gorkin (Sherman & Gorkin, 1980) in a non-religious context where individuals, especially those who scored high on a scale of feminism, bolstered their attitudes toward feminism after failing to solve a sex-role task. However, their

study did not use the induced compliance or the hypocrisy paradigms, but instead relied on the assumption that an inability to solve the task caused dissonance. As the authors themselves noted in their paper, the attitude bolstering may simply have been the result of a reminder of the importance of subscribing to feminism, rather than the result of dissonance. Nevertheless, Sherman and Gorkin's (1980) study does indicate that an attitude bolstering, rather than a reconciliatory attitude change, may be the consequence of dissonance regarding attitudes that are central to the self-concept.

Hence, it appears that when it comes to strong beliefs or attitudes, cognitive dissonance does not result in reconciliation, but rather in a bolstering of these. The present work attempts to examine whether dissonance leads to this same bolstering effect, when induced regarding religious attitudes. If religious dissonance leads to attitude bolstering, it will be an interesting deviation from the attitude change effect found in the induced compliance paradigm (where attitudes are reconciled with behaviour), and it will call for a revision of our understanding of the consequences of cognitive dissonance in contexts where religious beliefs or attitudes are at play.

Another aspect of cognitive dissonance that is worth investigating in the religious context is self-affirmation (Sherman & Hartson, 2011; Steele & Liu, 1983). In their original paper on self-affirmation, Steele and Liu (1983) showed that dissonance and the associated attitude reconciliation could be eliminated by giving participants an opportunity to complete a questionnaire on a topic of personal relevance. The authors argued that through affirming an

important aspect of the self-concept, participants could alleviate their cognitive dissonance, possibly as a result of the boost to their self-esteem. Interestingly, their findings showed that the self-affirmation did not need to be relevant to the topic regarding which it was induced. This has been supported by previous work showing that a domain-nonspecific self-affirmation task is more effective in resolving dissonance because it affirms another aspect of the self-concept and thereby increases self-esteem (Aronson, Blanton, & Cooper, 1995). However, research on self-affirmation following religious cognitive dissonance has not been carried out, so it remains to be seen whether self-affirmation can reduce dissonance in this context.

The Present Research

The first aim of the present investigation was to examine the emotional consequences of religious dissonance (Experiments 1 and 2). Experiment 2 further investigated whether an opportunity to self-affirm important religious attitudes can reduce negative affect. In Experiment 3 we further investigated whether self-affirmation that was domain-specific (i.e., in this case related to religion) was any less successful in reducing any negative affect compared to a domain-nonspecific self-affirmation. The second aim of the present work (investigated in Experiment 3) was to explore whether dissonance leads to a boost in religious attitudes as a compensatory response to cognitive dissonance. Such a finding would corroborate Batson's (1975) findings on religious attitude bolstering as a result of cognitive dissonance.

We introduce a religious version of the hypocrisy paradigm (Aronson et al., 1991; Fried & Aronson, 1995), which works by (a) making participants advocate a position that they are expected to support and then (b) making them mindful of their potential past failures to act according to the advocated attitudes. Hence, our manipulation offers a direct method of testing the consequences of cognitive dissonance because it forces participants to confront a potential discrepancy between their attitudes and their behaviour. By asking individuals how important they think that a given religious activity is, and then asking them how frequently they have engaged in that activity, cognitive dissonance was expected to result in individuals who felt that they had not engaged in the given religious activities sufficiently. The key methodological innovation, compared to the standard the hypocrisy paradigm, was to use multiple (religious) behaviours instead a single behaviour, because religious people might differ on how important they consider a given religious behaviour (e.g., praying).

The modified dissonance paradigm consisted of asking participants how important six religious activities were in their faith, and then asking them to complete a questionnaire. The questionnaire consisted of three parts that asked participants to write: (a) why performing each of the religious activities was important, (b) how often they had engaged in the religious activities in the last seven days, and (c) how much time they thought that they should have spent on each of the religious activities in the last seven days. This was expected to cause cognitive dissonance, and hence negative affect and attitude change, in participants who stated that the religious

activities were important but who felt that they had not engaged frequently in the religious activities recently.

Experiment 1

Method

Participants. Forty-two participants (27 Christians and 15 Muslims; 27 females) took part in the study. The mean age was 22.6 years. Participants were selected from a participant panel from the University of Cambridge, which consisted of hundreds of participants who had completed demographic questions, including their religious affiliation. The three criteria for participation in the present experiment were that participants had to be over 18 years old, be fluent in English, and self-identify as either Christians or Muslims.

Materials. A consent form was used to introduce the study by stating that it involved a survey on attitudes about religious and non-religious activities. It further informed, as part of the cover story, that the survey was designed to help the research group to develop religious educational resources for people interested in Christianity or Islam, depending on participants' religious affiliation.

A manipulation questionnaire was used to evoke feelings of cognitive dissonance in three steps: The first part of the questionnaire asked participants to write a reason for why they thought each of the six religious activities was an important practice for a religious person (for Christian

participants it said ‘for a Christian’, and for Muslim participants it said ‘for a Muslim’). The six religious activities were praying, scripture reading, going to a place of worship, telling non-believers about one’s faith, helping the needy, and reading books about one’s faith. Participants were told in the instructions that the answers might be used for materials regarding the religious educational project mentioned in the consent form. The second part asked participants how much time they had spent on/how many times they had engaged in each of the six religious activities in the last seven days. The 9-point scale was intentionally stretched in that the scale intervals represented wide groupings so that most participants would score in the lower intervals (i.e., for the praying, Scripture reading, and reading books about your faith activities, the points were: *0, 1-30 minutes, 30-60 minutes, 1-2 hours, 2-4 hours, 4-7 hours, 7-12 hours, 12-20 hours, and 20+ hours*; for the going to a place of worship and telling non-believers about one’s faith, the points were: *0, 1, 2, 3-5, 6-8, 9-11, 12-14, 15-17, and 17+*; and for the helping the needy activity the points were: *0, 1 pence-£1, £1-5, £5-10, £10-20, £20-30, £30-50, £50-70, and £70+*). The third part asked participants how much time they thought that they should have spent on each of the activities over the last 7 days (on a 9-point scale from -4 to $+4$ where the negative scores indicated that they thought that they should have spent less time on a given activity and the positive scores indicated that they thought that they should have spent more time; if they were content with their recent behaviours, they were asked to select the mid-point, ‘0’). Hence, this third part of the questionnaire measured the level of the ‘behavioural gap’, which is the term that we used to describe the difference between participants’ recent behaviour and their ideal behaviour.

A control questionnaire was used in the control condition. It consisted of the same three components as the manipulation questionnaire but the behaviours referred to six non-religious behaviours (i.e., reading magazines, doing sports/exercise, cooking, going to the cinema, shopping, and listening to music). These neutral activities were chosen because participants were not expected to feel cognitive dissonance if they had not engaged much in them despite having advocated them. Participants were first asked to write reasons why each of the activities was a good practice for young people who were stressed about their studies. They were told that their answers may be used in materials for a project that encouraged stressed students to engage in de-stressing activities. They were then asked how much time they had spent on/how many times they had engaged in these activities in the last seven days but unlike the manipulation questionnaire, these scales were not stretched (e.g., for the shopping activity, the points were: 0, 1, 2, 3, 4, 5-6, 7-8, 9-10, and 10+). Finally, they were asked how much time they thought that they should have spent on each.

The Positive Affect Negative Affect (PANAS) questionnaire (Watson, Clark, & Tellegen, 1988) was used to measure levels of negative affect following the manipulation. This scale consists of twenty adjectives, ten measuring positive affect and ten measuring negative affect. For the purpose of the present study, all ten negative emotions were included but only the five cognitive dissonance-relevant negative emotions of guilt, shame, irritability, distress, and upset were considered relevant to the predictions (the others were: hostility, nervousness, jitter, scaredness, and fear). The latter three were included as a measure of general discomfort, while

the former two, namely guilt and shame, were used as a measure of specific religious cognitive dissonance. The instructions were to tick the box that best described the degree of momentary emotion on a 9-point Likert scale where 0 was 'not at all' and 8 was 'very much'.

Design and procedure. Participants were randomly assigned to either the dissonance condition ($n = 21$) or the control condition ($n = 21$). The procedure for both conditions was identical except for the second questionnaire, which was either the dissonance or the control one. When they arrived to the lab, participants in both conditions were given the consent form in which they were informed that the study was part of a religious education project. This deception was used to increase participants' commitment to the study by telling them beforehand that the religious activities that they would be advocating in the manipulation questionnaire were for a good cause.

Next, depending on which group they had been randomly allocated to, participants were asked to fill out either the manipulation questionnaire or the control questionnaire. Both consisted of three equivalent parts, as described above. After this, the PANAS scale was handed out, and participants were asked to indicate to what extent they felt each of the emotions in the present moment.

Results

Manipulation check. The average behavioural gap for the six religious activities in the dissonance condition was 1.43 points ($SD = 0.81$), showing that on average, participants were not content with their recent behaviour (remember that an average of '0' would have indicated that participants were content with their recent behaviour).

The PANAS guilt and shame questions were combined into a guilt-shame variable, with a reasonably high Cronbach's alpha of .77. Similarly, the distress, irritability, and upset questions were grouped together in a general discomfort variable, with a Cronbach's alpha of .76. Figure 1 illustrates these two compound variables in the two conditions. A mixed ANOVA with dissonance as between-subject variable and affect as within-subject variable indicated no main effect of dissonance, $F(1, 40) = 0.56, p = .46, \eta_p^2 = .014$, or affect $F(1, 40) = 1.03, p = .32, \eta_p^2 = .025$, but a Dissonance \times Affect interaction, $F(1, 40) = 10.52, p = .002, \eta_p^2 = .208$. The experimental group ($M = 3.62, SD = 3.88$) reported a higher level of guilt-shame than the control group ($M = 1.52, SD = 2.14$), $t(40) = 2.17, p = .036, r^2 = .10$. By contrast, no difference in general discomfort was found between the dissonance group ($M = 1.62, SD = 2.46$) and the control group ($M = 2.57, SD = 2.68$), $t(40) = -1.16, p = .25, r^2 = .03$, nor did the two groups differ on any of the other five negative emotions of hostility, nervousness, jitter, scaredness, and fear.

Insert Figure 1 about here

Discussion

Experiment 1 indicated that the modified religious hypocrisy paradigm triggers the emotions of guilt and shame, but no evidence was found for the general discomfort (e.g., irritability, upset, and distress) that previous research on cognitive dissonance through *induced compliance* has shown (e.g., Croyle & Cooper, 1983; Elkin & Leippe, 1986). We suspected that the slightly higher general discomfort in the control group was due to some of the control activities, especially exercising, where participants might have felt uncomfortable for not having done enough. For this reason, the control activities were kept more neutral in Experiment 2.

Experiment 2

The aims of Experiment 2 were to replicate the findings of guilt and shame found in Experiment 1, and to test whether religious hypocrisy-induced cognitive dissonance could be resolved through religious self-affirmation. It was hypothesised that an opportunity to reduce cognitive dissonance via a religious self-affirmation opportunity would decrease the negative affect that results from the dissonance, as proposed by self-affirmation theory (Steele & Liu, 1983).

Method

Participants. Eighty-five participants (72 Christians and 13 Muslims; 59 females) from the student population of the University of Cambridge took part. The mean age was 24.2 years. They were selected from a pool of participants who had been recruited from the university student population, as well as from the local community of Cambridge.

Materials. The questionnaire used in the dissonance condition was the same as the one used in Experiment 1. The first part of the control condition questionnaire was identical to the first part of the manipulation questionnaire used in Experiment 1, and it asked participants why they thought that the six religious activities were important to Christians/Muslims (depending on the participant's own affiliation). Having the first part of the control questionnaire identical to the first part of the manipulation questionnaire was an improvement from Experiment 1 because this made the two conditions differ only on the hypocrisy induction, and not on writing about the importance of the six religious activities. The second part asked participants how often they had engaged in six everyday activities: Grocery shopping, using public transport, biking, socialising with new people, having a meal in a public place, and going to the cinema. These activities were chosen because they were considered more neutral than the activities in Experiment 1, and therefore less likely to cause emotional discomfort in participants who felt that they had under- or over-performed them. The third part asked participants how much time they thought that they should have spent on each of the six everyday activities.

A religious self-affirmation task was used in the self-affirmation conditions to reduce the cognitive dissonance by asking participants to write briefly (six lines on an A1 sheet were provided) about their most important religious values with the following instructions: *'In order for us to understand your religious attitudes better, we would like you to write briefly what the most important religious values to you are at a personal level.'* We expected that this would reduce the cognitive dissonance because the opportunity to write about important religious values was likely to cancel out any guilt and shame induced by the hypocrisy by making the religious values, rather than religious behaviours, salient.

For the emotions measure, only five of the negative cognitive dissonance-relevant emotions of guilt, shame, irritability, distress, and upset were included.

Design and procedure. The design was a 2×2 factorial with dissonance and self-affirmation as the two independent variables. Participants were randomly assigned to one of the four conditions: Dissonance ($n= 22$), dissonance with self-affirmation ($n= 22$), control ($n= 21$), and control with self-affirmation ($n= 20$). The procedure was the same as in Experiment 1 except for the inclusion of the self-affirmation questionnaire which was administered after the hypocrisy (or control) questionnaire, but before measuring the dependent variable of emotion.

Results

Manipulation check. The average behavioural gap for the six religious activities in the dissonance conditions was 1.52 points ($SD = 0.83$), showing that on average, participants thought that they had underperformed the religious activities. This behavioural gap was similar to that found in Experiment 1 (i.e., 1.43).

Figure 2 shows the results. We carried out a mixed ANOVA with dissonance and self-affirmation as between-subject variables and affect as within-subject variable. There were no main effects of self-affirmation, $F(1, 81) = 0.98, p = .32, \eta_p^2 = .012$ or affect, $F(1, 81) = 3.31, p = .073, \eta_p^2 = .039$, but a main effect of dissonance was found, $F(1, 81) = 7.57, p = .007, \eta_p^2 = .085$. However, this effect was qualified by an interaction between dissonance and self-affirmation, $F(1, 81) = 5.06, p = .027, \eta_p^2 = .059$. (The other interactions were non-significant, all $F_s < 1$.) This interaction was further examined by carrying out two separate ANOVAs for the two levels of the self-affirmation variable. In the absence of self-affirmation, there was a main effect of dissonance, $F(1, 41) = 10.86, p = .002, \eta_p^2 = .209$, but no main effect of affect, $F(1, 41) = 2.58, p = .12, \eta_p^2 = .059$, and no Dissonance \times Affect interaction, $F < 1$. The dissonance condition had a higher score than the control condition for guilt/shame ($M = 2.64, SD = 2.73$ vs. $M = 0.52, SD = 0.98; F(1,41) = 11.15, p = .002, \eta_p^2 = .214$), but only marginally so for general discomfort ($M = 3.45, SD = 4.26$ vs. $M = 1.57, SD = 1.77; F(1, 41) = 3.51, p = .068, \eta_p^2 = .079$). A different

pattern was observed in the presence of self-affirmation, where there was no main effect of dissonance ($F < 1$) or affect ($F < 1$), and no interaction ($F = 1$).

Insert Figure 2 about here

Discussion

The effect of hypocrisy-induced guilt and shame found in Experiment 1 was replicated in the current study: Participants who were in the dissonance conditions felt more guilt and shame than participants in the control conditions. Moreover, the religious self-affirmation task eliminated the feelings of guilt and shame. Experiment 2 has also shown that merely asking people how important religious activities are is not sufficient to induce cognitive dissonance, as seen in the control conditions. In order to induce cognitive dissonance, the second part of the manipulation questionnaire where participants were asked how often they had engaged in, and should have engaged in, the religious activities was necessary to evoke the feeling of hypocrisy and dissonance.

Experiment 3

The aim of Experiment 3 was to investigate whether, in addition to guilt and shame, religious attitudes are also affected by dissonance. It was predicted that, similarly to previous research on religious cognitive dissonance that has used the belief disconfirmation paradigm (Batson, 1975), the hypocrisy paradigm would trigger a boost in religious attitudes as a response

to cognitive dissonance. In addition, Experiment 3 examined the effects of two different types of self-affirmation tasks: one domain-specific (religious) and another neutral to test whether one works more effectively than the other. Thus, the experiment consisted of four groups: dissonance, control, dissonance with religious self-affirmation, and dissonance with non-religious self-affirmation.

Method

Participants. Seventy-nine participants (66 Christians and 13 Muslims; 51 females) from the student population of the University of Cambridge took part. The mean age was 26.6 years. Participants were selected from the same pool of participants as in Experiments 1 and 2.

Materials. The hypocrisy and control questionnaires, as well as the emotion questionnaire were identical to the ones used in Experiment 2. A 13-point religious attitudes scale (where '0' was 'not at all important' and '12' was 'extremely important') was used to measure participants' attitudes toward the six religious behaviours that were used to induce the cognitive dissonance: *praying, scripture reading, going to a place of worship, telling non-believers about one's faith, helping the needy, and reading books about one's faith*. Participants were asked to indicate for each of the six behaviours how important they were to them in their faith.

Instead of the open-ended self-affirmation task that was used in Experiment 2, two separate self-affirmation questionnaires, each consisting of six statements on a 7-point Likert scale (where '0' was anchored as 'Not at all important to me' and '6' was anchored as

'Extremely important to me') were used. The first of these was the non-religious self-affirmation questionnaire which asked participants how important they considered six virtues (i.e., *'treating everybody equally'*, *'not keeping account of people's wrongdoings'*, *'practising compassion'*, *'loving one's neighbour'*, *'being humble'*, and *'showing patience for fellow humans'*). These virtues were selected because they are pro-social but not necessarily religious. Hence, the use of these pro-social items was seen as a good way to help participants to restore their self-esteem (and thereby reduce dissonance) in a non-religious domain. Participants were asked to rate how important each virtue was to them. The other self-affirmation questionnaire was religious (i.e., *'God can intervene in the world as much as He wants to'*, *'everything is known to God'*, *'God's justice is unwavering'*, *'the nature of God is all-loving'*, *'God is present everywhere'*, and *'everything was created by God'*). Participants were asked to rate how important each statement was to them. These items were selected because they provide a direct religious route to dissonance resolution through a reminder of God's positive attributes. These religious items were inspired from a previous study on religious dissonance where similar religious self-affirmation items were used (Burriss et al., 1997).

Design and procedure. The procedure was identical to Experiment 1 except for the inclusion of the attitude measure which was inserted before the emotions measure. Similarly to Experiment 2, the self-affirmation questionnaires were handed out after the hypocrisy questionnaire, and before measuring the attitudes and emotions. Participants were randomly

assigned to one of the four conditions: Dissonance ($n= 20$), control ($n= 20$), dissonance with religious self-affirmation ($n= 20$), and dissonance with non-religious self-affirmation ($n= 19$).

Results

We first discuss the attitude results, and then the affect results. In both cases, we first compare the results of the control group with those of the dissonance group (this provides a replication of Experiment 1, but with the additional attitude variable). We then compare the dissonance group with the dissonance with religious self-affirmation (RSA) and the dissonance with non-religious self-affirmation (NSA) groups, allowing us to test whether a religious self-affirmation task is any less effective in reducing religious dissonance, compared to a non-religious self-affirmation task.

Manipulation check. The average behavioural gap for the six religious activities in the dissonance conditions was 1.33 points ($SD = 0.83$), showing that on average, participants thought that they had underperformed the religious activities. This behavioural gap was similar to those found in Experiments 1 (i.e., 1.43) and 2 (i.e., 1.52).

Attitude change. A t-test showed that total religious attitudes (attitudes toward the six religious activities combined) were higher in the dissonance condition ($M = 50.85$, $SD = 13.80$) compared to the control condition ($M = 40.15$, $SD = 15.95$), $t(38) = 2.27$, $p = .015$, one-tailed, $r^2 = .12$, supporting the prediction that hypocrisy boosts religious attitudes.

A one-way ANOVA between dissonance, dissonance-RSA, and dissonance-NSA was significant, $F(2, 56) = 3.27, p = .045, \eta_p^2 = .104$. A post-hoc Dunnett test indicated that the dissonance group obtained reliably higher scores ($M = 50.85, SD = 13.8$) than the dissonance-RSA group ($M = 40.0, SD = 16.1, p = .023$) and the dissonance-NSA group ($M = 40.1, SD = 14.5, p = .038$).

Affect. Figure 3 shows the results of the comparison between the dissonance group and the control group. Although the Figure suggests an effect of dissonance and a Dissonance \times Affect interaction, a mixed ANOVA with dissonance as between-subject variable and affect as within-subject variable did not find any main effect of dissonance, $F(1, 38) = 2.12, p = .15, \eta_p^2 = .053$, or affect ($F < 1$), or any interaction, $F(1, 38) = 1.09, p = .30, \eta_p^2 = .028$.

When applied to the three dissonance conditions, a mixed ANOVA found a main effect of affect, $F(1, 56) = 7.52, p = .008, \eta_p^2 = .113$, with the scores for guilt-shame ($M = 1.44, SD = 2.30$) being lower than those for general discomfort ($M = 2.73, SD = 3.70$), but no main effect of dissonance, $F < 1$, and no interaction, $F(1, 56) = 2.30, p = .11, \eta_p^2 = .076$.

Insert Figure 3 about here

Discussion

As hypothesised, dissonance resulted in a boosting of the religious attitudes related to the six behaviours that were used to induce the cognitive dissonance. The reason for this increase in religious attitudes might be that, instead of attempting to reconcile their recent religious behaviour with their current attitudes, individuals were motivated to improve their religious efforts as a result of the guilt and shame that they experienced. Moreover, the attitude boosting effect was cancelled out by both the religious and the non-religious self-affirmation questionnaires, indicating that the domain of the self-affirmation need not be different to the religious domain in which the dissonance is induced.

The lack of guilt and shame as the result of dissonance in Experiment 3, as opposed to Experiments 1 and 2, may be due to the fact that attitudes were measured before the emotions, and hence could have eliminated any dissonance. Therefore, by the time the participants completed the emotions questionnaire, they had already resolved their dissonance, and so did not feel any guilt or shame.

General Discussion

Guilt and Shame as a Consequence of Religious Dissonance

The present work has shown that religious dissonance induced through hypocrisy is characterised by feelings of guilt and shame. This is in contrast to the feelings of general discomfort that have previously been found in previous experiments on cognitive dissonance (e.g., Elliot & Devine, 1994). This suggests that religious cognitive dissonance induced through hypocrisy may be different in nature. Alternatively, the reason for this could be that the hypocrisy paradigm forces participants to confront their inconsistencies in a way that is more direct than the widely used induced compliance paradigm of cognitive dissonance where participants are asked to engage in a task that clashes with their attitudes (Senemeaud & Somat, 2009). Because no other study has directly measured the affective consequences of hypocrisy using this paradigm, it is difficult to rule out the explanation that guilt and shame are emotions that always accompany hypocritical feelings, even when individuals are made to feel hypocritical about non-religious behaviours. It may be the case that guilt and shame are feelings associated with religious hypocrisy, but not with other hypocrisies (e.g., the ones that relate to health behaviours, as investigated by early studies such as Aronson et al., 1991).

The present research has also contributed with new experimental support to self-discrepancy theory (Higgins, 1987). The theory proposes that discrepancies between *actual* and *ideal* (i.e., what one strives towards as a person) *selves* cause ‘dejection-related emotions’ (e.g., sadness, disappointment, and dissatisfaction) and that discrepancies between *actual* and *ought*

(i.e., what one feels obligated to be like) *selves* cause ‘agitation-related emotions’ (e.g., fear, threat, and restlessness). The hypocrisy paradigm, especially as employed in the present research where a question on how often participants *should have* engaged in the given activities was included, offers a direct way of testing the predictions made by self-discrepancy theory. The fact that guilt and shame were found to result from hypocrisy in Experiments 1 and 2 supports self-discrepancy theory because it highlights the emotional consequences of personal inconsistencies, although guilt and shame are not mentioned specifically by self-discrepancy theory. However, some correlational studies have shown that shame is an emotion that accompanies most forms of self-discrepancies (Tangney, Niedenthal, Covert, & Barlow, 1998). Based on our findings in Experiments 1 and 2, we argue that there can be an overlap between *actual-ideal* and *actual-ought* discrepancies because when our participants failed to engage in the religious activities to the extent that they *should have*, they may have fallen short of both their *ideal* and their *ought* selves. So while the hypocrisy paradigm with the instructions that we used is suitable for studying self-discrepancies, in its current form it does not enable a distinction between *actual-ideal* and *actual-ought* discrepancies. Using different instructions to directly target both the *actual-ideal* and *actual-ought* discrepancies, one might be able to differentiate between these, and thereby between any differences in the emotional consequences of both discrepancies.

The Augmentation of Religious Attitudes as a Result of Religious Dissonance

The finding that religious attitudes were augmented as a result of religious hypocrisy seems counter-intuitive in light of the tradition of cognitive dissonance research that has used the

induced compliance paradigm (e.g., Croyle & Cooper, 1983; Leippe & Eisenstadt, 1994; Martinie & Fointiat, 2006; Rhodewalt & Comer, 1979; Senemeaud & Somat, 2009). Such previous research has consistently found that individuals reconcile their attitudes with their behaviour, rather than increasing the gap between attitudes and behaviour further by boosting their attitudes, which was the outcome of Experiment 3. However, this effect of attitude bolstering is compatible with a previous quasi-experimental study (Batson, 1975), which found that when Christians' religious beliefs were challenged by external material, their religious attitudes were strengthened. Batson's (1975) study, which used the belief-disconfirmation paradigm (where cognitive dissonance is induced by presenting belief-conflicting information to participants) also found this attitude effect as a result of cognitive dissonance. The reason for this effect in the present work might be that religious individuals felt that their religious attitudes were too important to be reduced in strength simply because of a performance-related inadequacy. Alternatively, it may be the case that the hypocrisy manipulation functions as a reminder of the need to improve one's behaviour – a sign of which can be the attitude strengthening effect. Hence, the fact that individuals strengthened their religious attitudes after feeling hypocritical could indicate their motivation to improve their behaviour.

In their paper, McConnell and Brown (2010) showed that the direction of the attitude change caused by hypocrisy was moderated by participants' self-complexity, which is the number of differentiated self-aspects that individuals have. Individuals who had high self-complexity bolstered their attitudes regarding the topic (i.e., good study habits) that they were

made to feel hypocritical about, whereas individuals low on self-complexity reduced the strength of their attitudes as an attempt to reconcile these with their behaviour. In contrast, Experiment 3 of the present work showed that there was an overall effect of religious attitude bolstering. It may be the case that self-complexity moderates attitude change when a single behaviour is targeted in the hypocrisy paradigm, whereas targeting multiple behaviours simply augments attitudes. A potential mechanism for this could be that inducing hypocrisy regarding several behaviours activates more aspects of the self-concept, which in turn creates a similar effect to that seen in high self-complexity individuals in the other study. Alternatively, the bolstering of religious attitudes as a consequence of hypocrisy might be a phenomenon specific to religious attitudes. Examining religious hypocrisy using a single behaviour, and measuring religious individuals' self-complexity would progress our understanding of whether the current findings are unique to religious attitudes or whether they are the result of the multiple behaviours used in these experiments.

The Effectiveness of both Domain-specific and Domain-nonspecific Self-Affirmations

Our work has also indicated that when it comes to religious dissonance, the domain of the self-affirmation may not make a difference to the resolution of the dissonance, as shown in Experiment 3. This is in contrast to previous work on dissonance induced through the induced compliance paradigm, where participants preferred self-affirmation in a different domain to the one in which the dissonance was induced (i.e., they wrote an essay against funding increases for facilities and services for disabled people, Aronson, Blanton, & Cooper, 1995). The reason for

this discrepancy between the previous study and ours may be related to the nature of the domains (religious versus non-religious) or to the nature of the dissonance paradigms (the induced compliance versus the hypocrisy). One way in which the religious domain differs from other domains is that religious individuals are able to rely on God for mercy and forgiveness, and thereby ridding themselves of their flaws. The religious self-affirmation that we used in Experiment 3 was related to God's attributes, some of which were related to God's love and power, so it may be the case that a reminder of these attributes reduces dissonance despite being in the religious domain. It may also be the case that the hypocrisy paradigm does not require a domain-neutral self-affirmation because the dissonance is induced blatantly, whereas it is relatively more indirect in the induced compliance paradigm (i.e., the participants are not confronted with their discrepancies). Hence, the hypocrisy-related dissonance may be reduced within the same domain because it directly resolves the obvious hypocrisy. However, in order to clarify whether the present findings of self-affirmation are the result of the domain or the paradigm, further research that isolates these two variables is required.

Conclusions and Limitations

Our work has furthered research on cognitive dissonance in four ways. First, we have shown that the emotions of guilt and shame can result from hypocrisy-induced cognitive dissonance. Second, we have demonstrated that the hypocrisy paradigm can be used to test self-discrepancy theory (Higgins, 1987) by including a question on the behavioural gap, which is the gap between one's actual and one's ideal behaviour. Third, we have shown that an attitude

change in the opposite direction of an attitude-behaviour reconciliation can result from religious cognitive dissonance. Fourth, we have provided evidence that, at least in the religious domain, even a self-affirmation opportunity from the same domain as the dissonance-induction can relieve dissonance and its emotional and attitudinal consequences.

One limitation of the present work is that it does not determine whether the findings of the three experiments are unique to religious cognitive dissonance, or whether they are the consequences of the hypocrisy-induced dissonance. In future research, it would be particularly interesting to investigate whether guilt and shame result from hypocrisies other than the religious. Another limitation of the present investigation is that we were unable to differentiate between the two main types of self-discrepancies (i.e., *actual-ideal* and *actual-ought*) proposed by Higgins (1987). Future research should use the hypocrisy paradigm to target these using more specific instructions during the dissonance-induction in order to shed more light on both self-discrepancy theory (Higgins, 1987) and cognitive dissonance theory (Festinger, 1957).

Figure Captions

Figure 1. Guilt-shame and general discomfort as a function of dissonance (error bars represent ± 1 standard error).

Figure 2. Guilt-shame and general discomfort as a function of dissonance and self-affirmation (error bars represent ± 1 standard error).

Figure 3. Guilt-shame and general discomfort as a function of dissonance and self-affirmation (error bars represent ± 1 standard error).

References

- Aronson, E., Fried, C. B., & Stone, J. (1991). Overcoming denial and increasing the intention to use condoms through the induction of hypocrisy. *American Journal of Public Health, 81*, 1636-1638.
- Aronson, J., Blanton, H., & Cooper, J. (1995). From dissonance to disidentification: Selectivity in the self-affirmation process. *Journal of Personality and Social Psychology, 68*, 986-996.
- Barrett, J. L. (2000). Exploring the natural foundations of religion. *Trends in Cognitive Sciences, 4*, 29-34.
- Batson, C. D. (1975). Rational processing or rationalization? The effect of disconfirming information on a stated religious belief. *Journal of Personality and Social Psychology, 32*, 176-184.
- Burris, C. T., Harmon-Jones, E., & Tarpley, W. R. (1997). "By faith alone": Religious agitation and cognitive dissonance. *Basic and Applied Social Psychology, 19*, 17-31.
- Cohen, A. B., Hall, D. E., Koenig, H. G., & Meador, K. G. (2005). Social versus individual motivation: Implications for normative definitions of religious orientation. *Personality and Social Psychology Review, 9*, 48-61.

- Cooper, J. (2007). *Cognitive dissonance: Fifty years of a classic theory*. London, England: SAGE Publications.
- Croyle, R. T., & Cooper, J. (1983). Dissonance arousal: Physiological evidence. *Journal of Personality and Social Psychology, 45*, 782-791.
- Dunford, F. W., & Kunz, P. R. (1973). The neutralization of religious dissonance. *Review of Religious Research, 15*, 2-9.
- Elkin, R. A., & Leippe, M. R. (1986). Physiological arousal, dissonance, and attitude change: Evidence for a dissonance-arousal link and a "Don't remind me" effect. *Journal of Personality and Social Psychology, 51*, 55-65.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as a psychological discomfort. *Journal of Personality and Social Psychology, 67*, 382-394.
- Exline, J. J. (2002). Stumbling blocks on the religious road: Fractured relationships, nagging vices, and the Inner struggle to believe. *Psychological Inquiry, 13*, 182-189.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, U.S.A.: Stanford University Press.
- Festinger, L., Riecken, H., & Schachter, S. (1956). *When prophecy fails*. New York, U.S.A.: University of Minnesota.

- Fried, C. B. (1998). Hypocrisy and identification with transgressions: A case of undetected dissonance. *Basic and Applied Social Psychology, 20*, 145-154.
- Fried, C. B., & Aronson, E. (1995). Hypocrisy, misattribution, and dissonance reduction. *Personality and Social Psychology Bulletin, 21*, 925-933.
- Higgins, E. T. (1987). Self-Discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319-340.
- Leippe, M. R., & Eisenstadt, D. (1994). Generalization of dissonance reduction: Decreasing prejudice through induced compliance. *Journal of Personality and Social Psychology, 67*, 395-413.
- Luyten, P., Corveleyn, J., & Fontaine, J. R. J. (1998). The relationship between religiosity and mental health: Distinguishing between shame and guilt. *Mental Health, Religion & Culture, 1*, 165-184.
- Mahaffy, K. A. (1996). Cognitive dissonance and its resolution: A study of lesbian Christians. *Journal for the Scientific Study of Religion, 35*, 392-402.
- Martinie, M. A., & Fointiat, V. (2006). Self-Esteem, trivialization, and attitude change. *Swiss Journal of Psychology/Schweizerische Zeitschrift für Psychologie/Revue Suisse de Psychologie, 65*, 221-225.

- Park, C. L., Edmondson, D., Hale-Smith, A., & Blank, T. O. (2009). Religiousness/spirituality and health behaviors in younger adult cancer survivors: Does faith promote a healthier lifestyle? *Journal of Behavioral Medicine, 32*, 582-591.
- Rhodewalt, F., & Comer, R. (1979). Induced-compliance attitude change: Once more with feeling. *Journal of Experimental Social Psychology, 15*, 35-47.
- 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.
- Senemeaud, C., & Somat, A. (2009). Dissonance arousal and persistence in attitude change. *Swiss Journal of Psychology/Schweizerische Zeitschrift für Psychologie/Revue Suisse de Psychologie, 68*, 25-31.
- Shariff, A. F., Cohen, A. B., & Norenzayan, A. (2008). The devil's advocate: Secular arguments diminish both implicit and explicit religious belief. *Journal of Cognition and Culture, 8*, 417-423.
- Sherman, D. K., & Hartson, K. A. (2011). Reconciling self-protection with self-improvement: Self-affirmation theory. In M. D. Alicke & C. Sedikides (Eds.), *Handbook of self-enhancement and self-protection* (pp. 128-151). New York, U.S.A.: Guilford

- Sherman, S. J., & Gorkin, L. (1980). Attitude bolstering when behavior is inconsistent with central attitudes. *Journal of Experimental Social Psychology, 16*, 388-403.
- Sherry, A., Adelman, A., Whilde, M. R., & Quick, D. (2012). Competing Selves: Negotiating the Intersection of Spiritual and Sexual Identities. *Professional Psychology: Research and Practice, 41*, 112-119.
- Slone, D. J. (Ed.). (2006). *Religion and cognition: A reader*. London, England: Equinox.
- Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology, 45*, 5-19.
- Tangney, J. P., Niedenthal, P. M., Covert, M. V., & Barlow, D. H. (1998). Are shame and guilt related to distinct self-discrepancies? A test of Higgins's (1987) hypotheses. *Journal of Personality and Social Psychology, 75*, 256-268.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.