Running head: EVALUATIONS OF FORMER GROUPS		1
Looking back on identities past: Implicit and explicit evaluations	of former groups	
Charles R. Ebersole Beavercreek, Ohio		
Bachelor of Arts, Miami University, 2012		
A Thesis presented to the Graduate Faculty of the University of Virgin Degree of Master of Arts	ia in Candidacy for the	
Department of Psychology		
University of Virginia May 2015		
Dr. Brian Nosek, Primary Advisor	Date	

Dr. Shige Oishi, Second Reader

Date

Abstract

Group memberships have consequences for social evaluation, leading people to prefer in-groups over out-groups. However, group membership can change. In this paper, I investigate implicit and explicit evaluations of a past in-group. Across three studies, former Christians showed less positive implicit and explicit evaluations of Christianity than current Christians, but also slightly more positive implicit evaluations compared to non-religious individuals who were never Christian. This lingering influence of group membership on implicit evaluation was not moderated by the length of time since group exit or past level of involvement in Christianity. Overall, implicit and explicit evaluations of former Christians more closely resembled those of their current group rather than those of their past identity.

Looking back on identities past: Implicit and explicit evaluations of former groups

Individuals are members of many groups. Group membership might be defined by
shared demographic factors (e.g., sex, race), personal beliefs (e.g., political or religious groups),
or common interests (e.g., occupations, sports teams). For some groups, membership is stable;
for others, membership changes over time. For example, life circumstances may change, leading
people to change careers or cities. Individuals can mature out of groups, such as graduating from
a school, or aging out of youth groups. Finally, people's beliefs might change, leading them to
depart groups such as a political or religious affiliations. All these scenarios signal transitions
out of old group identities and possibly toward new group identities.

The groups that individuals belong to have consequences for how they see and define themselves. Individuals use group memberships as a basis for crafting and defining personal identity. Identity Theory (e.g., Stryker & Burke, 2000) and Social Identity Theory (Tajfel & Turner, 1979) define the self as a collection of group memberships and roles that individuals play in groups. To maintain these identities, individuals are motivated to see their group as distinct from others and promote adherence to shared standards within their group (Turner et al., 1987).

Evaluations of groups also have consequences for evaluations of the self. Individuals are motivated to maintain positive self-image (Greenwald, 1980). This motivation extends to evaluations of the group, as positive group-image can help maintain positive self-image (Tajfel, 1978). As a result, in-group favoritism forms quickly, even for groups formed randomly and with little consequence, and produces strong preferences for in-groups over out-groups (Turner, Brown, & Tajfel, 1979; Mullen, Brown, & Smith, 1992).

What happens to in-group favoritism when a person leaves a group? At one extreme, people may maintain favoritism for groups as long as they were members at some point in their

life history. At the other extreme, favoritism may require present membership, and past groups are viewed as any other out-group. An intermediate possibility is that past group memberships have a lingering influence on social evaluation. Moreover, any lingering influence may differ between explicit evaluations - which may tie more closely to the circumstances for leaving the group and conscious beliefs about the group, and implicit evaluations - which may reflect more of the accumulated experience as a past group member. The purpose of this article is to examine implicit and explicit social evaluation of past group memberships.

Group preferences after group transitions

As an example of group transition, consider a person who is born into a Republican family and identifies as Republican but becomes liberal during his teenage years and disaffiliates from the Republican party. Now, in his 20s, he reflects on his former political group. In forming his explicit evaluation he introspects on his beliefs about the Republican party and experiences he has had with Republicans. His choice to leave the Republican party may signal that he holds beliefs that conflict with Republican ideology. He may have also had negative experiences with Republicans during his transition. If so, these factors would likely lead this individual to explicitly evaluate Republicans negatively.

Explicit evaluations are characterized by a deliberate evaluative process in which the person introspects and reports their evaluation. Implicit evaluations, on the other hand, occur without an act of introspection about the target of evaluation (Greenwald & Banaji, 1995; Nosek & Greenwald, 2009). Implicit evaluations may be the result of associations that have accumulated through life experiences (Gawronski & Bodenhausen, 2006; Nosek, Hawkins, & Frazier, 2012; Rudman, 2004; Wilson, Lindsey, & Schooler, 2000).

For the hypothetical former Republican, implicit evaluations of Republicans may draw on different information than his explicit evaluations, and thus look quite different. For example, during his childhood, he may have been surrounded by individuals who were Republican, leading to an accumulation of positive associations with Republicans. However, as he wrestled with his political identity, he may have had several negative experiences with Republican policy positions. He may have also had negative social experiences about his shifting identity. These more recent experiences would add to his accumulation of associations with Republicans, but would not erase the positive associations formed earlier in life.

What is the possible consequence of different sources of information for implicit and explicit evaluation? Whereas the former Republican is able to deliberately alter his explicit identity, and thus explicit evaluation of Republicans, his implicit evaluations may reflect an accumulation of associations from life in and out of the identity (Rudman, Phelan, & Heppen, 2007). Therefore, regardless of his explicit evaluation, this individual may continue to display positive implicit attitudes toward Republicans as a lingering influence of his past membership. Moreover, given models of implicit evaluations as reflecting accumulated experience, it is reasonable to hypothesize that the total time and experience of being a group member would be a positive influence on implicit evaluation of that group, and the total time since leaving the group would be a negative influence on implicit evaluation of that group. I examined the effect of changing identities on implicit and explicit evaluation in the context of religious group membership.

Shifting religious demographics as an opportunity to study group transition

Changing religious identity is a similar group transition to changing political affiliation.

Many people are "born into" a religious identity. For many, this becomes a lifelong identity, and

for some, the identity changes later in life to another religion or to no religion at all. For example, Christianity is projected to lose roughly 66 million members worldwide between 2010 and 2050, with many individuals leaving organized religion entirely (Pew Research Center, 2015). This exodus from Christianity provides an opportunity to examine how individuals evaluate a former group in a naturally occurring group transition.

How might *former Christians* implicitly evaluate Christianity compared to *current*Christians or non-religious people who were *never Christian*? At one extreme, former

Christians may continue to hold implicit attitudes similar to members of their former group.

Current Christians have very positive implicit evaluations of their group (Axt, Ebersole, & Nosek, 2014). Early formative experiences may have an outsized impact on implicit evaluations (Rudman & Heppen, 2001; Rudman, Phelan, & Heppen, 2007), and departure from the group later in life may not be sufficient to substantially influence the pro-Christian implicit evaluations that emerged during group membership.

At the other extreme, former Christians might display implicit attitudes similar to never Christians. During and after their transition, former Christians might develop negative associations with their former group, adding to the positive associations accumulated during membership. When individuals have positive and negative associations with a target, their implicit evaluation can become context-sensitive in activation (Rydell & Gawronski, 2009; Gawronski & Bodenhausen, 2006). Former Christians may evaluate Christianity in the context of their current identity (being non-religious) rather than in the context of their past religious identity (being Christian). Therefore, when evaluating Christianity, associations formed during the participant's time as non-religious might be more strongly activated than associations formed during Christian membership.

7

As a final possibility, implicit evaluations of former Christians will fall somewhere between these extremes. Their location on this continuum might depend on the timing of their transition and past involvement in Christianity. Former Christians differ in how long they were Christian and the amount of time since their transition. Longer membership might allow for greater accumulation of positive associations with Christianity whereas longer time outside the group might relate to more negative associations. In addition, former Christians likely vary in how important their religious identity was to them and the frequency with which they attended religious events. Greater past involvement could produce stronger evaluations of Christianity that are more resistant to change after membership (Krosnick & Petty, 1995).

Finally, former Christians' implicit evaluations of Christianity might be distinct from their explicit evaluations. Former Christians likely explicitly evaluate Christianity more negatively than current Christians. This attitude would reflect differences in beliefs and possible negative experiences stemming from leaving religion. Indeed, non-religious individuals, explicitly evaluate Christianity much more negatively than current Christians (Pew Research Center, 2014). Former Christians likely contribute to this trend and report similar attitudes to their secular group members. However, the explicit evaluations of former Christians may still differ from those of never Christians, positively or negatively, based on past experiences as a Christian.

I examined these possibilities in three studies. In Study 1, I examined whether or not former Christians hold implicit and explicit attitudes toward Christianity that differ from the attitudes current Christians and never Christians. In Studies 2 and 3, I investigated possible moderators of attitudes among former Christians. First, I examined whether the amount of time spent as a Christian and the length of time since leaving religion predicted evaluations of

Christianity. Finally, I investigated relations between past involvement in Christianity and current attitudes, comparing these relations to those of current Christians.

Study 1

In Study 1, I examined attitudes toward Christianity among former Christians, relative to both current Christians and never Christians. After data collection, I split the dataset into an exploratory sample and a holdback sample (N's 1,758 and 2,668). With the exploratory sample, I conducted a variety of analyses based on initial theorizing about how former group membership might relate to implicit and explicit attitudes. Current Christians exhibited much more positive attitudes toward Christianity, implicitly and explicitly, compared to former Christians. Former Christians exhibited more positive implicit attitudes toward Christianity compared to never Christians, but the two groups did not differ in their explicit evaluations. This suggests that former membership may leave a lasting impact on implicit attitudes but not on explicit attitudes. The comparison of former and never Christians served as the primary confirmatory test for Study 1. I used the exploratory analyses to generate my confirmatory analysis plan, and then discarded all exploratory analyses. Study 1 reports the confirmatory tests using only the holdback sample.

Participants

Participants (N = 2,668) volunteered by visiting the demonstration site of Project Implicit (https://implicit.harvard.edu/) and selecting the Religion Implicit Association Test. Of those, 1,053 identified as Christian and 793 identified as religiously unaffiliated. The Christian sample was 65.1% female, 91.7% currently lived in the United States, and participants had a mean age of 27.1 years (SD = 11.5). The unaffiliated sample was 51.5% female, 80.3% currently lived in the United States, and participants had a mean age of 26 years (SD = 10.4). Also, 558 of these

¹ I continued to collect data for the holdback sample while I was conducting the exploratory analyses making the holdback sample larger than the exploratory sample.

² See supplemental materials for results from these exploratory analyses.

participants indicated that they had formerly been Christian; the remaining 235 indicated never being Christian.

Measures

Participants completed four tasks: explicit attitude measures toward various religions, a Multi-Category Implicit Association Test (MC-IAT; Axt, Ebersole, & Nosek, 2014) assessing implicit attitudes toward the same religions, a measure of personal religious history, and a demographics questionnaire.

Implicit religion attitudes. Implicit attitudes were assessed using the MC-IAT. The MC-IAT is a series of Brief IATs (Sriram & Greenwald, 2009) measuring the strength of associations between religions groups and positive evaluation via reaction times on a categorization task. The task consisted of 14 blocks, 2 of which were practice. Each test block contained 16 trials, presented one at a time, containing words related to one of four religions or that were positive (Wonderful, Best, Superb, Excellent) or negative (Terrible, Awful, Worst, Horrible) in valence. Participants were randomly assigned to complete one of two versions of this measure. In the holdback sample, participants saw words related to Christianity (Gospel, Christian, Jesus, Church), Judaism (Torah, Jew, Abraham, Yahweh), Islam (Koran, Muslim, Mohammed, Allah), and Hinduism (Hindu, Krishna, Karma, Dharma). In the exploratory sample, the fourth religion category was Buddhism instead of Hinduism (Buddha, Buddhist, Dharma, Karma). Random assignment to the fourth religion category was used as the basis for identifying exploratory and holdback samples. I had no reason to expect that the change in the fourth religious category would make a substantial difference in evaluations for the other categories (Axt et al., 2014).

For each block, participants categorized stimulus items as either a target religious group (e.g., Christianity) or positive words by pressing the "I" key. Participants pressed the "E" key

for anything else (e.g., another religious group or negative words). Participants completed the task as quickly as possible and had to correct errors before proceeding to the next trial. Each religion served as the target religion (paired with positive words) in three response blocks, paired with each of the other religions once. Each religion appeared as the target group once per four blocks in a random order. Participants were assigned to one of 24 possible block orders.

MC-IAT scores were computed using the *D* scoring algorithm designed for the Brief IAT (Nosek, Bar-Anan, Sriram, Axt, & Greenwald, 2014). This produces 6 *D* scores, one for each pairwise comparison of the four religions. First, all trials with reaction times greater than 10,000 ms and the first four trials of each block (which served as practice for each pairing) were removed. Next, all trials less than 400 ms or greater than 2000 ms were replaced with a time of 400 ms or 2000 ms respectively, and all participants with more than 10% of responses less than 400 ms were removed entirely to minimize the influence careless responding. Each *D* score was calculated by subtracted the mean response latency for one block (e.g., Christianity as target religion, Judaism as other) from its corresponding block (Judaism as target religion, Christianity as other) and dividing this score by the standard deviation of all trials across both blocks.

A score for each religion was calculated by averaging the three D scores in which the religion was represented. Thus, the score indicated an evaluation of that religion relative to the other three religions, with more positive scores indicating more positive evaluations relative to the other groups and more negative scores indicating more negative evaluations relative to the other groups.

Explicit religion attitudes. Explicit evaluations were assessed with a four single-item measures, asking participants, "how warm or cold are your feelings toward the religion X?", one for each of Christianity, Judaism, Islam, and Hinduism (holdback sample) or Buddhism

(exploratory sample). Participants responded using a 9-point scale (1- extremely cold, 5- neither warm nor cold, 9- extremely warm). The four items were presented one at a time in a random order. A single explicit attitude score for each religion was created by subtracting each religion's single-item score from every other religion's single item-score and averaging the three differences together. Thus, the explicit attitude score reflects warmer attitudes toward a given religion relative to the other three religions, similar to the implicit assessment.

Religious history. To assess religious history, participants could report up to five religious (or non-religious) groups that they had belonged to during their life. For each group, they indicated the age at which they left the group (or their current age if it was their current group), how important that religion was to them (0- not at all important, 1- somewhat important, 2- important, 3- very important, 4- extremely important), and how frequently they attended religious services (0- never, 1- less than once a year, 2- once a year, 3- once a month, 4- once a week, 5- more than once a week). Former Christians were identified as those who indicated being currently non-religious, but who also indicated having been Christian as some point. Measures of importance and frequency of attendance were not examined in this study, but are examined in Study 3.

Demographics. Participants provided several pieces of demographic information, including their sex, age, ethnicity, race, political identity, occupation, religious affiliation, level of education, current country of residence, and country of primary citizenship.³

Procedure

Participants completed the explicit attitude measures, the MC-IAT, the religious history measure, and demographics questionnaire in a randomized order.⁴

³ All materials can be accessed at: https://osf.io/69vgh/

⁴ Demonstrations of the study can be found at: https://osf.io/qixv6/wiki/Study%20Demonstrations/

Results

Current Christians were more explicitly pro-Christian (M = 2.48, SD = 1.96) than former Christians (M = -.78, SD = 1.55), t(1,549) = 33.64, p < .001, d = 1.78, 95% CI [1.66, 1.90], and never Christians (M = -.78, SD = 1.44), t(1,219) = 23.20, p < .001, d = 1.68, 95% CI [1.53, 1.84]. Current Christians were also more pro-Christian implicitly (M = .44, SD = .37) than former Christians (M = .20, SD = .35), t(1,495) = 12.34, p < .001, d = .66, 95% CI [.55, .77], and never Christians (M = .13, SD = .41), t(1,172) = 10.92, p < .001, d = .80, 95% CI [.65, .94].

Explicit evaluations of Christianity by former Christians (M = -.78, SD = 1.55) were similarly negative to evaluations by never Christians (M = -.78, SD = 1.44), t(762) = .003, p = .998, d < 0.005, 95% CI [-.16, .16]. However, former Christians were more pro-Christian implicitly (M = .20, SD = .35) than were never Christians (M = .13, SD = .41), t(731) = 2.39, p = .017, d = .20, 95% CI [.03, .36].

Discussion

Explicitly, former Christians evaluated Christianity negatively. This evaluation was similar to the evaluations of never Christians and very different than evaluations of current Christians. Implicitly, former and never Christians evaluated Christianity much less positively than current Christians, but all groups held positive implicit attitudes toward Christianity. The discrepancy between implicit and explicit attitudes for former and never Christians may reflect distinct sources of evaluation. Most participants came from countries that are predominantly Christian. Their implicit attitudes may reflect social hierarchies that favor majority groups in society (Rudman, Feinberg, & Fairchild, 2002; Axt, Ebersole, & Nosek, 2014). Their explicit evaluations, however, reflect their deliberate assessments of Christianity, which are more likely to be influenced by their beliefs about the group.

Former Christians were more implicitly pro-Christian than were never Christians, but far from being as positive toward Christianity as current Christians. This suggests that past group membership has a lingering, but small, influence on implicit preferences. Former Christians' implicit evaluations were .07 *D* units away from never Christians but .24 *D* units away from current Christians.

This outcome appears challenging for perspectives that suggest implicit attitudes are stable associations and are particularly reflective of early life experiences (Rudman & Heppen, 2001; Rudman, Phelan, & Heppen, 2007; Wilson, Lindsey, & Schooler, 2000). However, this study included all former Christians and did not assess when they left the group. Those who spend more time in Christianity might develop more positive associations with the group than those who were Christian for a shorter time. These associations would serve as a starting point for implicit attitudes as individuals transition from Christianity. Right after leaving, former Christians might continue to hold implicit attitudes similar to their attitudes during membership. These associations might then gradually become more negative as the individual spends more time outside of the religion. As such, the aggregate implicit attitudes of former Christians might reflect years of secular identity and fail to capture the process by which these evaluations change.

Study 2

In Study 2, I investigated whether the timing of former Christians' exits from Christianity related to their implicit and explicit attitudes toward Christianity. As in Study 1, I divided my dataset into an exploratory sample and a confirmatory holdout sample. From the 24,181 individuals that participated in this study, I randomly selected 7,000 participants to use as an exploratory sample. The remaining 17,181 participants comprised my holdback sample.

Counter to preliminary predictions, analyses with the exploratory sample suggested that the number of years since leaving Christianity did not predict implicit or explicit attitudes of former Christians. However, the age at which former Christians left Christianity predicted both implicit and explicit attitudes toward Christianity. Those who left later in life were more positive implicitly and explicitly toward Christianity. I then discarded my exploratory sample and results and applied confirmatory tests to the holdback sample for these unexpected findings. Study 2 reports only the confirmatory results of these tests, as well as confirmatory replications of the findings in Study 1.

Participants

Participants volunteered in the same manner as Study 1. In total, 17,181 individuals participated. Of those, 5,603 identified as Christian and 5,570 identified as non-religious. The Christian sample was 63.9% female, 89% currently lived in the United States, and participants had a mean age of 28.6 years (SD = 13.0). The non-religious sample was 50% female, 79% currently lived in the United States, and participants had a mean age of 27.7 years (SD = 12.0). In addition, 3,676 indicated that they had formerly been Christian; 1,894 indicated never being Christian.

Measures and Procedure

The measures and procedure used were the same as in Study 1.

Results

Current Christians were more pro-Christian explicitly (M = 2.52, SD = 2.06) than former Christians (M = -.87, SD = 1.54), t(7,356) = 76.51, p < .001, d = 1.91, 95% CI [1.86, 1.97], and never Christians (M = -.75, SD = 1.38), t(5,793) = 56.03, p < .001, d = 1.71, 95% CI [1.64, 1.78]. Current Christians were also more pro-Christian implicitly (M = .45, SD = .36) than former

Christians (M = .17, SD = .35), t(7,431) = 33.70, p < .001, d = .80, 95% CI [.75, .84], and never Christians (M = .14, SD = .36), t(5,712) = 27.98, p < .001, d = .88, 95% CI [.82, .94].

Unlike study 1, former Christians were more negative explicitly toward Christianity (M = -.87, SD = 1.54) than were never Christians (M = -.75, SD = 1.38), t(4415) = -2.48, p = .013, d = -.08, 95% CI [-.14, -.02]. Again, former Christians were more pro-Christian implicitly (M = .17, SD = .35) than were never Christians (M = .14, SD = .36), t(4351) = 2.63, p = .009, d = .09, 95% CI [.02, .15].

Timing of exit. Figure 1 displays a plot of age when leaving Christianity against current age. On average, former Christians left Christianity when they were 15.78 years old (SD = 7.19). Regardless of current age, most former Christians (92%) had left Christianity before age 25. Former Christians, on average, left Christianity 12.44 years ago (SD = 11.28).

I constructed hierarchical linear models predicting implicit and explicit attitudes toward Christianity of former Christians, with years since leaving the church and age when leaving (mean centered) entered as the first step, and the interaction of the two entered as the second step. The interaction did not reliably predict implicit attitudes, t(3,032) = -.83, p = .409, $r_p = .01$, 95% CI [-.02, .05], or explicit attitudes, t(2,986) = -1.55, p = .121, $r_p = -.03$ [-.06, .01], so I examined a model with only the main effects. The age when leaving Christianity weakly, but reliably, predicted implicit attitudes toward Christianity, t(3,033) = 2.65, p = .008, $r_p = .05$, 95% CI [.01, .08], as well as explicit attitudes toward Christianity, t(2,987) = 6.28, p < .001, $r_p = .11$ [.08, .15]. In both instances, individuals who left Christianity later in life exhibited more positive attitudes toward Christianity. The number of years since leaving did not predict implicit, t(3,033) = -.81, p = .419, $r_p = -.01$, 95% CI [-.05, .02], or explicit attitudes, t(2,987) = 1.23, p = .217, $r_p = .02$ [-.01, .06].

Discussion

Former Christians again demonstrated more positive implicit attitudes toward Christianity compared to never Christians (d = .09), although this effect was weaker than in Study 1 (d = .20). Unlike Study 1, former Christians explicitly evaluated Christianity more negatively than never Christians did (d = .08). This could stem from experiences that motivated former Christians to leave their religion or from conflict experienced during their transition.

The novel question tested in Study 2 was whether the age of leaving Christianity and how long ago that occurred were predictive of attitudes. Former Christians who left Christianity later in life had more positive implicit and explicit evaluations compared to those who left at a younger age. Individuals accumulate positive implicit associations with their in-groups. Longer membership as Christian might allow individuals to accumulate more positive associations with the group. This could lead to more positive or more resilient implicit attitudes. The relation with explicit attitudes was not hypothesized in advance. A simple explanation is that attitudes toward Christianity are relatively stable and those that dislike Christianity the most leave the religion as soon as it is feasible. Another possibility is that life circumstances during group transition influence explicit evaluations. For instance, teenagers leaving Christianity may do so while still living with family members who oppose the departure. That departure might be especially difficult, leading to stronger long-term negative explicit evaluations of Christianity compared to people who leave when they were adults and living away from their family of origin.

Length of time since leaving Christianity did not relate to implicit evaluations. Former Christians who left one year ago had the same implicit attitudes as those who left forty or more years ago. Implicit evaluation of former groups does not gradually decline after membership has ended. This observation seems quite contrary to the idea that implicit evaluations are a function

of accumulated experience. At least in terms of group membership, there seems to be no accumulating effect at all of having left a group. There are at least three possible explanations for these results. First, all change in implicit attitudes toward one's in-group might occur *prior* to group exit rather than after it. Deciding to leave Christianity is likely a process that develops over time. While contemplating exit, implicit attitudes might gradually change. Group exit would then coincide with the nadir of attitude change and remain stable after leaving the group.

A second possibility is that leaving a group produces a strong and immediate change in implicit evaluation. That is, the effects of group membership on implicit in-group favoritism may be entirely contingent on the immediate status of group membership. This account would be unexpected for many models of implicit attitudes (e.g., Gawronski & Bodenhausen, 2006; Nosek, Hawkins, & Frazier, 2011; Rudman, 2004; Wilson, Lindsey, & Schooler, 2000). Nonetheless, minimal group formation research demonstrates that implicit in-group favoritism can form immediately after entering a group (Greenwald, Pickrell, & Farnham, 2002; Pinter & Greenwald, 2004; Otten & Moskowitz, 2000). Perhaps group dissolution has similar effects, even for long-term group memberships.

A third possibility is that former Christians have always had negative explicit attitudes and weak positive implicit attitudes toward Christianity. Although people seem to quickly and reliably favor their in-groups (Tajfel, 1978; Otten & Moskowitz, 2000), former Christians did choose to leave Christianity. Their choice to exit the group might reflect a lack of involvement with their religion and relatively negative attitudes toward Christianity. This possibility would be more in line with views of implicit attitudes forming early in life, though not necessarily as a function of group memberships and close experiences, and being resistant to change over time.

I cannot parse between these explanations completely without a longitudinal investigation in which I assess participants implicit evaluations over time and assess change as a function of their continuing or changing membership in the group. That will be an informative study to conduct in the future. We can, however, gain some insight among the possibilities by examining indicators of former Christians' past engagement in Christianity. Study 3 investigates self-ratings of importance and participation in Christianity as possible moderators of implicit attitudes among former Christians.

Study 3

Experiences with Christianity likely vary among former Christians. For some,

Christianity may have never been an important identity or a common feature of life. For others,

Christianity may have once been an important element of their identity and the basis for many

events in their life. These differences in past experience could form the foundation for implicit

evaluations of Christianity which persist after membership. Former Christians might largely fall

into the former group, with their lack of involvement in Christianity contributing to their

decision to leave. Their less positive implicit attitudes (relative to implicit attitudes of current

Christians) may reflect the stable influence of minimal past involvement in Christianity. These

two outcomes, former Christians reporting less past involvement than current Christians report

current involvement and implicit attitudes being moderated involvement in Christianity, would

support the explanation that former Christians' implicit evaluations toward Christianity have

remained stable throughout their lives.

In Study 3, I first investigated whether former Christians report less past involvement in Christianity (self-reported importance and frequency of attending religious services) than current Christians report current involvement. Then, I investigated whether or not past involvement

moderates attitudes of former Christians. I examined whether or not current involvement moderates the attitudes of current Christians as a point of comparison.

I used the full data set from Study 2 for exploratory analyses. On average, current Christians reported much greater importance and more frequent attendance of religious functions than former Christians reported for their past membership. However, there was substantial variation in ratings of importance and attendance for both groups. Importance and attendance moderated implicit and explicit attitudes of current Christians. Current Christians who rated Christianity as more important and current Christians who attended religious services more frequently demonstrated more positive implicit and explicit attitudes toward Christianity. However, neither past importance nor past attendance moderated implicit or explicit attitudes among former Christians. Moreover, across the distributions of involvement (attendance and importance), current Christians evaluated Christianity more positively, both implicitly and explicitly, than former Christians did. Even current Christians reporting minimal involvement evaluated Christianity more positively than did former Christians who reported substantial involvement when they were Christian.

I used data from the Buddhism version of the study that was held back from Study 2 for confirmatory tests. First, I adapted my exploratory analysis script to match this holdback sample. Then, I drafted the results section for Study 3 based upon the exploratory findings. Finally, I applied the analysis scripts to generate the outcomes for the drafted results section to the holdback dataset in order to provide a confirmatory test of all outcomes. Study 3 reports only these confirmatory tests.

Participants

Participants volunteered in the same manner as Studies 1 and 2. In total, 24,184 individuals participated. Of those, 8,047 identified as Christian and 7,846 identified as non-religious. The Christian sample was 64.3% female, 89.3% currently lived in the United States, and participants had a mean age of 28.4 years (SD = 12.8). The non-religious sample was 49.9% female, 78.7% currently lived in the United States, and participants had a mean age of 27.9 years (SD = 12.0). In addition, 4,877 indicated that they had formerly been Christian; 2,076 indicated never being Christian.

Measures and Procedure

Participants completed the Buddhism version of the study. Otherwise, the measures and procedure used were exactly the same as in Studies 1 and 2. This study used the importance and attendance ratings from the religious history measure. For these questions, former Christians rated how important Christianity had been to them and how frequently they attended religious services while they were Christian. Current Christians provided the same ratings, but about their current religious identity. Data for this study were collected at the same time as the data used in Study 2.

Results

Current Christians were more pro-Christian explicitly (M = 2.43, SD = 2.10) than former Christians (M = -1.14, SD = 1.55), t(11,635) = 99.76, p < .001, d = 1.88, 95% CI [1.84, 1.93], and never Christians (M = -1.08, SD = 1.53), t(8,893) = 69.01, p < .001, d = 1.77, 95% CI [1.71, 1.82]. Current Christians were also more pro-Christian implicitly (M = .44, SD = .36) than former Christians (M = .15, SD = .35), t(10,657) = 40.72, p < .001, d = .80, 95% CI [.76, .84], and never Christians (M = .11, SD = .34), t(8,158) = 33.54, p < .001, d = .90, 95% CI [.84, .95].

Explicit evaluations of Christianity by former Christians (M = -1.14, SD = 1.55) were similarly negative to evaluations by never Christians (M = -1.08, SD = 1.53), t(6,660) = -1.54, p = .123, d = -.04, 95% CI [-.09, .01]. Again, former Christians were more pro-Christian implicitly (M = .15, SD = .35) than were never Christians (M = .11, SD = .34), t(6,065) = 3.38, p = .0007, d = .10, 95% CI [.04, .15].

Attitudes toward Christianity by levels of involvement with Christianity. The key question of Study 3 was whether involvement with Christianity while Christian could help clarify the difference between current and former Christian's implicit attitudes toward Christianity. Figure 2 displays ratings of importance among current and former Christians. Former Christians provided retrospective reports on importance when they had been Christian. The majority of former Christians (67.7%) indicated that Christianity had little or no importance for them when they were Christian (M = 1.27, SD = 1.17). The majority of current Christians (60.3%) indicated that their religion was either very or extremely important (M = 2.68, SD = 1.21). The difference in importance between former and current Christians was strong, t(11,806) = 62.88, p < .001, d = 1.18, 95% CI [1.14, 1.22].

Figures 3 and 4 display the means and 95% confidence intervals for implicit (Figure 3) and explicit (Figure 4) attitudes at each level of importance for former and current Christians. At every level of importance, current Christians reported more positive implicit and explicit attitudes toward Christianity compared to former Christians. In fact, current Christians who indicated that their religion was not important to them at all showed more positive implicit, t(460) = 3.01, p = .003, d = .28, 95% CI [.10, .47], and explicit attitudes, t(503) = 9.57, p < .001, d = .86, 95% CI [.67, 1.04], than former Christians who reported that Christianity was once extremely important to them.

Figure 5 displays ratings of attendance among former and current Christians. The majority of both former (73.1%) and current (81.3%) Christians attended religious services once a month or more. Current Christians reported more frequent attendance (M = 3.57, SD = 1.26) than former Christians (M = 3.19, SD = 1.37), t(11,760) = 15.56, p < .001, d = .29, 95% CI [.26, .33]. This difference in attendance was much smaller than the difference in importance ratings between former and current Christians (d = 1.18).

Figures 6 and 7 display the means and 95% confidence intervals for implicit (Figure 6) and explicit (Figure 7) attitudes at each level of attendance for former and current Christians. Current Christians at every level of attendance showed more positive implicit and explicit attitudes toward Christianity than former Christians. Examining the largest contrast in attendance, current Christians who never attend religious services had more positive implicit, t(742) = 3.26, p = .001, d = .28, 95% CI [.11, .46], and explicit attitudes, t(814) = 17.63, p < .001, d = 1.47, 95% CI [1.29, 1.65], than former Christians who attended services more than once per week.

Involvement with Christianity as a moderator of attitudes. The distributions of both importance and attendance showed considerable skew. To relax assumptions of normality, I treated both variables as ordinal factors in all moderator analyses. When entered as simultaneous predictors, importance, F(4, 6,071) = 23.19, p < .001, $r_p = .12$, 95% CI [.10, .15], and attendance, F(5, 6,071) = 5.26, p < .001, $r_p = .07$, 95% CI [.04, .09], moderated implicit attitudes of current Christians. Importance, F(4, 6,612) = 236.09, p < .001, $r_p = .35$, 95% CI [.33, .37], and attendance, F(5, 6,612) = 13.02, p < .001, $r_p = .10$, 95% CI [.07, .12], also moderated explicit attitudes of current Christians. Importance and attendance uniquely and positively related to

both implicit and explicit attitudes. Importance was a stronger predictor of both implicit and explicit attitudes than attendance.

Neither importance, F(4, 4,201) = .82, p = .512, $r_p = .03$, 95% CI [0, .06], nor attendance, F(5, 4,201) = 0.80, p = .552, $r_p = .03$, 95% CI [0, .06], moderated implicit attitudes of former Christians. Importance, F(4, 4,616) = 7.74, p < .001, $r_p = .08$, 95% CI [.05, .11], and attendance, F(5, 4,616) = 2.39, p = .035, $r_p = -.05$, 95% CI [-.08, -.02], did, however, moderate explicit attitudes of former Christians but in opposite directions. Greater past importance related to more positive explicit evaluations of Christianity, whereas more frequent attendance related to more negative explicit evaluations.

Discussion

Former Christians again implicitly evaluated Christianity more positively relative to never Christians. This effect was similar in size (d = .10) to what was observed in Study 2 (d = .09). Study 3 did not replicate the difference in explicit attitudes observed in Study 2. If former Christians do explicitly evaluate Christianity more negatively than never Christians, this difference is small and inconsistent.

The primary goal of Study 3 was to investigate the possibility that former Christians never developed strong positive implicit attitudes toward Christianity. Supporting this possibility, former Christians attended religious services less frequently (d = .29) and rate Christianity as having been much less important (d = 1.18) than current Christians report about their present religion. Involvement in Christianity did not, however, moderate former Christians' implicit evaluations of Christianity. Former Christians who once placed a great deal of importance in their Christian identity or who regularly attended church demonstrate similar implicit evaluations to those who report no past involvement in Christianity. It seems unlikely

that very involved individuals would have never developed positive implicit attitudes toward their religion. Furthermore, even current Christians who report no involvement with Christianity hold fairly positive implicit attitudes toward their religion. As such, it seems likely that former Christians once had more positive implicit attitudes toward Christianity that changed prior to or immediately after group transition.

Involvement did moderate attitudes of current Christians, with greater importance and more frequent attendance uniquely relating to more positive implicit and explicit evaluations. Furthermore, at each level of involvement current Christians had more positive evaluations of Christianity than former Christians. Even those who reported virtually no involvement in their religion had positive evaluations of Christianity. Simply being Christian appears sufficient to produce positive in-group evaluations, exceeding the evaluations of even the most involved former members.

General Discussion

How does personal group history relate to group evaluation? Based on three studies, past religious group membership has a lingering, but limited, influence on implicit evaluations. In every sample, former Christians demonstrated more positive implicit attitudes toward Christianity than never Christians did. Group history did not predict explicit evaluations. Both former and never Christians explicitly evaluated Christianity negatively, largely to the same degree. Simultaneously, implicit evaluations of former Christians more closely resembled implicit evaluations of never Christians than implicit evaluations of current Christians. Even former Christians who were once very involved with their religion demonstrated less positive implicit attitudes than the most disengaged current Christians. Moreover, the time in Christianity and time since leaving Christianity had little relation with former Christians' implicit attitudes

toward Christianity. Together, this suggests that implicit evaluation reflects present group membership much more than past group memberships regardless of the duration or importance of those prior group memberships.

Trajectories of implicit attitude change

There are at least three possible trajectories by which implicit attitudes of former Christians toward Christianity could have changed. The first, perhaps most obvious, trajectory is that implicit attitudes of former Christians become gradually less positive as time spent outside the group increases. In this scenario, former Christians would maintain stable implicit in-group favoritism throughout their time as a Christian. Then, once they choose to leave the group, their implicit evaluations of Christianity would become gradually less positive as experiences of not being a member accumulate. This would be consistent with notions of in-group favoritism while still a member (in line with Social Identity Theory, Tajfel & Turner, 1979), and satisfy models describing implicit attitudes as reflecting gradual accumulations of experiences (Gawronski & Bodenhausen, 2006; Nosek, Hawkins, & Frazier, 2012; Rudman, 2004; Wilson, Lindsey, & Schooler, 2000). However, the present data do not support this possibility. Amount of time spent outside of Christian membership did not moderate implicit evaluations of Christianity by former Christians. Even those who left Christianity in the prior year show similar implicit attitudes as those who left decades prior.

As a second possible trajectory, implicit attitudes might be an early indicator of the likelihood of leaving a group. The choice to leave Christianity might be the result of a prolonged accumulation of experiences with the religion. For instance, individuals' beliefs might gradually change, drifting away from Church doctrine or individuals might have several negative experiences with Christianity before they choose to leave. The accumulation of these

experiences might alter implicit evaluations of Christianity, making them less positive while an individual is still Christian. When implicit attitudes reach their nadir, the individual chooses to leave Christianity and has little additional motivation or experience for continued attitude change. This explanation is consistent with models of implicit attitudes reflecting accumulations of experiences and, unlike the first trajectory, is consistent with the present data showing implicit attitude stability post-membership. However, this would provide a boundary condition on ingroup favoritism - individuals who are likely to leave a group show less implicit in-group favoritism compared to more committed members. The moderation of current Christians' implicit evaluations by their involvement in Christianity in the present data possibly demonstrates this boundary.

The final trajectory for implicit attitude change is that attitudes change suddenly and dramatically at the point of group transition. In this model, individuals maintain stable implicit in-group favoritism throughout their time as a member. At the moment of transition, implicit evaluations of the group become immediately less positive. This reduction in implicit positivity then remains stable post-membership. This explanation is most at odds with present models of implicit attitude formation and change. However, it is important to still consider the immediate impact of leaving a group on implicit attitudes. Individuals can rapidly form implicit preferences for in-groups (Otten & Moskowitz, 2000). These implicit preferences might disappear rapidly as well in the absence of group membership. Furthermore, in maintaining a group identity, individuals associate that group with their self-concept. Individuals tend to demonstrate positive evaluations of themselves on implicit measures (Greenwald & Banaji, 1995; Koole, Dijksterhuis, & van Knippenberg, 2001). From a cognitive balance perspective (e.g., Heider, 1958; Greenwald et al., 2002), associating a group with the self also associates the group with self-

related positivity. Even in the absence of positive experiences or personal involvement with the group, membership, and the link between group and self that membership provides, should maintain some measure of implicit in-group favoritism. The moment of transition might signal the end of the link between the self and the group, decoupling positivity associated with the self from the group's evaluation.

It is important to note that the latter two trajectories, gradual change in implicit evaluation prior to group transition and immediate change upon transition, are not mutually exclusive. Individuals may drift from their religion for some time prior to leaving. Implicit evaluation of their group might wane during this period, but still remain more positive than non-group members and former members. Then, at the moment of transition, implicit evaluation might become immediately less positive, reaching a level similar to other former members. Future research examining implicit evaluation throughout group transition will be needed to parse between these possible trajectories.

Limitations

These studies benefit from large samples that observe the outcomes of a natural group transition. However, a primary limitation is that this investigation relies on cross-sectional data. Therefore, attitude change on an individual level cannot be directly observed. In addition, the time at which former Christians provided responses was, in some cases, many years after their transition. One common bias in memory is placing a great deal of weight on the ending of an experience (e.g., Redelmeier & Kahneman, 1996). Former Christians might have based their ratings of their overall experience primarily on their final period of Christian membership in which they were fairly uncommitted to Christianity. This bias could be responsible for the differences in involvement between former and current Christians. In addition, selecting an

exact age for the moment of transition might have been difficult for former Christians, as some might have gradually drifted from religion over time. Future work will need to make use of longitudinal methods in order to better discern the extent to which attitudes change during group transitions and to provide greater confidence in importance and involvement responses.

The current set of studies investigates attitude change through the lens of religion. The extent to which the patterns observed in these data will generalize to transitions from other groups is unknown. Transitions from religion are likely voluntary and occur over an extended period of time. These distinctions may be important for how individuals evaluate former groups. For instance, people may be unexpectedly ostracized from a group by its members. If implicit group evaluations require an accumulation of experiences in order to change, these individuals may continue to demonstrate strong positive implicit evaluations of their group for some time after being forced out. As another example, individuals who age out of a group (e.g., graduating high school) know that transition is coming for some time but do not necessarily choose to leave. If individuals continue to have positive experiences as they phase out of a group they might also continue to demonstrate strong positive implicit attitudes toward their past group post-membership. However, if implicit group evaluations do change immediately after group transition, individuals in both scenarios may display patterns of attitudes similar to the patterns displayed by former Christians. Studying transitions from different types of groups will provide a more complete understanding of how individuals evaluate past identities and the process by which evaluations change.

Conclusions

Religious group membership provides a strong basis for in-group favoritism. However, past membership does little to influence group evaluations. Those who leave Christianity display

some lingering positivity toward their former religion on an implicit level, but this pattern disappears from explicit evaluations. Overall, former Christians largely resemble members of their new secular group when evaluating Christianity, regardless of how involved they once were in Christianity. Group memberships do not always last. As demonstrated here, neither does their influence on social evaluation.

References

- Axt, J. R., Ebersole, C. R., & Nosek, B. A. (2014). The rules of implicit evaluation by race, religion, and age. *Psychological Science*, 0956797614543801.
- Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: an integrative review of implicit and explicit attitude change. *Psychological Bulletin*, *132*(5), 692.
- Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, *35*(7), 603.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: attitudes, self-esteem, and stereotypes. *Psychological Review*, *102*(1), 4.
- Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review*, 109(1), 3.
- Greenwald, A. G., Pickrell, J. E., & Farnham, S. D. (2002). Implicit partisanship: taking sides for no reason. *Journal of Personality and Social Psychology*, 83(2), 367.
- Heider, F. (1958). The psychology of interpersonal relations. New York: Wiley.
- Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology*, 80(4), 669.
- Krosnick, J. A., & Petty, R. E. (1995). Attitude strength: An overview. *Attitude strength:*Antecedents and consequences, 1, 1-24.
- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology*, 22(2), 103-122.

- Nosek, B. A., Bar-Anan, Y., Sriram, N., Axt, J., & Greenwald, A. G. (2014). Understanding and using the Brief Implicit Association Test: Recommended scoring procedures. *PloS One*, *9*(12), e110938.
- Nosek, B. A., & Greenwald, A. G. (2009). (Part of) the case for a pragmatic approach to validity: Comment on De Houwer, Teige-Mocigemba, Spruyt, and Moors (2009). *Psychological Bulletin*, 135, 373-376. doi: 10.1037/a0015047.
- Nosek, B. A., Hawkins, C. B., & Frazier, R. S. (2011). Implicit social cognition: From measures to mechanisms. *Trends in Cognitive Sciences*, *15*(4), 152-159.
- Otten, S., & Moskowitz, G. B. (2000). Evidence for implicit evaluative in-group bias: Affect-biased spontaneous trait inference in a minimal group paradigm. *Journal of Experimental Social Psychology*, 36(1), 77-89.
- Pinter, B., & Greenwald, A. G. (2004). Exploring implicit partisanship: Enigmatic (but genuine) group identification and attraction. *Group Processes & Intergroup Relations*, 7(3), 283-296.
- Pew Research Center (2014). *How Americans feel about religious groups*. Retrieved from: http://www.pewforum.org/2014/07/16/how-americans-feel-about-religious-groups/
- Pew Research Center (2015). *The future of world religions: Population growth projections,*2010-2050. Retrieved from: http://www.pewforum.org/2015/04/02/religious-projections-2010-2050/#projected-growth-map.
- Redelmeier, D. A., & Kahneman, D. (1996). Patients' memories of painful medical treatments: real-time and retrospective evaluations of two minimally invasive procedures. *Pain*, 66(1), 3-8.

- Rudman, L. A. (2004). Sources of implicit attitudes. *Current Directions in Psychological Science*, *13*(2), 79-82.
- Rudman, L. A., Feinberg, J., & Fairchild, K. (2002). Minority members' implicit attitudes:

 Automatic ingroup bias as a function of group status. *Social Cognition*, *20*(4), 294-320.
- Rudman, L. A., & Heppen, J. (2001). The smoking gun: Implicit and explicit attitudes toward smoking. Unpublished Manuscript.
- Rudman, L. A., Phelan, J. E., & Heppen, J. B. (2007). Developmental sources of implicit attitudes. *Personality and Social Psychology Bulletin*, *33*(12), 1700-1713.
- Rydell, R. J., & Gawronski, B. (2009). I like you, I like you not: Understanding the formation of context-dependent automatic attitudes. *Cognition and Emotion*, *23*(6), 1118-1152.
- Sriram, N., & Greenwald, A. G. (2009). The brief implicit association test. *Experimental Psychology*, *56*(4), 283-294.
- Stryker, S., & Burke, P. J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly*, 284-297.
- Tajfel, H. E. (1978). Differentiation between social groups: Studies in the social psychology of intergroup relations. London: Academic Press.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The Social Psychology of Intergroup Relations*, 33(47), 74.
- Turner, J. C., Brown, R. J., & Tajfel, H. (1979). Social comparison and group interest in ingroup favouritism. *European Journal of Social Psychology*, *9*(2), 187-204.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987).

 *Rediscovering the social group: A self-categorization theory. Basil Blackwell.

Wilson, T. D., Lindsey, S., & Schooler, T. Y. (2000). A model of dual attitudes. *Psychological Review*, 107(1), 101.

Figure 1- Plot of age when leaving Christianity against current age

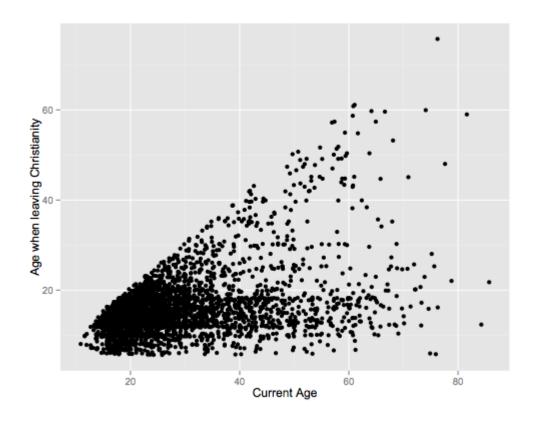


Figure 2- Distributions of importance ratings by current and former Christians

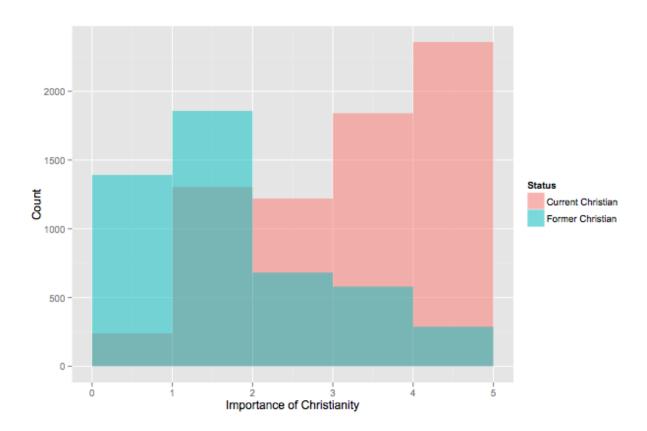


Figure 3- Implicit attitudes at each level of importance

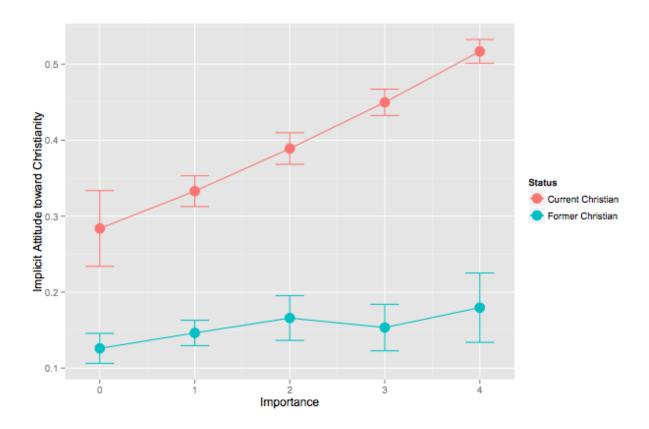


Figure 4- Explicit attitudes at each level of importance

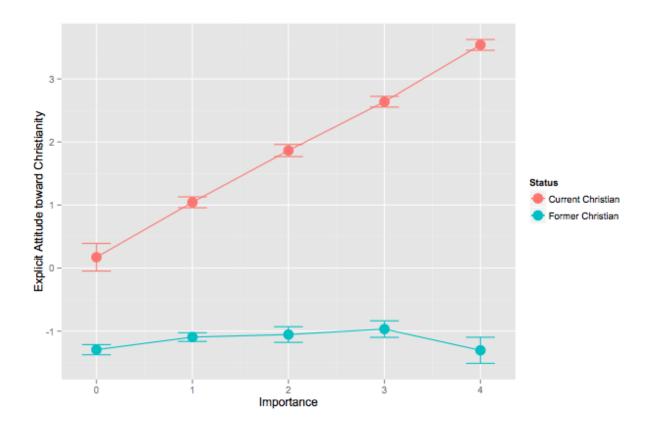


Figure 5- Distributions of frequency of attendance by current and former Christians

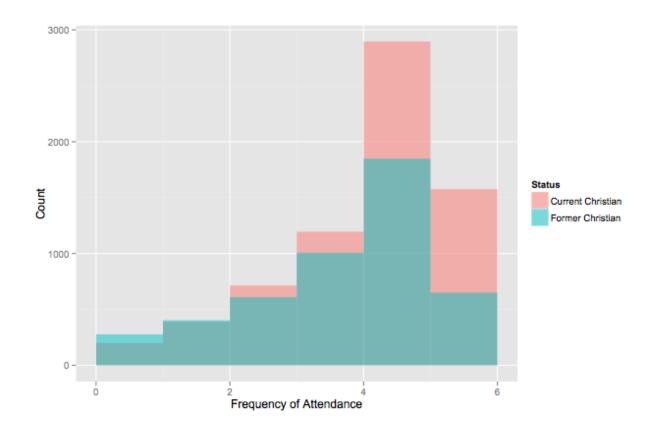


Figure 6- Implicit attitudes at each level of attendance

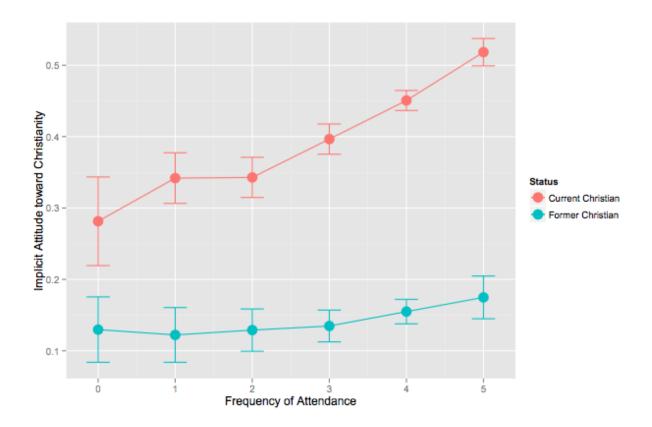
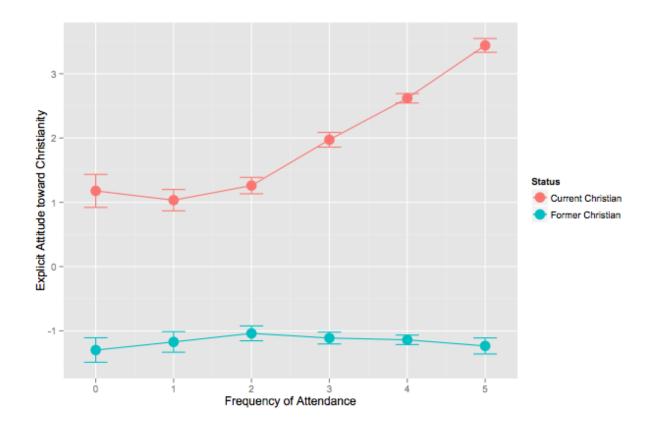


Figure 7- Explicit attitudes at each level of attendance



Supplemental Materials

Study 1 Exploratory Analyses

These analyses drew from the Buddhism version of the task (data from the Hinduism version are used in Study 1). Non-religious participants showed discrepant attitudes toward Christianity, with positive implicit attitudes, t(465) = 9.02, p < .001, d = .42 [.32, .51], and negative explicit attitudes, t(492) = -13.34, p < .001, d = -.60 [-.70, -.50]. From the religious history measure, Non-religious participants were divided into two groups: those that were formerly Christian at some point in their life (N = 367) and those who had never been Christian (N = 146). As an initial comparison, I examined whether current Christians had more positive attitudes toward Christianity compared to former Christians. This was the case on implicit, t(1011) = 11.23, p < .001, and explicit attitudes, t(1049) = 28.19, p < .001. Of greater interest, was whether or not former Christians and never Christians differed in their attitudes toward Christianity. Former Christians showed marginally more positive implicit attitudes toward Christianity, compared to never Christians, t(464) = 1.90, p = .058, d = .2, [-.01, .41]. The two groups did not differ in their explicit attitudes toward Christianity, t(491) = 0.94, t = .347, t = .1, [-.10, .29]. These latter findings formed the basis of the confirmatory test for Study 1.

Study 2 Exploratory Analyses

For initial exploration, I randomly drew a sample of 7,000 participants from the Hinduism version of the task. Current Christians had more positive implicit, t(3127) = 19.86, p < .001, and explicit, t(3172) = 49.59, p < .001, attitudes compared to former Christians. As in Study 1, former Christians had more positive implicit attitudes toward Christianity than those who had never been Christian, t(1795) = 3.83, p = .0001, d = .20 [.10, .30]. Unlike the previous studies, former Christians reported more negative explicit attitudes toward Christianity, relative

to the other religions assessed, compared to those who had never been Christian, t(1838) = -2.33, p = .020, d = -.12 [-.22, -.02].

Examining only former Christians, I next investigated whether the amount of time since an individual left Christianity (in years) or the age at which they left the church predicted current implicit and explicit attitudes. I constructed a hierarchical linear model with years since leaving the church and age when the individual left(mean centered) entered as the first step, and the interaction of the two entered as the second step. The same model was used for predicting implicit and explicit attitudes. The interaction did not reliably predict current implicit attitudes, t(1232) = -1.035, p = .301, $r_p = -.03$ [-.03, .09], or current explicit attitudes, t(1237) = -0.525, p = .600, $r_p = -.01$ [-.07, .04], so a model with just the main effects was used. The age at which the participant left Christianity weakly, but reliably, predicted current implicit attitudes, t(1233) = 2.091, p = .037, $r_p = .06$ [<.01, .11], as well as current explicit attitudes, t(1238) = 4.791, p < .001, $r_p = .13$ [.08, .19], such that individuals who left Christianity later in life had more positive implicit and explicit attitudes toward Christianity. The number of years since leaving did not predict implicit, t(1233) = 0.468, p = .640, $r_p = .01$ [-.04, .07], or explicit attitudes, t(1238) = 1.571, $t_p = .117$, $t_p = .04$ [-.01, .10].

Study 3 Exploratory Analyses

I used the full data set from Study 2, which used data from the Hinduism version of the study, for these exploratory analyses. Current Christians (M = 2.51, SD = 2.05) were more pro-Christian explicitly than former Christians (M = -.89, SD = 1.55), t(10,347) = 90.75, p < .001, d = 1.82, 95% CI [1.77, 1.86], and never Christians (M = -.74, SD = 1.40), t(8139) = 65.81, p < .001, d = 1.70, 95% CI [1.64, 1.75]. Current Christians (M = .45, SD = .36) were also more pro-Christian implicitly than former Christians (M = .17, SD = .36), t(10,438) = 38.90, p < .001, d = .

.78, 95% CI [.73, .82], and never Christians (M = .13, SD = .35), t(8040) = 33.77, p < .001, d = .90, 95% CI [.84, .95].

Former Christians (M = -.89, SD = 1.55) were more negative explicitly toward Christianity compared to never Christians (M = -.74, SD = 1.40), t(6188) = -3.46, p = .0005, d = -.09, 95% CI [-.15, -.04]. Again, former Christians (M = .17, SD = .36) were more pro-Christian implicitly than were never Christians (M = .13, SD = .35), t(6080) = 4.25, p < .001, d = .12, 95% CI [.06, .17].

Attitudes toward Christianity by levels of involvement with Christianity. The key question of Study 3 was whether involvement with Christianity while Christian could help clarify the difference between current and former Christian's attitudes toward Christianity. Former Christians provided retrospective reports on importance when they had been Christian. The majority of former Christians (68.2%) indicated that Christianity had little or no importance for them when they were Christian (M = 1.28, SD = 1.19). The majority of Christians (59.1%) indicated that their religion was either very or extremely important (M = 2.67, SD = 1.22). The difference in importance between former and current Christians was strong, t(11,621) = 61.23, p < .001, d = 1.15, 95% CI [1.11, 1.19].

At every level of importance, Christians reported more positive implicit and explicit attitudes toward Christianity compared to former Christians. In fact, current Christians who indicated that their religion was not important to them at all showed more positive implicit, t(478) = 3.16, p = .002, d = .29, 95% CI [.11, .48], and explicit attitudes, t(454) = 8.97, p < .001, d = .85, 95% CI [.66, 1.04], than former Christians who reported that Christianity was once extremely important to them.

The majority of both former (72.3%) and current (81.3%) Christians attended religious services once a month or more. Current Christians (M = 3.17, SD = 1.37) reported more frequent attendance than former Christians once had (M = 3.55, SD = 1.26), t(11,592) = 15.54, p < .001, d = .29, 95% CI [.26, .33]. This difference was much smaller than the difference in importance (d = 1.15).

Current Christians at every level of attendance showed more positive implicit and explicit attitudes toward Christianity than former Christians. Examining the largest contrast in attendance, current Christians who never attend religious services had more positive implicit, t(711) = 7.27, p < .001, d = .64, 95% CI [.47, .82], and explicit attitudes, t(683) = 15.73, p < .001, d = 1.41, 95% CI [1.22, 1.60], than former Christians who attended services more than once per week.

Involvement with Christianity as a moderator of attitudes. The distributions of both importance and attendance showed considerable skew. To relax assumptions of normality, I treated both variables as ordinal factors in all moderator analyses. When entered as simultaneous predictors, importance, F(4, 5879) = 33.17, p < .001, $r_p = .15$, 95% CI [.12, .17], and attendance, F(5, 5879) = 2.61, p = .023, $r_p = .05$, 95% CI [.02, .08], moderated implicit attitudes of current Christians. Importance, F(4, 5841) = 206.41, p < .001, $r_p = .35$, 95% CI [.33, .37], and attendance, F(5, 5841) = 8.89, p < .001, $r_p = .09$, 95% CI [.06, .12], also moderated explicit attitudes of current Christians. Importance and attendance uniquely and positively related to both implicit and explicit attitudes. For both attitudes, importance was a stronger predictor than attendance.

Neither importance, F(4, 4159) = 1.80, p = .126, $r_p = .04$, 95% CI [0, .08], nor attendance, F(5, 4159) = 0.52, p = .765, $r_p = .02$, 95% CI [-.02, .06], moderated implicit attitudes

of former Christians. Importance, F(4, 4117) = 7.53, p < .001, $r_p = .09$, 95% CI [.05, .13], and attendance, F(5, 4117) = 6.55, p < .001, $r_p = -.09$, 95% CI [-.13, -.05], did, however, moderate explicit attitudes of former Christians but in different directions. Greater past importance related to more positive explicit evaluations of Christianity, whereas more frequent attendance related to more negative explicit evaluations.