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Religious engagement and varieties of self-regulation: broadening beyond belief and restraint

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RELIGIOUS ENGAGEMENT AND VARIETIES OF SELF-REGULATION: BROADENING BEYOND BELIEF AND RESTRAINT

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ABSTRACT

Within the psychology of religion, research suggests that religious engagement influences self-regulation, i.e., a person's ability to pursue goals. Theoretical explanations for this relationship tend to oversimplify both sides of the connection, construing religious engagement narrowly in terms of beliefs and interpreting self-regulation as a matter of self-interested restraint. These conceptual specifications are challenged by perspectives within religious studies that are committed to analyzing religions as ordinary social phenomena and by evidence from psychological studies of normative behavior. This dissertation employs these insights to broaden the theoretical scope of the study of self-regulation through a series of interdisciplinary reviews and an empirical study.

To test the relationship between self-regulation and religious engagement, the dissertation presents a cross-sectional study of an online sample of 412 participants. Each participant completed five previously established psychological surveys and experiments that index: how conventional they consider their religiosity; the degree to which they are embedded in obligatory relationships, roughly called "social density"; their endorsement of what Moral Foundations Theory calls "binding" moral intuitions; emotional regulatory capacity; and delayed discounting rates, a common proxy for impulsivity.

A series of hierarchical linear regressions showed that conventional religiosity was associated with both emotional regulation and delayed discounting. Delayed discounting and emotional regulation, however, were not associated. Statistical mediation analyses showed that the relationship between conventional religiosity and emotional regulation was fully mediated by social density, but the connection between conventional religiosity and delayed discounting was not influenced by any of the other variables.

Collectively these results support the primary argument of this dissertation – that the theoretical focus within psychological research on religious engagement and self-regulation has become unduly narrow in its construal of both concepts. This dissertation concludes by reflecting on these

results in light of what we know about formalized inquiries of this kind from the philosophy of science.

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1.1. Introduction

How does culture change our behavior? The answer may seem obvious, but that is only because the phenomenon is so apparent– social context invariably changes what we do. Digging into the psychological dynamics that shape how this occurs is the broad purpose of this dissertation. Our inquiry will take us into the formation of groups and the norms that give them their distinctive qualities. It will also take us deeply into the way these norms are internalized to shape how we perceive, think, feel, and ultimately what we do. Rather than tackle this overwhelmingly large question outright, this dissertation focuses on the relationship between religion and goal-directed behaviors, also known as self-regulation. The inquiry is driven by the sharper question: how and why does engaging in a religious system change the ways people self-regulate?

Behavior is inherently bio-cultural. The things we do are shaped by our brains and our cultures. The things we do also have consequences for our biology and our social context. So, in order to answer questions about why we do what we do, I have to draw from many different disciplines. Understanding the

social dynamics of religious engagement requires listening to scholars from religious studies, sociology, and anthropology. Understanding self-regulation demands a deep engagement with researchers in psychology and cognitive science. At its best, the scientific study of religion, integrates these disparate disciplines into a bio-cultural approach that grounds theory in evidence in order to make it vulnerable to correction. This is the approach I will be taking in this dissertation as I weave these disciplines together in order to understand the social and psychological dynamics that shape the ways we regulate our behavior.

1.2. Self-regulation

For most people, the mention of regulating behavior brings to mind self-control and willpower. If you suggest that we need to understand social dynamics in order to understand these processes, they will give you a quizzical look. Willpower and self-control hold a mythical place in our culture. The two have been called "the greatest human strength" (Baumeister & Tierney, 2012), the moral muscle (Baumeister & Exline, 1999), and a hallmark virtue (Prelec & Bodner, 2003). Such accolades may be well earned. After all, better self-control is associated with better grades (Tangney, Baumeister, & Boone, 2004), health, wealth (Moffitt et al., 2011), and the capacity to make amends within close

relationships (Finkel & Campbell, 2001). When surveys ask individuals why they did not make desired life-style changes, lack of willpower was the most common response (American Psychological Association, 2011). Research and self-help books abound, full of insights and advice on how to remedy this deficit. If only we had more willpower, we are told, then our lives could be everything that we imagine. But is that true?

Part of the mythos of self-control and willpower derives from its scientific origin story, the now famous marshmallow experiments (Mischel et al., 2011).[1] Here is how the story is typically told. Psychologists were working with four-year olds from a nursery at Stanford. In the experiment, kids were individually brought from the nursery into a room they were told was the "surprise room." Once there, a researcher and the child talked a bit, just to help put the kid at ease. Then the researcher told the kid that she has to leave the room briefly, but while

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1. While the concept is ancient, the word "willpower" does not start showing up regularly in print until the mid-19th century. Self-control, on the other hand, prominently entered print in 1811 with Mary Brunton's novel and has remained a relatively common feature since then. Common in this sense means that about 5 of every 100,000,000 words was self-control. But, what is striking about the Ngram chart of "willpower" (Google Ngram: https://books.google.com/ngrams), is that after 1960 its presence leaps by orders of magnitude (in 1940 willpower was used 7 times for every 100,000,000 words, by the turn of the millennia it was being used 70 times). This is not a book about history. There are too many variables present to even speculate whether these words entered our consciousness as a result of the Victorian era, the industrial revolution, the expansion of the British empire, or the growing prominence of psychology. Nevertheless, it is striking, and I do not intend for it to be anything more than that, that 1960, the inflection point for willpower, is also the time that Mischel and colleagues were conducting these famous experiments.

she is gone the child has a choice: he can eat the one marshmallow that is on the table or he can wait until the researcher returns and then he can have two marshmallows. But he only gets the two if he resists eating the one. This basic experimental set-up gave psychologists a way to test the impact of variables like family structure (Mischel, 1961), attention (Mischel & Ebbeson, 1970; Mischel & Moore, 1973), and cognitive appraisal (Mischel & Baker, 1975) on the child's capacity to delay gratification. But the compelling part of these early experiments came when the researchers followed up with these kids a decade or more later and found that those who were able to hold out for the two marshmallows were also those that had higher SAT scores, lower BMI, better verbal fluency and reasoning skills, and lower incidence of substance abuse to name a few outcomes (Mischel, Shoda, & Peake, 1988; Mischel, Shoda, & Rodriguez, 1989). The list of favorable outcomes goes on (Mischel et al., 2011) and each addition amplified the perceived importance of self-control for living a good life.

Clearly self-control was important, but how does one acquire this necessary capacity? Around the turn of the 21st century a separate research program emerged and brought willpower fully into the mainstream. This research program was led by Baumeister and Tice at Case Western and started off with another experiment involving tempting food (Baumeister, Bratslavsky,

Muraven, & Tice, 1998). Students were brought into a room that was full of the smell of fresh baked cookies. There were the cookies on the table, alongside other chocolaty sweets. Next to the sweets was a bowl of radishes. These students were not given a choice– some were allowed to eat the sweets, but another group was only allowed to eat the radishes. The participants were then given an impossible puzzle to try and solve. The experiment was set up to see whether people's persistence in attempting to solve the puzzle was influenced by whether they ate satisfying cookies or had to exercise restraint and eat radishes. Those who ate radishes gave up much sooner than the cookie group or the people who got no treats and just did the puzzle (Baumeister et al., 1998). This result has been repeated hundreds of times with a variety of different conditions and the main result has largely been borne out (Maranges & Baumeister, 2016)– when people exercise self-control, they are using a finite resource. With a nod to Freud's energetic model of the psyche, this research team labeled the phenomenon 'ego-depletion' and 'willpower' as the energy or resource that is being depleted.

The connected concepts of willpower and self-control are not only prominent in the public imagination; they are also at the center of a large research program within psychology (cf. Vohs & Baumeister, 2016). This research program is part of a broader sub-field within psychology committed to studying

self-regulation, of which self-control is a specific example. To understand self-regulation it is helpful to remember that all organisms self-regulate to maintain a certain level of homeostasis. Our autonomic nervous system regulates our bodies' temperature, blood pressure, and blood chemistry for example. These processes are examples of self-regulation, but when psychologists talk about self-regulation, they are referring specifically to a behavioral process. Keeping this broad scope of regulation in mind is helpful because the behavioral process of regulation follows the same pattern as these autonomic processes (Carver & Scheier, 1998).

This pattern is a feedback loop. In the example of thermoregulation, our bodies have a set-temperature– something roughly around 98.6º F. As we begin to deviate from that set point, this regulatory system kicks in and we begin sweating or shivering in an attempt to bring our internal temperature back to this set-point. This is the basic pattern of the feedback loop. There is a standard, in this case it is the set-point of somewhere around 98.6º F. The system self-monitors, to check on its current state in relation to this set-point (e.g., too hot/too cold?). If there is a difference, then the system initiates a behavior to try and adjust back to that set-point (sweat/shiver). After a while, you check back in, thus it being a loop.

Behavioral self-regulation follows the same dynamic: we have a goal, we check in on our current state, and then we adjust our behavior in an attempt to remove any discrepancy between the two. Carver and Scheier (1981) were among the first to propose using this model of a cybernetic feedback system to understand our goal-directed behaviors. The simplicity of this model is beguiling, especially when you begin to consider the range of behaviors that it encompasses. This simple process can be used to describe the simple act of walking from the study to the kitchen to pour another cup of coffee. But it can also describe much more complex behaviors, like sharing emotional states in order to meet the goal of being a good partner. This variance in complexity is connected to the goal itself: being a good partner is a much more complicated goal than getting a cup of coffee. There is also variance surrounding the amount of effort required in the process of regulation. Some behaviors are nearly effortless, such as driving a car after many years of practice. Other times regulation requires an incredible amount of attentive effort, such as if you were resisting Baumeister's cookies.

1.2.1 Problems of willpower

Those instances in which self-regulation requires deliberate effort are called self-control. More formally, self-control is the act of "overriding one action

tendency in order to attain another goal" (Carver & Scheier, 2016, p. 3). This act of "overriding" is commonly framed in terms of inhibition (Roberts et al., 2014). So, while self-regulation encompasses a broad range of simple, complex, automatic, and effortful behaviors, self-control is a limited subset which involves inhibiting one impulse to pursue a different goal. The range of this subset, however, remains unclear in the literature. Some researchers argue that inhibition is central to 80-90% of self-regulation (Baumeister, 2014) and others suggest that the vast majority of self-regulation is automatic (Papies & Aartes, 2016). Regardless of where researchers fall within this debate, it is increasingly common to include willpower as an essential part of the self-regulatory process (Schmeichel & Baumeister, 2004). But this is not a neutral decision. Since willpower is connected to effort, its inclusion in the process tacitly blurs the distinction between self-control and self-regulation and tips the scales towards self-regulation as primarily inhibitory. This confusion arises in part from the underdetermined nature of the concept willpower.

Dewey noted nearly a century ago that there is "one superstition current among even cultivated persons. They suppose that if one is told what to do, if the right *end* is pointed to them, all that is required in order to bring about the right act is will or wish on the part of the one who is to act." (Dewey, 1922/2002, p. 27).

As much as we may enjoy thinking that more of this magical resource, willpower, would solve our problems, we have likely all experienced the fact that changing behavior is not simply a matter of changing goals and applying more effort.

Beyond anecdotal and theoretical critiques, there is also mounting empirical evidence that challenges the ego depletion model of willpower. A series of experiments have shown that beliefs about willpower may be self-fulfilling prophecies– if people believe willpower is a limited resource, then they act as if it is (Job, Walton, Bernecker, & Dweck, 2013; Job, Dweck, & Walton, 2010). This nuance does not contradict the ego-depletion model, but more recent meta-analyses and replication efforts signal deeper problems with the model. Carter and McCullough's (2013) broad meta-analysis of ego-depletion studies suggested that the seemingly vast amount of evidence supporting the view that willpower is a limited resource is likely the result of publication biases. Following this blow, a multi-lab preregistered replication effort (Hagger & Chatzisarantis et al., 2016) failed to find reliable evidence of willpower being depleted. These recent challenges do not definitively undermine the ego-depletion model of self-control, but they should make researchers more cautious

about extending this metaphor as the primary characteristic of self-regulation more broadly (Inzlicht et al., 2014)

Baumeister and colleagues have responded to these challenges (e.g., Baumeister & Vohs, 2016a; 2016b). They argue that people have overextended the studies that suggest what we believe about willpower has a larger influence on depletion than any actual effort (Baumeister & Vohs, 2016b; Job, Dweck, & Walton, 2010). When Vohs and colleagues (2013) replicated this study, they found that belief in unlimited willpower only mattered for mild depletion tasks; once participants were severely depleted, through multiple self-control tasks, then belief did not change the original depletion effects. In an initial response to the more challenging large-scale replication effort from Hagger and colleagues (2016), Baumeister and Vohs (2016a) argued that the task used was meaningfully different from those used in other studies. More specifically, the replication effort was conducted entirely on computers, so the depletion task had to be a computerized one. One previous study found that this computerized task, which involves a blend of crossing out different letters, led to meaningful depletion effects (Sripada, Kessler, & Jonides, 2014); but that remains a slender hook on which to hang the entire replication effort. In their retort, Baumeister and Vohs (2016a) say:

> We will organize a preregistered, multisite replication project next year, using well-tested procedures (ones that actually involve self-regulation). We herewith preregister the hypothesis that depleted participants will perform worse on subsequent, ostensibly unrelated self-regulation tests than will nondepleted participants, as a great many other studies have found. (p. 575)

Two years may not be sufficient time, but the incentive for such a thorough empirical response is high, and yet there are still no signs of this confirmatory replication effort. Furthermore, within their response, Baumeister and Vohs (2016b) only engaged Carter and McCullough's (2013) meta-analysis in a footnote (Baumeister and Vohs, 2016b). This response fails to recognize the extent to which publication bias can significantly inflate effect sizes (Franco, Malhotra, & Simonovits, 2014).

Collectively, this host of challenges to the ego-depletion model of self-regulation is more formidable than Baumeister and colleagues are willing to admit (2016b). This does not mean that ego-depletion does not occur, nor that an energetic view of mental processes is not helpful. But these challenges do radically diminish the likelihood that the majority of self-regulatory behaviors are characterized by restraint, which requires willpower, as claimed by

Baumeister (2014) and colleagues (Schmeichel & Baumeister, 2004), and assumed by others (e.g., Laurin & Kay, 2016). If self-regulation is not dependent on how much willpower individuals have, then how are we to understand its dynamics? There are various alternative models for understanding the cognitive dimensions of self-regulation (see Bargh, 1997; Berkman, Hutcherson, Livingston, Kahn, & Inzlicht, 2017; Ferguson, 2007). For our purposes, however, understanding the social context of self-regulation, also provides an illuminating corrective to the prevailing theories that construe regulation primarily in terms of restraint.

1.2.2 Promise of context

Centering social context in our model of self-regulation is necessary for multiple reasons. By social context, I am referring to the relationships, practices, and perceived expectations, norms, and values within a person's surrounded social and physical environment.[2] At the most apparent level, social context will determine what counts as self-control or not because the expectations and values within that context determine the landscape of good and bad behaviors. For

[2] As I will unpack within the next chapter, social context is a dynamic and multifaceted space. For example, the social context of a classroom will involve the norms and expectations of the school, the wider city, state, and nation, along with the histories, commitments, and identities of each person in the classroom. Granted this complexity of the social environment, I will attempt to focus on the facets of social context that appear to be salient for the individual, as inferred by influencing their actions.

example, the capacity to restrain the expression of distress may be seen as self-control in some contexts, but not in others (Butler, Lee, & Gross, 2009). In the language of Carver and Scheier's (1998; 2016) framework of self-regulation– social context influences the standards that provide the set-points for regulation. I will explore this point more fully below and in chapter 2.

Not only does the relevant social context shape our standards for behavior, it can also determine our capacity to act. To appreciate this point, it helps to look more closely at the famous marshmallow test. In the earliest versions of this experiment, Mischel was not simply testing children's capacity to avoid temptation– he was testing the impact of context on *how* children delayed gratification (Mischel, 1958; 1961). The initial runs of the experiment were not in a Stanford preschool, they were done with 53 kids in Trinidad. Mischel was testing stereotypes about how individuals of African descent and those of Indian background would respond to delaying gratification. In this study and subsequent follow-ups, he found that it was not an ethnic difference that determined who delayed gratification and who did not, it was a familial difference; specifically, the children from households where a father was not present were much more likely to take the immediate reward (Mischel, 1961). More recent research has continued to underscore the ways that family structure

and socialization impact regulatory success along with the ways in which children go about self-regulating (e.g., Keller et al., 2004). For example, in some social contexts self-regulation occurs primarily through effortful inhibition, while in other contexts the automatic emotional regulation of temptation precludes the need for inhibition (e.g., Lamm et al., 2017).

Even the studies conducted in the US that gave rise to the mythos of the marshmallow test were about how easily contextual factors can change self-regulatory behaviors. Simple contextual differences, such as whether or not the two options were physically present (Mischel & Ebbeson, 1970), or directing kids to pay attention in different ways (Mischel & Moore, 1973), or to think about different aspects of the treats (Mischel & Baker, 1975), dramatically changed the outcomes. In other words, a blend of contextual factors, cognitive capacities, and motivational processes coalesce to shape the self-regulation of behavior.

At this point you might protest: when studies show that the ability of children to self-regulate predicts positive outcomes later in life this indicates a dispositional ability, not contextual influences. After all, it is the capacity of these preschoolers to deploy effective strategies when they were unprompted and facing the most tempting conditions that had the strongest predictive value

(Shoda, Mischel, & Peake, 1990)[3]. This tension, between the influence of context and the impact of a stable personality evokes a long-standing debate within psychology.

Around the time of Mischel's early experiments, a group of psychologists were arguing that what seem to be stable character traits are actually just consistent responses to stable situations (Ross & Nisbett, 1991). Drawing from an influential set of experiments from Jones and Harris (1967), Ross (1977) labeled this tendency to overemphasize dispositions and traits, and thereby elide the importance of situational factors, the "fundamental attribution error" (see also Gilbert, 1998). On the other side of the debate are those psychologists who argue that there are stable dispositions and traits that make up our personality and give people a relatively consistent set of responses to different situations (Bowers, 1973). In support of these stable dispositions, Epstein and O'Brien (1985) showed that if the situation specific behaviors were aggregated, then remarkably consistent responses emerged. In other words, behavior is influenced by situational factors within any particular instance, but when taken at a general

3. Importantly, a large set of these positive outcomes are social skills: the ability to make new friends, not to go pieces under stress, express themselves easily, be attentive, curious, not sulky, and be unlikely to tease other kids (Mischel et al., 1988). So, social context is important to consider as both a causal factor and a consequence of any self-regulatory process.

level there are still stable dispositions, which allow researchers to coherently study personality as a construct. Decades of research into personality has converged on a five-factor model in which personality can examined as variance in an individual's disposition towards: openness, conscientiousness, extraversion, agreeableness, and neuroticism (Costa-McCrae, 1992; Goldberg, 1992). Adding to the statistical support for personality are twin studies (Bouchard, 1994) and genetic analysis (Comings et al., 2000; Heck et al., 2009) that suggest these dispositional tendencies have a biological basis.

What are we to make of this debate? Like most divisions around interpretation, the truth appears to be somewhere in the middle. A systematic review found that the correlation between traits and behavioral responses is not statistically different from that between situational factors and behavior; both have an average correlation ~.20 (Richard, Bond, & Stokes-Zoota, 2003). In other words, as we might suspect, any particular behavior is influenced by a blend of situational and dispositional factors. Turning back to the research on self-regulation, this suggests that individuals will vary in their trait tendency to exercise regulation—this tendency is captured within the dimension of conscientiousness (Roberts et al., 2014)—and their likelihood of exercising this tendency will vary by context.

Before adding religiosity to the discussion, it is worth summarizing what we have already covered. Self-regulation is the psychological process of adjusting behaviors in pursuit of goals. This process can be analyzed in terms of a feedback loop that includes standards, self-monitoring, willpower, and motivation. While the inclusion of willpower, as necessary for adjusting behavior, biases this model of self-regulation towards an overemphasis on effortful inhibition, the general process of self-regulation can also be automatic. The particular instances in which self-regulation is effortful are called self-control. Psychologists all agree on these definitions, but there are strong debates about the degree to which regulatory behaviors are automatic or effortful. My contention is that turning to examine the way social processes influence self-regulation can help resolve this debate by characterizing some of the features that lead to automatic modes regulation. In particular, I will focus on the variety of social processes at play within religious engagement and how these social dynamics interact with psychological processes.

1.3. The relevance of religion

1.3.1 Defining religion

Very rarely does adding religion to inquiry help reduce complexity. Scholars of religious studies spend an enormous amount of time, energy, and paper debating what we even mean by "religion." Classic definitions from European enlightenment philosophers tended to emphasize religion as theistic belief even while they advanced naturalistic and rational arguments for changing this belief (e.g., Hume, 1757; Kant, 1788/2015). Later philosophers and theorists, like Feuerbach (1830/1980), Marx (1844/1970), Nietzsche (1887/2009), and Freud (1928) advanced a more critical position, which argued that understanding the naturalistic origins of supernatural beliefs undermined the legitimacy of those beliefs. The common thread is that religion is demarcated as primarily about theistic belief.

The main problem with this position is that it is based on the tacit assumption that Protestantism is the norm. This assumption leads to an over-emphasis on subjective states, such as beliefs and feelings, at the expense of ritual behaviors and community. The strong forms of this critique have been pushed by anthropologists such as Asad (1993), who argues that not only is this association between religion and theistic belief overly influenced by Christian perspectives,

but that the very category of religion is fabricated and done so towards malicious ends (see Masuzawa, 2005). Religious studies as a discipline has arrived at a peculiar place where many scholars resist the use of religion as a viable category.

Despite this odd irony, the critique from Asad (1993) and others is fair. Even if you include scholars such as Durkheim (1912/2008) and Weber (1963/1993), whose complex analyses of religions extend well beyond theistic belief, there still may be a tacit bias towards emphasizing Christianity-like features of religious systems. But, we can grant these points about the ambiguity of the category 'religion', along with its colonial lineage, and still recognize that going to a temple is different than to going to the market. How can we explore these differences without repeating past mistakes of bias and reifying harmful miscategorizations?

One way that psychological researchers have tried to parse out what is distinct about religious behaviors is by recognizing that some actions are done in reference to what one considers sacred (Pargament, Mahoney, Exline, Jones, & Shafranske, 2013). This approach to defining religion is helpful because it relies on the person's own attributions instead of the researcher's assumptions. The difficulty with any definition that rests on a single characteristic, however, is that it risks capturing too much and too little. For example, there are evangelical

Christians in the US who train themselves to experience most of what they do in relation to God (Luhrmann, 2012). Do we want to consider all of their lives therefore religious? At the same time, plenty of rituals that may be worth considering as religious are undertaken with an everyday practicality that the practitioners might not consider to be in relation to the sacred.

In response to these difficulties, many researchers employ a family resemblances definition for understanding religious phenomena (Segal & Smart, 2012; Wildman, 2010). Drawing from Wittgenstein (1953/2009), family resemblance approaches avoid the need to define an essential characteristic and instead provide a cluster of similarities which roughly organize things within a collection, but any single feature might not be common to the entire group. Within this dissertation, therefore, when I talk about religion I am referring to the ways people, individually and collectively, relate to that which is considered ultimate through symbol systems of ideas and practices that are taken as given and often include engaging fundamental problems about origins and mortality, suffering and liberation, meaning and purpose, and morality and self-cultivation. Just in case that cluster is too cognitive, since it is oriented towards questions and solutions, it is important to recognize that engaging these problems often means

embodying a way of life that cultivates habitual practices, orders values, embeds one in a community, and infuses experience with a transcendent significance.[4]

Throughout this dissertation, I will refer to both religious systems and to religious engagement. When I say "religious systems" this is a way to refer to those systems of symbols and practices as they exist on their own. Of course, these systems are never purely "on their own"– if they were not being carried in the minds, actions, and artifacts of a community, then they would not exist at all. But, insofar as they are encountered as external to any particular individual, then religious systems do seem to have an independent status. This use of the term is similar to saying religious traditions, but I prefer systems as they imply a more dynamic and multi-faceted nature than tradition, which may imply a static and monolithic entity. When I say "religious engagement" I am referring to the various ways that an individual interacts with and embodies their religious system. Religious engagement is thus very similar to religious practice, but "practice" may unwittingly imply a narrow focus on ritual behaviors. I therefore

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4. My definition draws primarily from three sources: Geertz' famous definition: "(1) a system of symbols (2) which acts to establish powerful, pervasive and long-lasting moods and motivations in men (3) by formulating conceptions of a general order of existence and (4) clothing these conceptions with such an aura of factuality that (5) the moods and motivations seem uniquely realistic" (Geertz, 1993, p. 90). Neville's definition: "human engagement of ultimacy expressed in cognitive articulations, existential responses to ultimacy that give ultimate definition to the individual and community, and patterns of life and ritual in the face of ultimacy" (2014, p. 4). And Wildman's emphasis on fallibilistic, loose criteria for vague categories (2010, p. 37).

use "engagement" to also include the relational dimensions of belonging and the fact that holding religious beliefs is an active behavior as well. Turning back to the current project, religious systems may include elements that foster self-regulation, such as particular beliefs about the supernatural or particular ritual practices that cultivate the capacity to restrain. Religious engagement, on the other hand, focuses our attention on the way that people engage these particular elements of the given system. Since my primary question is psychological, religious engagement is my main concept of interest, but this engagement cannot be separated from the religious systems that offer the symbols or practices with which to engage. Both religious engagement and religious systems are vaguely construed using the family resemblances approach.

Part of the usefulness of this approach is that it changes the question from whether or not something fits within our category and instead looks at the ways in which it might be religious and the points at which it diverges from other religious phenomena. For example, consider a courtroom. This is a space rich with symbolic practices that are taken as given. It involves special clothing, a specific order of action, particular emotions you are unlikely to encounter elsewhere, a solemnity, and an orientation towards the ideal of Justice, which could be taken as ultimate. In these ways the courtroom is a very religious space.

At the same time, the courtroom does not necessarily embed one in a community that infuses experience with a transcendent significance while engaging fundamental problems of origins, liberation, meaning, or self-cultivation. Scholars could argue that actually it does do these things by ruling on education, health, and what actions are right and wrong. The point of the family resemblances definition, however, is that we do not need to settle some debate about whether or not the legal system "counts" as religion. Instead we can focus on the specific features that tip the scales one way or the other. This approach, which Taves (2009) describes as the "building block approach," is particularly important for attempts to study religious phenomena scientifically. The broad category of religion is too general and vague to give you any empirical traction. But, parsing religion into particular features, whether social or psychological, that give rise to the effects of interest allows researchers to employ methods that are testable, replicable, and can be synthesized into a broader understanding of religious phenomena as a whole.

For example, if you are interested in self-regulation, this approach allows you to ask how are particular features of religious systems are likely to influence the standards, self-monitoring, willpower, and motivation necessary for regulation. We are approaching the point at which we can begin to answer those

questions, but first it is necessary to situate the scientific study of religion within religious studies more broadly. Doing so will help highlight the methods, sensitivities, and modes of explanation that this approach employs.

1.3.2 The scientific study of religion

In the broad sense that scientific inquiry pursues naturalistic explanations for phenomena, the scientific study of religion is not a new mode of inquiry. Philosophers dating back to Xunzi (Campany, 1992; Kline & Tiwald, 2014) have theorized about the naturalistic origins and functions of religious practices. Many of the theorists mentioned above, Hume (1757), Feuerbach (1830/1980), Marx (1844/1970), and Freud (1928) also sought to ground religious phenomena within a naturalistic understanding of the world. These theorists do not use a strong mode of empirical falsification, which led Popper (1962) to highlight Marx and Freud as representative of pseudoscience; but they nevertheless set the stage for thinking about the origins and functions of religious systems without appealing to a supernatural realm. At the turn of the 20th century philosophers and psychologists like James (1902) and Leuba (1909) began incorporating more directly testable theories and empirical methods into their understanding of religion, founding the field of the psychology of religion. There are various ways to organize the field, but for our purposes, there are two main streams of

research that will help us understand the relationship between religious engagement and self-regulation.

One stream of research within the psychological study of religion is oriented towards understanding individual differences in the way that people engage their religiosity. For example, Allport (1950) and colleagues (Allport & Ross, 1967) studied the way that individuals are either intrinsically or extrinsically motivated to engage their religious traditions, though this distinction may founder when applied to non-Protestant traditions (e.g., Cohen et al., 2017) . The study of variance within individual religious orientations has differentiated to include other ways of being religious, such as questing (Darley & Batson, 1973), authoritarianism, and religious fundamentalism (Altemeyer & Hunsberger, 1992) to name a few. Not only does this branch within the psychology of religion examine individual differences in religiosity, it also studies the consequences of these differences for peoples' minds and behavior. For example, researchers in this field examine the consequences of various modes of religiosity for mental health (Koenig, 2009), prejudice (Rowatt, Shen, LaBouff, & Gonzalez, 2013), and various virtuous qualities like social justice (Sandage & Jankowski, 2013), hope (Sandage & Morgan, 2014), gratitude (Koenig et al., 2014), and forgiveness (Worthington et al., 2014) to name a few.

Relevant to the task at hand, one branch within this stream of research also looks at the way various modes of religiosity relate to self-regulatory capacities (Jankowski & Vaughn, 2009). For example, while much of the evidence suggests that religious engagement has a positive impact on self-regulatory capacity (Laurin & Kay, 2016, McCullough & Willoughby, 2009; Zell & Baumeister, 2013), this research on individual differences shows that some ways of being religiosity, such as those characterized by spiritual instability (Sandage & Jankowski, 2010; 2013) or authoritarian images of god (Johnson, Li, Cohen, & Okun, 2013) are actually dysregulating. While most of this dissertation will focus on the general ways in which social processes and religious engagement are likely to influence self-regulation, it is necessary to keep this variance at the individual level in mind.

A separate stream of research, growing out of cognitive science, is oriented towards understanding the origins and functions of religious beliefs and behaviors. While this stream draws from earlier work in anthropology, the turn to apply cognitive approaches in order to explain religious phenomena traces most clearly to Guthrie's (1980) seminal paper *A cognitive theory of religion*. In his later book, Guthrie (1993) argues that religious beliefs are a form of pareidolia, or the tendency to see patterns in random stimuli. This is one explanation among

many. Our predispositions towards teleological explanations (Kelemen, 2004), dualism (Bloom, 2007), or theory of mind (Bering, 2006) are also taken to help explain why people would be inclined to hold religious beliefs (Boyer, 2002). Other researchers that engage with the cognitive science of religion are less inclined to ask about the origins of religious beliefs and practices and more attuned to the functions of religious phenomena. Researchers within this functional approach argue that religious rituals help with healing (McClenon, 1997), group cohesion (Sosis, 2000; Whitehouse & Lanman, 2014), and other prosocial process (Norenzayan et al., 2016)[5]. Research within the cognitive science of religion is flourishing and diverse, but this diversity is united by the effort to incorporate our understanding of religion within the overarching framework of any life science– evolution. In order to situate the relevance of this stream of research for understanding the relationship between religious engagement and self-regulation, it is necessary to review a few points about studying religious systems from an evolutionary perspective.

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[5] While this functional stream of research may seem decidedly less cognitive than the one focused on beliefs, these researchers are predominately cognitive anthropologists. So, while they may be studying the functional outcome of group cohesion or ritual healing, their analysis is predominately in terms of cognitive variables, such as costly signaling (Sosis, 2000), identity fusion (Whitehouse & Lanman, 2014) or dissociation (McClenon, 1997).

1.3.3 Religion and evolution

Attempting to ground religion in evolution is not entirely novel. The paradigmatic example that scholars love to hate is Frazer's (1890/1963) progressivist account that magical beliefs evolve into religions and religions will ultimately be supplanted by science. The primary problem with such approaches, besides the fact that they are wrong, is summarized by Smith's (1982) critique that they allow the scholar "to draw his data without regard to time and place and then, locate them in a series from the simplest to the more complex, adding the assumption that the former was chronologically as well as logically prior" (p. 24). In other words, the absence of the necessary phylogenetic data allowed theorists to import a misguided progressive view of evolution that culminated in their own ethnocentric ideal.

More recent attempts at understanding religion through the perspective of evolution are more sensitive to these pitfalls. They are also aided by a wealth of data that allows the construction of phylogenetic lineages in order to answer questions about the sorts of social and ecological pressures that lead religious systems to change over time (e.g., Watts et al., 2015). Where data does not allow historical reconstruction, researchers can still study the way cross-cultural variance in religious practices correspond to different environmental pressures

(e.g., Sosis, Kress, & Boster, 2007). Cross-cultural experiments, especially among children and other primates, allow researchers to hone in on psychological tendencies that appear to be species wide, suggesting an evolutionary origin (e.g., Tomasello, 2016). These data-driven lines of inquiry are also grounded in a more robust understanding of evolutionary theory. In short, many of the lingering concerns about studying religion in the context of evolution are largely directed at issues that have been abandoned, though this does not imply that there are not many technical issues still to resolve. As Strausberg (2014) said: "there is a long way from stating the meta-theoretical fact that anything, even religion, is ultimately subject to evolutionary processes to showing that cultural evolution is a fruitful research program " (p. 604). Throughout this dissertation I will highlight research that fruitfully uses evolutionary theory to help understand culture in general and the relationship between religion and self-regulation in particular.

A key part of evolutionary theory is Tinbergen's (1963) distinction between the levels of explanation for any form of animal behavior. Ultimate explanations use evolutionary dynamics over a long range of time. In other words, they describe *why* the process of natural selection on hereditary variation would lead to a certain behavior being present within an ecosystem (Bateson &

Laland, 2013). In contrast, proximate explanations describe *how* this behavior functionally operates– what are the actual processes that make it work (Scott-Phillips, Dickens, & West, 2011)[6].

As we turn now to the relationship between religion and self-regulation, it is essential to keep these different levels of explanation in mind. For example, at the ultimate level, McCullough and Carter (2011) describe the ways that effective self-regulation would be an adaptive psychological capacity in the evolutionary landscape. Therefore, those religious beliefs, rituals, and social structures that fostered self-regulation would be selected for in the process of evolutionary change (Norenzayan et al., 2016). This ultimate perspective is necessary, but within this dissertation I will focus primarily on the proximate mechanisms through which religious systems influence regulatory behavior. Without a clear picture at the proximate level, we will have a much harder time constraining our ultimate explanations. But once we have the proximate level clear, then we know

[6] The classic example of this distinction is the peppered moth, which varies in relation to pollution in their environment (Kettlewell, 1958). Dark moths thrive in industrial environments, while light moths thrive in the forest. The ultimate explanation for this variance is differential reproduction; moths that blend in are less likely to be eaten and more likely to reproduce (Cook et al., 2012). The proximate explanation appeals to molecular biology to describe how specific alleles give rise to differing degrees of melanisation (Cook & Saccheri, 2013).

more specifically what facets of a religious system should be the specific target of ultimate explanations. So, if we zoom in to the proximate level, what do we see?

1.4. Evidence connecting religion and self-regulation

When researchers began to study the relationship between religiosity and self-regulation, it was not done with evolution in mind. Instead, it was part of a psychological study on the ethical behavior of kids, the Character Education Inquiry (Hartshorne, May, & Maller, 1929). This was one of the first studies of moral behavior, as the psychologists sought to understand what it was that made some kids more likely to be deceitful, altruistic, or persistent in their actions. Within this study they found a small positive relationship between the amount of time kids spent at Sunday school and their persistence on a difficult task, though this varied enough by religious community to make the results unreliable. Interestingly, there was no relationship between Sunday school attendance and the inhibition task (Hartshorne et al., 1929). The more lasting impact of this study was that they found no generalizable ethical traits; instead, all of the kids acted honestly sometimes and deceitfully other times. Sometimes they persisted and other times they gave-in. This study was part of the research that gave rise to the situationalist positions described above.

Fifty years later another set of studies suggested a more consistent positive relationship between religiosity and self-control. Where Hartshorne et al. (1929) used behavioral tasks, these new studies worked with novel self-report measures of trait self-control, such as the California Psychological Inventory (Gough, 1956). In an early study from this period, McClain (1978), showed that religiosity was related to self-control, but only among those US students for whom religion was an intrinsic motivation; this means they were religious for its own sake, not for the sake of social connections or familial obligations (Allport & Ross, 1967). More recent studies found similar positive associations between religiosity, in this case self-reports of religious involvement, and self-control among students in Indonesia (French, Eisenberg, Vaughan, Purwono, & Suryanti, 2008) and Pakistan (Aziz & Rehman, 1996). By 2009, McCullough and Willoughby found that 11 of the 12 existing studies supported a positive association between self-control and religiosity. Since then, more studies have emerged which help solidify this relationship, while also providing some nuance.

Part of that nuance and clarification has come from body of research using delayed discounting tasks, which measure an individual's willingness to forego immediate rewards in order to wait for larger rewards later (Madden & Johnson,

2010). Since they involve competing neural systems (McClure, Laibson, Loewenstein, & Cohen, 2004) and are strong predictors of impulsivity (Odum, 2011), these behavioral tasks are taken to be a measure of the direct inhibition described above. Initial research suggested that religiosity predicted an individual's willingness to wait for the larger later rewards (Carter, McCullough, Kim-Spoon, Corrales, & Blake, 2012b). This positive relationship between religiosity and delayed discounting was mediated by future time orientation—an individual's propensity to think about the future and feel as if it is approaching quickly (Gjesme, 1979)—which other studies have shown is associated with intrinsic religiosity (Carter et al., 2012b; Öner-Özkan, 2007). A second project from this research team (Carter, McCullough, & Carver, 2012a) also found that self-monitoring of goals and values mediated the relationship between religiosity and self-control. Importantly, religious involvement also predicted reports of feeling monitored by God, which was significantly related to self-monitoring, but in the statistical models this feeling of supernatural monitoring was not related to self-control (Carter et al., 2012a, p. 693).

Other empirical projects use different behavioral tasks to support the association between religious cognition and self-regulatory behaviors. Rounding

et al. (2012) found that implicitly priming individuals with religious concepts[7] led them to endure more discomfort, delay gratification, and persist longer on a depleting task. Following Baumeister's ego-depletion model of self-control, Rounding and colleagues (2012) argue that religious thoughts may help individuals replenish their self-control resources. Friese and Wänke's (2014) recent work on prayer and self-control also explicitly frames this influence in terms of ego-depletion (see also Friese, Schweizer, Arnoux, Sutter, & Wänke, 2014). Their study had participants engage in either a brief period of prayer or free thought prior to an emotion suppression task and a Stroop task, which involves overriding prepotent—i.e., powerful and intuitive—responses. Those individuals who engaged in prayer did not show ego-depletion effects on the Stroop task (Friese & Wänke, 2014).

While these various studies focus on different facets of religious engagement, such as holding particular beliefs or attending religious rituals frequently, they are collectively taken to support a general association between religiosity and self-regulation (Laurin & Kay, 2016; McCullough & Willoughby,

[7] This implicit priming procedure was developed by Shariff and Norenzayan (2007). It involves unscrambling sentences that include religiously associated words such as, god, divine, or spirit. In these experiments, half of the sample is given these sentences with religious words, while the other half is given sentences which do not have any religious associations.

2009; Zell & Baumeister, 2013). Fishbach and colleagues (2003) found that priming individuals with relevant temptations activated religious thoughts or other higher order goals, and religious thoughts reciprocally inhibited temptation recognition (p. 305). In a series of studies, Colzato and Hommel have demonstrated the relationship between religion and various self-regulatory processes including attention regulation (Colzato, Hommel, & Shapiro, 2010; Colzato et al., 2010; Colzato, van den Wildenberg, & Hommel, 2008) and action inhibition (Hommel, Colzato, Scorolli, Borghi, & van den Wildenberg, 2011). Their research program has been especially careful about showing how different religious contexts lead to different, and often opposing, relationships between religion and self-regulation.

For example, Paglieri et al. (2013) found that a positive association between religion and delayed discounting behaviors held in the Netherlands, but was reversed in Italy where less religious participants were the most likely to hold out for the larger later reward. In this case they interpret the salient difference as rooted within the varying beliefs that Dutch Calvinists and Italian Catholics hold about ascetism and salvation. These differences in belief, however, may shroud other salient contextual differences. In a large online sample, Shenhav, Rand, & Greene (2017) also recently found that religious belief

was associated with greater likelihood of taking the smaller sooner option within a delayed discounting task, which corroborates results from Morgan et al.'s (2016) study among older Americans, the most religious of whom were also the most likely to not wait for the larger later reward.

Morgan et al.'s (2016) work was part of the psychological study of religion that uses neuroimaging techniques to study religious cognition. Within this study, Morgan et al. (2016) found that connectivity between systems associated with valuation processes[8] was especially implicated in the relationship between religious cognition and delayed discounting (Morgan et al., 2016). In other words, even though the religious participants were more likely to choose the smaller sooner option, this relationship was still likely occurring through the impact that religious cognitions have within the processes of assessing value. Taken alongside Shenhav et al. (2017) and Paglieri et al. (2013), these studies, which show religiosity in a negative relationship to self-regulation, can help constrain theoretical explanations for how religious engagement is related to self-regulation. But, most of the explanations focus on a positive relationship between the two.

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[8] In particular, higher levels of connectivity between the nucleus accumbens and the dorsolateral prefrontal cortex and the caudal anterior cingulate cortex predicted a higher likelihood of being influenced by the religious primes.

The emphasis on a positive relationship between religious engagement and self-regulation is not unfounded; at a general level, studies tend to support this interpretation. For example, in addition to the experimental and survey tasks mentioned above, there is a related and larger body of research showing that religiosity is associated with a range of behavioral outcomes thought to involve self-regulation, such as substance use (e.g., DeWall et al., 2014; Kim-Spoon, Farley, Holmes, Longo, & McCullough, 2014), sexual behavior (Vazsonyi & Jenkins, 2010) or social deviance (e.g., Klanjšek et al., 2012; Laird, Marks, & Marrero, 2011). These studies collectively support the association between religiosity and less delinquency, better health outcomes, and a wide range of other prosocial behaviors (e.g., Wallace & Forman, 1998). While most of these relationships are only suggestive of self-regulation as a mediator, some longitudinal studies have tested this directly (e.g., Desmond, Ulmer, & Bader, 2013). For example, Kim-Spoon and colleagues (2015) found that personal religiosity—the reported importance of religion to the individual, which is contrasted with organizational religiosity, representing "involvement in formal religious institutions" (Kim-Spoon et al., 2015)—in early adolescence predicted lower levels of substance abuse 2.4 years later. Importantly, self-regulatory skills mediated this association between personal religiosity and less substance use.

Similarly, Pirutinsky (2014) conducted a longitudinal study on the relationship between religiosity, impulse control, and criminal behavior among adolescents with prior serious criminal offenses. He also found that increases in personal religiosity predicted lower incidence of later criminal behavior and that this association was partially mediated by increases in self-control (Pirutinsky, 2014, p. 1300). Collectively this research on religiosity and behavioral outcomes lends substantial support to the generally positive relationship between religiosity and self-regulation.

The nature of this relationship is nuanced by studies like the longitudinal ones just mentioned (Kim-Spoon et al., 2015; Pirutinsky, 2014), which distinguish between personal religiosity and organizational religiosity. Other studies, like McClain's (1978), make a similar point by showing that the association between religiosity and self-regulation holds for the intrinsically religious individual, but not those who are motivated to be religious by extrinsic factors. This salient difference in religious motivation is corroborated by other studies as well that show intrinsic, but not extrinsic, religiosity to predict self-regulatory skills (e.g., Bergin et al., 1987; Bouchard et al., 1999; Hosseinkhanzadel, Yeganeh, & Mojallal, 2013; Jonas & Fischer, 2006; Klanjšek et al., 2012). Drawing an even larger contrast, Sandage and Jankowski (2010; 2013) found that religiosity characterized

by spiritual instability—a form of relational spirituality in which theists relate to god in a fearful and mistrusting way (see Hall & Edwards, 2002; Sandage & Jankowski, 2010)—was negatively associated with regulatory capacity. Like the contextual differences mentioned above (e.g., Morgan et al., 2016; Paglieri et al., 2013), these individual differences will help constrain our explanations for how different facets of religiosity relate to self-regulation.

Before moving on to these explanations, we need to discuss the way personality enters this research. As mentioned above, the trait conscientiousness describes an individual's tendency to be organized, persistent, and motivated in pursuit of goals (Costa & McCrae, 1992; McCrae & John, 1992), so it is not surprising that this trait relates positively to self-regulation (McCrae & Löckenhoff, 2010). Research also consistently suggests that conscientiousness is related to religiosity (Piedmont & Wilkins, 2013), with some studies showing it predicts later levels of religiosity (McCullough, Tsang, & Brion, 2003; Regnerus & Smith, 2005; Wink, Ciciolla, Dillon, & Tracy, 2007). Collectively, this could suggest that it is not religion that causes better self-regulation, but rather the better self-regulators who become religious. While this possibility is not strictly ruled out, the longitudinal studies mentioned above did not find this to be the case (Kim-Spoon et al., 2015; Pirutinsky, 2014); a result supported by the priming

studies (e.g. Rounding et al., 2012). A more complex, but potentially satisfying interpretation is that there is a reciprocal dynamic between religiosity, conscientiousness, and self-regulation, in which none are necessarily prior to the others.

Notwithstanding the conflicting evidence at the general level—from Paglieri et al., (2013), Morgan et al., (2016), and Shenhav et al. (2017)—and the nuances at the level of individual differences (e.g. Hosseinkhanzadel et al., 2013; Jonas & Fischer, 2006; Klanjšek et al., 2012; Sandage & Jankowski, 2010; 2013), these various strands of research support a reliable association between religion and self-regulation and provide the foundation for explaining how the two are related. In the next section I will review the currently prevailing explanations for the relationship between religious engagement and self-regulation.

1.5. Theories linking religion and self-regulation

As described above, Carver and Scheier (1998; 2016) parsed self-regulatory processes into a feedback loop that relies on standards, self-monitoring, and motivation. Later researchers added willpower as the necessary fuel to enact this feedback loop (Baumeister, 2014; Schmeichel & Baumeister, 2004). Given these four components of self-regulation, when researchers move to explain its

relationship with religion, each part of the feedback loop acts as a focal point to organize theory. While practical for an exposition, it is important to keep in mind that this feedback process is deeply interconnected so that often the boundary between processes of goal activation, motivation, and self-monitoring become blurred. Parsing the process into distinct components has more to do with efficiently organizing inquiry than any actual and distinct joints in nature. With this disclaimer in mind, if we look at religious engagement in relation to each of these facets of regulation, what do we see?

The clearest distillation of these explanations occurs in three literature reviews for disciplinary handbooks: McCullough and Carter's (2013) chapter for the American Psychological Association's *Handbook of Psychology, Religion, and Spirituality*; Zell and Baumeister's (2013) chapter for the *Handbook of the Psychology of Religion and Spirituality*; and Laurin and Kay's (2016) chapter for *the Handbook of Self-Regulation*. Throughout the next section I will draw extensively from each of these in order to articulate the current explanations for the relationship between religion and self-regulation.

1.5.1 Standards

Zell and Baumeister (2013) begin their explanation of religion and self-regulation with standards. As noted above, these standards can exist at broad

abstract levels, such as "be humble," but also include direct goals encompassing everyday behaviors– such as prohibitions on drinking or lying. Regardless of the level of abstraction, the relevant functional aspect of standards is their capacity to guide self-regulatory efforts. Zell and Baumeister along with others (e.g., Baumeister & Exline, 2000) suggest that religion's impact on standards is relatively straightforward: religious systems carry clear and explicit standards for behavior. These standards may be direct rules and ritual prescriptions, such as the Ten Commandments or the Five Pillars of Islam (Zell & Baumeister, 2013), but they can also be carried tacitly by moral exemplars (Oman & Thoresen, 2003).

Laurin and Kay (2016) offer a similar explanation:

> A strict moral code that offers clear guidelines for determining right and wrong can serve as a useful heuristic for choosing one's course of action. Making choices can be depleting (e.g., Vohs et al., 2008); to the extent that a religion has a strict moral code, it might alleviate some of that burden. (p. 312)

Here, Laurin and Kay (2016) helpfully articulate the reason having such clear standards would aid in regulation– by alleviating ego-depletion effects. Furthermore, they are careful to acknowledge that not all religious systems will include strict moral standards– instead, they suggest, this can act as a predictive

variable. Both of these accounts emphasize the role of explicit beliefs about moral behavior within religious systems and the way these influence ego-depletion processes.

McCullough and Carter (2013) take a different route. Instead of focusing on the direct moral codes within religious systems, they argue instead that religions tend to encourage norms that are based in the overarching values of tradition and conformity. Here they are drawing from the Schwartz Value Survey (Schwartz, 2006; 2012), which attempts to distill a set of ten basic values that are apparent cross-culturally. Within this schema, tradition describes the acceptance and respect for customs, while conformity describes acting in accordance with social expectations and norms (Schwartz, 2012). McCullough and Carter's (2013) argument is based on empirical research showing that religious people in the US, Turkey, and Israel tend to endorse these values and that religiosity in all contexts is negatively related to the values of hedonism, stimulation, and self-direction (Saroglou, Delpierre, & Dernelle, 2004). In other words, the moral goals that religious systems tend to endorse are not arbitrary–they are precisely the type of values that demand self-regulation. This association acts as an ultimate explanation for why particular religious standards foster self-regulation. But McCullough and Carter (2013) also offer a proximate explanation

by suggesting that religious systems have the capacity to sanctify particular goals (Emmons, 1999). This process increases the goal's importance and evidence suggests that sanctification has a significant impact on the way individuals regulate in relation to those goals (Pargament & Mahoney, 2005).

In chapters 2 and 3, I will challenge and extend these explanations by situating them more clearly within the dynamics of social processes. In particular, the explanations that depend on explicit moral codes directing behavior and preserving willpower likely overemphasize this pathway of influence. Psychologically there is substantial evidence that most of our moral behaviors are not guided by explicit moral codes (e.g., Ariely, 2010; Haidt, 2001; Lerner, Li, Valdesolo, & Kassam, 2015). And socially, a long tradition in anthropology has analyzed the ways that moral codes have communal functions which extend beyond explicit prohibitions and have a much greater influence on our behavioral patterns (e.g., Turner, 1969; Rappaport, 1999). In other words, the explicit moral dictates of any religious system are just the tip of the iceberg; most of standards carried within religious systems are operating tacitly beneath the surface.

McCullough and Carter's (2013) explanation gets us further in this direction by suggesting that religious standards may function to preserve social

conformity and traditions. This insight, along with their point about sanctification, will be a launching point for situating religious standards within their broader social context. This broad perspective is necessary to understand the deeply social character of standards and how they are developed and persist. Attending to social context provides a novel perspective on the way religious systems foster self-regulation through standards, which does not rely on their capacity to preserve willpower.

1.5.2 Self-monitoring

Within the process of self-regulation, self-monitoring[9] refers to the capacity of individuals to be aware of their current state in relation to their goal state (Carver & Scheier, 1998; 2016). Zell and Baumeister (2013) argue that many religious practices nurture an individual's tendency towards self-awareness or self-examination. Prayer, meditation, and confession all stand out as examples. Furthermore, many religious calendars have seasons set aside for self-examination: for example, Lent in the Christian calendar or the month of

[9] This definition of self-monitoring as a cognitive capacity is distinct from Synder's (1974) use of the term as a personality trait describing the extent to which people watch and restrain their actions in response to situational cues about the appropriateness of that behavior (see also, Fuglestad & Snyder, 2010; Gangestad & Snyder, 2000). While Snyder's use is similar to dynamics I will describe, functionally separating the capacity of self-monitoring from sensitivity to social cues and willingness to abide provides a more conceptually clear framework for explanation.

Ramadan in Islam (Zell & Baumeister, 2013). These associative explanations suggest that religious practices could develop the habit of self-monitoring. As Laurin and Kay put it: "Those who self-monitor regularly are more apt to notice discrepancies between their current and desired states, which is what prompts them to act" (2016, p. 307). This practice based explanation is complemented by other explanations suggesting that believing in watchful supernatural agents will also increase an individual's tendency to self-monitor.

This explanation is prominent within the cognitive science of religion, where Norenzayan (2013) and others (Shariff & Norenzayan, 2007) have argued that supernatural surveillance fosters the self-monitoring necessary for prosocial behaviors. This association draws heavily on experiments which reliably show that people's behavior changes if they believe they are being watched (e.g., Bateson, Nettle, & Roberts, 2006; Bering, McLeod, & Shackelford, 2005; Haley & Fessler, 2005). This explanation is also supported by Carter et al.'s (2012a) study which found that religiosity was significantly related to self-monitoring tendencies and that this relationship was partially mediated by the perception that one was also being monitored by God. Carter and colleagues (2012a) found that the perception of being monitored by other people also mediated this pathway between religiosity and self-monitoring, but importantly: "monitoring

by God and monitoring by others only partially mediated the relationship between religiosity and self-monitoring. Thus, there remains a substantial amount of variance left to explain regarding the association between religiosity and self-monitoring" (2012a, p. 694). The variance that is left unexplained could be accounted for by those religious practices of self-awareness, or there could be other mediating influences. As McCullough and Carter (2013) note, this theoretical relationship remains largely unconstrained by empirical evidence and therefore a fruitful ground for future research.

Throughout this dissertation, I will expand on these explanations by arguing that what matters is less that an individual is being watched and more *who* is doing the watching. Different watchers belong to different communities and each of these communities will carry their own norms and standards. Therefore, it is not simply that being watched causes us to self-regulate, instead being watched causes us to act more normally in relation to that group. Recognizing the social contexts within which self-monitoring occurs also helps us attend to the type of relationship that an individual has with these communities. The quality of these relationships will largely determine whether an individual self-regulates towards conformity or towards an individualized rejection of the collective standards. Focusing on the quality of one's relationship

with their religious community's symbols will help to clarify why individual differences in religiosity have different predictive value for self-regulation.

Other aspects of who is watching will also likely be salient for regulation. For example, Johnson and colleagues (2013; 2016) show that different conceptions of god, as either authoritarian or benevolent, lead to divergent behavioral outcomes. This research is part of an ongoing debate within the psychology of religion concerning the relatively efficacy of punishing versus benevolent conceptions of deities for different types of behavior (see Johnson, 2005; Johnson & Cohen, 2016; Norenzayan et al., 2016; Shariff & Norenzayan, 2011; Yilmaz & Bahçekapili, 2016). Regardless of how this debate resolves, this research highlights that holding a belief in supernatural deities may be less important than the ways people relate to the content of that belief. The relational content of belief and the social context endorsing those beliefs will both help to nuance our understanding of the ways religious engagement impacts regulation via self-monitoring.

1.5.3 Motivation

Rather than being another self-regulatory capacity, motivation is an overall disposition or willingness to exercise these other capacities or not. Most often this willingness is expressed in terms of an individual's cost/benefit

analysis. Laurin and Kay (2016) draw from Bandura's (1991; 1997) model of motivation to express this analysis in terms of three questions: Can I do it? Will there be a reward? Do I care? In chapter 4 we will engage this model in more depth. For now it is worth noting to appreciate the way Laurin and Kay (2016) build their theory around each of these questions. Drawing from their work on compensatory control (Laurin, Kay, & Fitzsimons, 2012), Laurin and Kay (2016) describe the complex ways that religious beliefs can lead people to be both overconfident in their ability to regulate —by fostering a sense of protection (Holbrook, Fessler, & Pollack, 2016)— and less confident in these abilities—by encouraging people to relinquish their control (Laurin et al., 2012).

While an individual's perceived ability to exercise regulation clearly impacts their willingness to regulate, the heart of motivation within this model is whether people perceive a reward and whether they care. Laurin and Kay (2016) suggest that "religion provides more or less clear ideas about what kinds of behaviors will receive divine reward. As a result, religion may motivate people to engage their self-regulatory efforts in moral domains, or domains that they believe God will reward" (p. 316).[10] Similarly, Zell and Baumeister (2013) suggest

10. This focus on moral domains helps explain some seemingly contradictory findings associated with religiosity. While most research shows religiosity is related to norm conforming behaviors, other studies have shown that reminders of religious deities also increases risky behaviors

that religious beliefs about the afterlife, salvation, and enlightenment are among the strongest incentives for following moral standards (p. 507-508). Within a strict cost/benefit analysis, the promises of ultimate fulfillment or punishment are powerful motivators.

Whether or not individuals care about these rewards is interwoven with this analysis– belief in divine rewards or punishments would imply a sense of their value. Zell and Baumeister (2013) extend this element of motivation to note that religions provide overarching principles that imbue behaviors with a larger purpose (e.g., Sansone, Weir, Harpster, & Morgan, 1992). This overarching sense of purpose, a high level goal, illustrates the ways standards and motivation are interconnected, while also providing an example of the way rewards may not always be postponed into an afterlife. Many of these explanations highlight the ways in which religious systems provide positive incentives, so it is also important to note that motivation can also work through feelings of guilt, which may be fostered by religious involvement (Albertsen, O'Connor, & Berry, 2006; Zell & Baumeister, 2013).

(Kupor, Laurin, & Levav, 2105). Here Laurin and Kay (2016) argue that this difference depends on whether a particular domain of behavior is viable for receiving divine rewards or not.

Using divine rewards and punishments to explain the relationship between religion and motivation depends heavily on a form of rational choice theory. There are abundant critiques of rational choice theory as an explanation for individual behavior (Ingold, 1996; Tversky & Kahneman, 1986), although the theory is quite useful at describing aggregate behaviors across a group (Becker, 1993). The strongest critique, at least for our current inquiry, is that rational choice theory assumes that human action is thoroughly instrumental (Boudon, 1998). As Weber (1922/1978) noted almost a century ago, some action is clearly pursued as a means towards a desired end, but other actions are value-rational– "determined by a conscious belief in the value for its own sake of some ethical, aesthetic, religious, or other form of behavior, independently of its prospects of success" (p. 25). In other words, analyzing religiously motivated behaviors as directed towards an instrumental reward may miss the way that these behaviors are valued fundamentally in and of themselves. For example, when Laurin and Kay (2016) describe the self-control required by religious standards they suggest that “dietary rules require Jews to resist the delicious smell of pepperoni pizza” (p. 317). I too love pepperoni pizza, but this description may fundamentally miss the social dimensions of motivation in which keeping kosher is an end unto itself, not a means to compel rewards from one’s god. This theoretical point is

supported by empirical work showing that religiosity is highly related to deontological moral reasoning, which is resistant to manipulation by instrumental ends (e.g., Ginges, Atran, Medin, & Shikaki, 2007; Sheikh, Ginges, Coman, & Atran, 2012). If we should not frame religiosity's relationship to motivation in terms of shifting incentives, then how are we to model this influence?

In chapters 3 and 4 I will provide an alternative account to the current model's overemphasis on cost/benefit analysis. Rather than suggesting that religious beliefs shift incentives within an objectively given value-landscape, this chapter argues that religious engagement can change the contours of those value-landscapes. This argument hinges on the relationship between religiosity and moral reasoning, paying specific attention to the role of moral emotions. A growing research program in psychology suggests that most moral behavior is driven by various combinations of emotional inclinations (Haidt, 2012). These moral emotions are evolutionarily rooted (Curry, 2016; Tomasello, 2016) and deeply social (Greene, 2013). Understanding these emotions and the way they are shaped by religious practices and beliefs will provide a model connecting religiosity and motivation that recognizes the way moral actions are socially endorsed ends unto themselves.

Given the salience of moral emotions, an essential part of this perspective on motivation is emotional regulation. Emotional regulation is commonly portrayed as the strategies that people employ to deal with positive and negative emotions (Gross, 2014). But the perception of different emotional experiences as positive or negative depends largely on prior evaluative processes that are guided by socialization (Hofmann, De Houwer, Perugini, Baeyens, & Crombez, 2010). In other words, the best way to avoid temptation is not to effectively restrain the tempting impulse, but to emotionally regulate such that you do not experience temptation in the first-place (e.g., Lamm et al., 2017). In chapter 4 I will argue that religion's relationship to motivation is determined in part by these socialized and implicit emotional regulatory processes that can shape an individual's experience of their moral world.

1.5.4 Willpower

Willpower plays a pivotal role in the current explanations for this relationship. While we have looked at willpower primarily as a resource within the ego-depletion model of self-control (Baumeister, 2014), it is also considered to work like a muscle insofar as it can be exercised and strengthened (Muraven, Baumeister, & Tice., 1999). With this capacity for change in mind, some explanations suggest that religious engagement may boost self-regulation

through rituals that demand the exercise and presumed strengthening of willpower (Zell & Baumeister, 2013). Evidence for this strengthening effect comes from studies suggesting that people consider religious environments to be high-constraint settings where only very specific behaviors are appropriate (Kenrick, McCreath, Govern, King, & Bordin, 1990; McCullough & Willoughby, 2009; Price & Bouffard, 1974). Furthermore, various religious practices explicitly involve restraint, whether sitting in long periods of meditation, fasting during Ramadan, or undergoing dysphoric experiences (e.g., Xygalatas et al., 2013).

Despite the validity of objections that we cannot assume religious practices require subjective experiences of restraint (e.g., Koenig, 2016), there nevertheless does appear to be a positive relationship between religious engagement and effortful inhibition. Laurin and Kay (2016) make this argument by reviewing the set of experimental studies outlined above (Friese et al., 2014; Friese & Wänke, 2014; Rounding et al., 2010; Watterson & Gieseler, 2012), which explicitly depend on the ego-depletion model and support this positive relationship. The question, however, is not whether religiosity is related to willpower, but the extent to which this relationship helps explain the broader association between religious engagement and self-regulation.

Within Laurin and Kay's (2016) explanation, ego-depletion and willpower play an essential role: "recent controversy notwithstanding (e.g., Job et al., 2010; Molden et al., 2012), it is undeniable that exerting self-control relies on some forms of limited resources" (p. 313). Insofar as they are restricting themselves to instances of self-control, this is a fair point because self-control is defined in terms of this limited resource (Baumeister et al., 2007). But throughout their review, Laurin and Kay (2016) use self-control and self-regulation interchangeably. Similarly, Zell and Baumeister (2013) use self-control as the overarching framework for all regulatory processes. The problem with blurring these concepts is that it is quite deniable that self-regulation relies on a limited resource. An entire branch of psychological researchers and thinkers explicitly argue against this dependence (Bargh, 1997; Carter, Kofler, Forster, & McCullough, 2015; Inzlicht, Schmeichel, & Macrae, 2014; Papies & Aartes, 2016). If religion's influence on willpower is taken to explain its relationship to self-regulation, then it is crucial to understand the extent to which willpower is necessary for regulation.

Fortunately, McCullough and Carter's (2013) review suggests that religion's relationship to self-regulation may occur through implicit or automatic processes, not simply through effortful inhibition. This suggestion draws from an

earlier theoretical review from Koole and colleagues (2010). The basic argument is that rather than fostering an effortful inhibition of impulses, religion may lead to a mode of efficient and flexible implicit self-regulation. These theorists are using Kuhl's (2000; Kuhl & Fuhrmann,1998) framework of regulation, which distinguishes implicit regulation as akin to an inner democracy that organizes and integrates various automatic psychological processes, from explicit control, which is like an internal dictatorship consciously and effortfully inhibiting other processes. Koole and colleagues (2010) draw from this distinction to suggest that such implicit modes of regulation would allow religious individuals to act in accord with high standards while maintaining a high emotional well-being that would otherwise be taxed by inhibitory efforts. Theoretically this association between religious engagement and implicit regulation is well motivated, but how might this influence occur?

As an explanation, Koole and colleagues note how religion is oriented towards the whole person, not just specific thoughts or behaviors (2010, p. 97). This suggests that religious values are holistic and thorough in their range, thereby influencing all domains of an individual's life, not just compartmentalized behaviors. Building on this first point, Koole et al. (2010) also argue that religious growth often occurs through integrating processes– bringing

past experiences into a unified network of meaning. Finally, religion also involves embodied practices that may intermesh symbolic meaning with postures, actions, and the body. These three characteristics, holistic, integrating, and embodied, are central to Kuhl's (2000) model of implicit regulation.

Koole et al. (2010) and McCullough and Carter (2013) support this positive association by reviewing the relevant research. In particular, the association between intrinsic, but not extrinsic, religiosity and regulation reviewed above (e.g., Bergin et al., 1987; Bouchard et al., 1999; Hosseinkhanzadel et al., 2013; Jonas & Fischer, 2006; Klanjšek et al., 2012) lends support to the theory that religious engagement influences self-regulation through implicit processes. Other experiments, such as implicit religious primes influencing reactions to temptation (Fishbach et al., 2003) or prosocial behavior (Gervais & Norenzayan, 2012), also provide strong support for the relationship.

The case for religion's influence on implicit self-regulation is strong and challenges an undefended reliance on willpower and ego-depletion to explain the overall relationship. More critically, however, the actual psychological dynamics are left largely unexplored; instead, these explanations work primarily by suggesting similarities between religion and implicit regulation. McCullough and Carter (2013) offer a more functional account:

> religion might help people to form appropriate intentions that can then be translated into effective action (also known as *volitional efficiency*). Second, religion might facilitate *emotion regulation*. Third, religion might help people reconcile new experiences with what has come previously, thereby helping to create and preserve *meaning in life.* (p. 130)

While I largely agree with this explanation as fruitful routes for future research, McCullough and Carter's (2013) review does not allow them to expand on the dynamics of these pathways. And unfortunately, research since then has left this relationship between religious engagement and implicit modes of regulation largely unexamined. While I cannot provide a thorough explication of religion's impact on these implicit modes of regulation, taking a social perspective on the relationship between religious engagement and self-regulation helps to articulate the way various forms of regulation may become more fluid and automatic.[11]

1.5.5 Theoretical summary

The prevailing explanations for how religious engagement impacts self-regulation provide a helpful starting point for understanding this relationship.

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[11] Importantly, implicit modes of regulation not necessarily at odds with the ego-depletion model. Indeed, it is likely that various aspects of being religious foster both forms of self-regulation. The debate is the degree to which either account should be the primary model for connecting religion and self-regulation.

But, as I have argued above, these explanations have tended to oversimplify both sides of the connection, construing religious engagement narrowly in terms of beliefs and interpreting self-regulation primarily as a matter of self-interested restraint. As I will argue throughout this dissertation, these conceptual specifications are challenged by perspectives within religious studies that are committed to analyzing religions as ordinary social phenomena (e.g. Durkheim, 1912/2008) and by evidence from psychological studies of normative behavior, which I will engage in chapter 3. The main goal of this dissertation, therefore, is to advance an alternative explanation for this relationship by taking account of the social context within which it occurs.

1.6. Conclusion

While there is a long tradition in religious studies that is attentive to the social dimensions of religiosity, I am also not alone in arguing for the importance of social context in understanding self-regulation. For example, feeling that you belong to a group with shared goals has a significant positive impact on the capacity to fulfill those goals, whether they are health related (e.g., Gere et al., 2014; Leahey, Kumar, Weinberg, & Wing, 2012) academic (Walton & Cohen, 2011) or more general goals (see Fitzsimons & Finkel, 2010; 2011)

Fitzsimons and colleagues (2015) developed the theory of Transactive Goal Dynamics in order to articulate the reasons that being in relationship would impact an individual's self-regulation: "we suggest that relationship partners are best conceptualized not as mostly independent goal-pursuers who occasionally influence each other, but instead, as interdependent subparts of one self-regulating system" (Fitzsimons et al., 2015, p. 648). Analyzing the dynamics within this self-regulating system quickly becomes complex. For example, Fitzsimons and colleagues (2015) argue that the degree to which groups share goals, what they call "transactive density," determines how social relationships constrain effective self-regulation. This occurs because goals can conflict with each other: for example, if Tim holds the goal of eating less carbs, but his partner Robert holds the goal of becoming a baker, then each will run into difficulty with their personal goals and in pursuing their shared goal of supporting each other.

Throughout their account of TGD, Fitzsimons et al. (2015) maintain this practical approach to unpacking these complex dynamics that can occur within dyadic relationships. Transactive density depends largely on the opportunities for interaction within the relationship and each individual's motivation for interdependence. The degree to which transactive density influences successful goal pursuit also depends on the ability to coordinate goals, each member's

orientation to the relationship, and previous successful attainment of goals (Fitzsimons et al., 2015). By carefully examining the way partners in a relationship can become a self-regulating system, along with the challenges that system can face, transactive goal dynamics provides a helpful microcosm on the way social dynamics can influence individual regulatory pursuits.

While TGD provides a strong foundation for understanding the social dimensions of self-regulation, in chapter 3 I will argue that these dynamics become significantly more complex within larger groups, such as religious communities. Once an individual's sense of identity is interwoven with belonging to a particular group, then transactive density is no longer a simple matter of coordinating and compromising different goals within a dyadic relationship. Fortunately, work on social identity theory and the psychology of social norms will provide a way to understand the impact these complex social dynamics will have on regulatory behavior. Nevertheless, by highlighting the importance of shared standards and each person's attachment to the relationship that holds those standards, Fitzsimons et al. (2015) point our attention in the right direction as I begin to construct a more social explanation for the relationship between religious engagement and self-regulation.

One possible critique of my aim to develop an alternative theoretical model for the relationship between religious engagement and self-regulation is that it will inescapably be too vague to be vulnerable to correction. Philosophers of science have a long history of tracing the ways that unexamined assumptions shape theoretical commitments, which in turn influence interpretations of data. While the influence of assumptions on modeling and interpretation is unavoidable, it can be adjusted by making the theory's entailments testable. Therefore, as I develop the alternative theoretical model through chapters 2-4, I will highlight some of the model's key predictions. In chapter 5, I will present results from a cross-sectional study empirically testing some of these predictions. The result will be two levels of argument within this dissertation– one that argues at the theoretical level for inadequacy of current explanations and the plausibility alternative social explanation and a second empirical test. Given the complexity of this mode of inquiry, chapter 6 will conclude by reflecting on the relationship between these two levels of argument in light of what we know about formalized inquiries of this kind from the philosophy of science.

What is at stake within this inquiry? Our understanding of the relationship between religious engagement and self-regulation also guides how religion is framed in relation to other domains, such as cooperation. This

dynamic between religion and cooperation is especially important to attend to, because it is a crucial component of emerging theories about cultural evolution (e.g., Gray & Watts, 2017). If self-regulation is primarily a process of inhibition, then the relationship between religious systems and cooperation is tacitly framed in terms of such restraint (Ainsworth & Baumeister, 2013). On the other hand, if self-regulation is deeply social and largely automatic, then religion's impact on cooperation must be framed in radically different terms. How we theoretically construe the relationship between religious engagement and self-regulation, has significant effects on how we understand the role of religion and large-scale, complex sociality within the context of evolution (Norenzayan et al., 2016).

Similarly, self-regulation also plays an important explanatory role in research on the relationship between religion and mental health. In the first review of the religion and self-regulation relationship, one of McCullough and Willoughby's (2009) key propositions is that "religion affects health, well-being, and social behavior through self-regulation and self-control" (p. 71). How we understand this mediating role will vary significantly depending on whether we conceptual self-regulation as a deeply social process or as primarily an individual's capacity to exercise restraint.

Within the context of this project, I will not be able to fully unpack these entailments for cooperation and mental health. But they are important to keep in mind. How we understand the relationship between religion and self-regulation is not an isolated and esoteric debate. It has implications for religious studies scholars interested in the social construction of reality and for public health advocates who are trying to understand the social determinants of health. I will not pretend to satisfy all, or even a portion, of the needs of these other stakeholders. But I will attempt to present an example of interdisciplinary work that can serve as an initial step towards better biocultural understandings of the complex exchanges between the social and the personal.

Chapter 2– The social construction of self-regulation

2.1. Introduction

In the first chapter I covered the basic model of self-regulation and how theorists currently conceptualize its relationship with religious systems. In summary, self-regulation occurs through a motivated feedback process of standards, self-monitoring, and the adjustment of behaviors to reduce any discrepancy between the two (Carver & Scheier, 2016). Part of my argument within that initial chapter was that often self-regulation is narrowly construed as primarily a process of self-interested restraint. While these characteristics may accurately apply to the subset of self-regulation designated as self-control (Baumeister, Vohs, & Tice, 2007), there is not strong evidence that they extend to the broader set of regulatory behaviors (Carter & McCullough, 2013; 2014). This narrow construal of self-regulation as synonymous with self-control limits explanations for the relationship between religious engagement and self-regulation.

Interpreting the relevance of religious engagement for self-interested restraint risks miscasting the deeply social features of religious systems as if they were means to individual ends. In order to gain an appreciation of the social dimensions germane to this relationship, religious studies is a key stakeholder

that needs to be brought into the conversation. For over a century, scholars of this discipline and their forebears have analyzed the complex dynamics between individual religious engagement, social processes, and broader religious traditions. While these scholars bring a helpful depth to our current inquiry, they are not solely attuned to the social dimensions of this dynamic. As I will argue throughout this chapter, self-regulation has played an important, though largely subterranean, role within this discipline, though, most of this influence occurs as an auxiliary, but necessary, facet of the more prominent focus given to social regulation. A key part of my argument, however, is that the line between social regulation and self-regulation is quite porous.

We will begin our engagement with religious studies by reviewing Émile Durkheim's work on religion, morality, and social constraint. Durkheim remains a foundational theorist for work within religious studies and provides a persistently relevant analysis of the way religious and moral systems are interwoven with the formation and cohesion of social groups. Expanding from Durkheim, we will briefly review the functionalists that expanded on his insights before engaging the post-modern theorists who offer strong critiques of Durkheim's program. By engaging Durkheim alongside his critics we gain a clear image of his most robust theoretical commitments, which will help shape our

understanding of the social processes relevant for the relationship between religious engagement and self-regulation.

There are a number of arguments that I will advance throughout this review. First, these theorists help us appreciate the way that the standards necessary for self-regulation are socially given. Even the most deeply personal and internal goals are shaped by one's social context to some degree. Pushing this point further, these standards will not always be propositional. Customs and norms that are internalized as goals for regulation are rarely explicit– instead they often emerge intuitively as people conform to the social habits surrounding them. These initial arguments focus on the ways social context shapes self-regulation, but another crucial insight from these social theorists is that the inverse dynamic is just as important. Acts of self-regulation are also acts of social regulation, the constraint of individual behaviors by tacit and explicit social guidelines.

Beyond their directly instrumental purposes, our behaviors unavoidably endorse and sustain (or oppose) particular social realities. This point helps illustrate how acts of self-regulation indexical signal an individual's affiliative social identity, which adds a new dimension to our understanding of self-monitoring and motivation. Nuancing these arguments, post-modern theorists

are quick to point out that within any group there are multiple, overlapping, and often contested, identities being enacted. Therefore, it is not a given which identity and associated norms an individual will be regulating or rebelling in relation to. Nor can we take for granted that this relationship with a group is uncomplicated. This critique encourages us to consider both the place of one's affiliated group within the larger social context (i.e., marginalized or prominent) and the quality of the relationship one experiences with this group (e.g., securely vs. insecurely attached). Collectively these perspectives from religious studies point to the deeply social character of self-regulation.

While these perspective help to correct the overly narrow construal of self-regulation, for our present inquiry there are two problems with relying too heavily on these social theorists. First, the social processes they articulate do not uniquely apply to religious systems. While Durkheim emphasized the intrinsic interdependence between religious, moral, and social orders, later theorists generalized his work to describe the way social and moral processes are constituted and maintained in ways that do not necessitate any religious dimension. Throughout the review I will therefore reflect on whether or not religious engagement brings a unique dimension to these broader processes. The second shortcoming of these social theories is that they all necessarily

presuppose a social psychology. Reflecting on the tacit psychological theories guiding their interpretation will take us into the next chapter, where psychological research reenters the conversation.

2.2 The social construction of reality

Before plunging into Durkheim's work, it is worth noting the core theoretical framework common across these various theorists: the social construction of reality. The phrase traces back to the seminal work of sociologists like Schutz (1932/1967), Luckmann (Schutz & Luckmann, 1973), and Berger (Berger & Luckmann, 1967), but the philosophical commitments of this idea draw from older schools of thought, such as Husserl's (1901/2001) phenomenology (see also Merleau-Ponty, 1945/2012) and the American pragmatic tradition. The fundamental idea of social constructivism is expressed by Berger (1967): "Every human society is an enterprise of world-building… Society is a dialectic phenomenon in that it is a human product, and nothing but a human product, that yet continually acts back upon its producer" (p. 3). This dialectic can be modeled as a process of externalization, objectification, and internalization (Berger & Luckmann, 1967). Externalization refers to the way that society is a human product– it is built from the collective actions of each individual member.

Objectification describes the way in which the social order is taken for granted by its members– through collective habits it transcends any individual's actions and comes to have an objective status. Internalization describes the way that this social reality reflexively becomes a part of each individual's psyche, tacitly influencing their ideas, emotions, and actions. We can analyze each of these processes distinctly, but within this theoretical framework it is important to remember that they occur in mutually interdependent and reinforcing ways.

While this description is exceedingly abstract, it is meant to capture the social dynamics present in the most common situations and behaviors. Drawing from Collins (2004) and Goffman (1959) for example, consider what is involved in the most basic greeting between two friends: "*Hi Ann! How are you?" "Hey Felicia, good to see you! I'm good, how about you?" "Great to hear! Yea, I'm good too*." Within this interaction the two friends are externalizing a tacit set of etiquette, customs, and norms that guide how people of a certain degree of familiarity in a particular setting initiate an interaction. The same exchange can also be seen as objectifying those customs by following and reinforcing their practice. Simultaneously, the enactment of these norms is itself an instance of internalization, more deeply seeding the individual habit. The social theorists we will encounter below debate about the character of each aspect of this dialectic.

For example, is objectification best described as a symbolic moral order (e.g., Douglas, 1970) or a set of habitual social practices (Bourdieu, 1972/1977)? Regardless of this disagreement, all agree on the basic dialectic and the point that there is a massive amount of information conveyed within such a simple and short exchange. Consider, for example, how the exchange would vary if Felicia was Ann's boss, or if one was arriving late to a meeting, or if this was happening at a party, or after years of no contact. Since the argument I am building is occurring through the written words in this chapter, our focus naturally moves to the verbal utterances of this exchange, but there is also a deeper, and arguably more influential, level of information exchanged through tone, postures, embraces, glances, and an amazing array of facial expressions. This stream of information and the varying sets of norms and conditions that guide its enactment and interpretation is of primary concern for most of the social theorists below. For the sake of our inquiry, I argue that this stream of information and the social forces that shape it, strongly influence the seemingly individual and internal processes of self-regulation. To make that argument clear, we will start with Durkheim.

2.3 Durkheim

Before Schutz, Berger, and Luckmann explicitly articulated the social construction of reality, Durkheim was keenly attuned to the dialectic between the individual and the social. Within religious studies in particular he is noted for articulating a complex dynamic in which religious systems, morality, and social cohesion are deeply interwoven. From this perspective, religious systems undeniably contain written codes of conduct, such as the standards emphasized by Zell and Baumeister (2013), but this explicit moral code is predicated on the more pervasive and influential way that religious systems bind individuals together in a moral community infused with unwritten customs, norms, and obligations. To appreciate the nuance within his perspective, it is worth beginning with the way Durkheim conceives of religion.

2.3.1 Durkheim on religion

Durkheim argues that religion is deeply interwoven with society itself, as he states in his famous quote: "If religion generated everything that is essential in society, this is because the idea of society is the soul of religion" (Durkheim, 1912/2008, p. 314). To gain perspective on this claim that “society is the soul of religion,” it is worth backing up to Durkheim's theory of collective effervescence. In *The Elementary Forms of Religious Life* (*EFR*) Durkheim (1912/2008) argues that

experiences of group identity emerge out of shared ecstatic experiences during collective rituals. This experience of being part of a group provides the basis for the idea of the sacred: "it is in these effervescent social settings, and from this very effervescence, that the religious idea seems to be born" (Durkheim, 1912/2008, p. 164). Durkheim elaborates on how these extraordinary group experiences develop into the distinction between the sacred and profane, and how the religious force generated during collective action becomes fixed on material symbols, such as the totem. But for our purposes, the key insight is that the idea of sacred is generated through this social process.

This insight is part of Durkheim's broader argument within *EFR*: ideas, beliefs, and morality all trace back to social origins. For example, contrary to other theorists (Tylor, 1881) who argued that the idea of the soul emerges from our experience of dreaming, Durkheim argues that "the individual soul is therefore only a fragment of the group's collective soul; it is the anonymous force at the basis of the cult, but incarnate in the individual and wedded to his personality" (1912/2008, p. 194). In other words, the idea of the soul emerges from our split experience as individual and social beings (see also Durkheim, 1914/1975). Religious beliefs are not the only concepts that emerge from social processes. Among Durkheim's more radical claims is that our concepts of time,

space, causality, force, hierarchy, all originate from social dynamics. In short, "society has provided the canvas on which logical thought has operated" (Durkheim, 1912/2008, p. 115). In many ways this idea anticipates the externalization process that later social constructive theorists will articulate.

We do not have to follow Durkheim in such a complete social grounding of thought in order to appreciate his more basic point about the intrinsically social origins of religion. Importantly, within this social process of externalization, rituals and the larger social organization of the group play an essential role. For example, the emotional effervescence of these collective rituals is undeniably central within Durkheim's analysis– but the importance of this emotional quality comes primarily from the way it contrasts with the more normal, mundane, and often solitary activities of the Australian tribespeople he is discussing (1912/2008, pp. 157-160). In other words, it is not the behavior of the ritual per se that gives rise to the idea of the sacred, instead it is the way that activity is situated within the broader social context. This broadens Durkheim's analysis of externalization to not just examine the origins of specific ideas within particular social practices, but to more generally seek the structure of the social order itself.

2.3.2 Durkheim, social cohesion, and the moral order

This broader concern brings us to the social constructive process of objectification. Not only are religious ideas emergent from social processes, but these ideas are also essential for maintaining social cohesion. Throughout Durkheim's broader work, social cohesion was a primary concern. In *The Division of Labor in Society* (1893/1984) he works to envision the way social solidarity is maintained through the changing social conditions of industrialization. In his later research on suicide (1897/1997), Durkheim explores the tragic consequences when the processes necessary for social stability are disrupted. Throughout his work, religious communities are emblematic of social cohesion in large part because of their connection with morality. This is not because religious systems provide explicit codes for moral behavior, but because they bind individuals into moral communities (Durkheim, 1912/2008, p. 46).

At this point in our inquiry morality has cropped up a number of times. It will remain an integral part of our discussion, so it is worth pausing briefly to clarify what I mean by morality. This is no easy task– for as long as people have been writing they have been debating the nature and scope of moral behaviors and judgments (cf. Golob & Timmerman, 2017). We will have more to say about these debates, especially in the next chapter when we turn to research in moral

psychology, but for our present purposes at the social level of analysis we can lean on a vague understanding of morality as what people consider good or bad. Here it is important to not construe “consider” in overly rational terms because there is an ongoing debate about the degree to which morality is primarily rational, emotional, or simply a set of social habits (see Graham et al., 2011). There are other lively disagreements about the degree to which morality shifts across cultures (Curry, 2016) and whence it emerges (Tomasello, 2016). Given this contested terrain, we can add to our vague definition of morality as what people consider good or bad the expectation that you can recognize moral behaviors within a group by observing those actions that are sanctioned. By "sanctioned" I do not mean that these actions are explicitly punished or rewarded– approval can be as subtle as an uninterrupted flow of interaction and disapproval can be the smallest shift in posture or a flinch. Adding this expectation helps to sidestep the rational versus emotional debates about morality and instead focus our attention on the social origins and consequences of moral behaviors.

This definition of morality remains intentionally vague because rather than sharply delineate moral from non-moral behaviors, we want to remain attuned to how other theorists conceptualize morality. By holding the concept

lightly we can develop a better approximation of the various ways scholars picture morality as embedded within religious systems and society at large. With this in mind, for Durkheim (1893/1975) morality and social cohesion are intrinsically connected:

> Everything which is a source of solidarity is moral, everything which forces man to take account of other men is moral, everything which forces him to regulate his conduct through something other than the striving of his ego is moral. (p. 136)

To be part of a group, for Durkheim, is to be bound by the obligations of participation and belonging, which are the essential form of morality. These expectations extend beyond explicit rules about right and wrong into a more pervasive moral order that is woven within the unspoken customs and norms of the group. Importantly these obligations of social cohesion inherently serve regulatory functions, bringing individual action into alignment with the social order. We will return to this point about social regulation below.

When Douglas (1966) broadens Durkheim's conception of the moral order, she illustrates its pervasiveness by pointing to the events that people experience as transgressions of that order. By engaging basic notions of hygiene and dangerousness, Douglas (1966) argues how thoroughly our sense of good and

bad extend through social reality. This extension is pervasive enough to encompass even the ground under our feet: "we are left with the old definition of dirt as matter out of place . .. [This] implies two conditions: a set of ordered relations and a contravention of that order" (p. 44). In other words, for Douglas (1966) and Durkheim (1893/1975) before her, the moral order pervades social reality.

When Durkheim turns to religion, he sees the moral authority exerted by the group as dependent on the same social dynamics that generate the sense of the sacred: "religious force is nothing but the collective and anonymous force of the clan" (1912/2008, p. 166). A few pages later he elaborates: "[Religious forces] are moral powers since they are wholly constructed from the feelings the collective moral being arouses in those other moral beings, the individuals" (1912/2008, p. 168). The pervasive morality embedded within religious systems emerges from the collective force of participating in the group and helps to maintain the group itself.

This relationship between morality, social cohesion, and religious authority is crucial for understanding the social dimensions of self-regulation. We will engage other entailments below, but for now, this relationship points to a set of tacit, pervasive, and influential standards that actively demand

regulation. Durkheim is arguing that this set of social norms is infused with moral force because abiding by these norms is essential for social cohesion. Transgression poses a threat to the group itself. This moral dimension illuminates not only the social origin of these tacit standards, but also the social force that motivates individuals to abide by them.

Contrast this Durkheimian view of the origin and efficacy of regulatory standards with Zell and Baumeister's (2013) account of how religious systems influence standards:

> The first way religion can facilitate self-control is by providing clear standards about right and wrong. Religious traditions provide direct commands about what people ought to do and instructions on how people ought to live, such as the Ten Commandments in the Judeo-Christian tradition, the Eightfold Path of Buddhism, or the Five Pillars in Islam. Religious traditions also include moral exemplars for people to emulate, such as Muhammed, Sri Krishna, Jesus, the Buddha, or Mother Theresa. (pp. 502-503)[12]

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12. It is worth remembering that Zell and Baumeister (2013) use self-control as indicative of self-regulation more generally, so they would take this explanation to be relevant for all regulatory processes.

While the two accounts have clear differences, they are not incompatible. Zell and Baumeister (2013) do not rule out the influence of tacit moral standards embedded within religious traditions any more than Durkheim (1893/1984) denies the presence and importance of explicit laws for maintaining social cohesion. But the two accounts do provide sharply different emphases: in one, religious systems carry a set of explicit representations about moral behavior, which are transmitted to adherents and then abidance is motivated by a corresponding set of representations about rewards and punishments; in the other, the moral force of religious systems is tacitly carried by the individual's attachment to the group and motivated by the need to maintain the group. In part these different emphases emerge from the different disciplinary concerns of psychology and sociology, respectively. But, both are discussing the same phenomenon—the influence that religious engagement has on regulatory behavior—and as I will argue in the next chapter, Durkheim's theory is not antithetical to psychological description. Therefore it remains a fruitful exercise to draw out the differences between the two interpretations in order to help motivate my alternative explanation. In the next chapter I will engage psychological research to help weigh the plausibility of each.

2.3.3 Durkheim's dialectic

Returning to Durkheim, we just sketched out the ways that religious and moral forces emerge as a result of social processes and reflexively help to maintain those social processes. Part of the complexity within Durkheim's thought springs from the fact that there is no linear causal relationship between the collective, the religious, and the moral. Each of these social domains simultaneously maintains and is dependent on the others. To make matters more complicated, Durkheim is somewhat ambiguous about the relationship between these social forces and individual psychological processes. I quote his *Rules of Sociological Method* (Durkheim, 1895/1982) at length because it portrays the various sides of this interdependence:

> If social life were no more than an extension of the individual, we would not see it return to its origin and invade the individual consciousness so precipitately. The authority to which the individual bows when he [*sic*] acts, thinks or feels socially dominates him to such a degree because it is a product of forces which transcend him and for which he consequently cannot account. It is not from within himself that can come the external pressure which he undergoes; it is therefore not what is happening within himself which can explain it. It is true that we are not incapable of placing

> constraints upon ourselves; we can restrain our tendencies, our habits, even our instincts, and halt their development by an act of inhibition. But inhibitive movements must not be confused with those which make up social constraint. The process of inhibitive movements is centrifugal; but the latter are centripetal. The former are worked out in the individual consciousness and then tend to manifest themselves externally; the latter are at first external to the individual, whom they tend afterwards to shape from the outside in their own image. Inhibition is, if one likes, the means by which social constraint produces its psychical effects, but is not itself that constraint." (pp. 127-128)

At first glance, this quote is not ambiguous at all– Durkheim is drawing a sharp distinction and giving a clear priority to the social over and above the psychological. If we take Durkheim seriously, then any analysis of self-regulation and inhibitory control should be distinct from analyses of social constraints. Part of his motivation for drawing this sharp theoretical line springs from his goal to establish sociology as a discipline distinct from psychology. As he says later: "the determining cause of a social fact must be sought among antecedent social facts and not among the states of the individual consciousness" (Durkheim, 1895/1982,

p. 134). Methodologically this is a critical move for maintaining the clarity of sociological inquiry.

Nevertheless, within the rest of his work Durkheim continually emphasizes the continuity between the individual and the collective. For example, earlier in the same book he argues that socialization is a process of constraining individual impulses, but "if this constraint in time ceases to be felt it is because it gradually gives rise to habits, to inner tendencies which render it superfluous" (1895/1982, p. 54). Social forces shape psychological habits. Even in the passage above the line is blurred– psychological inhibition is the means by which social constraint is influential. Within the dialectic he draws, internal restraint and external constraint are necessarily interwoven— the moral order may come from the outside, but it is necessarily held within each individual's mind, and only by their abidance is it maintained and perpetuated to be given, externally, to the next generation. Given this dialectic, any effort to sharply separate the two is more likely to distort each than clarify either.[13]

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13. The necessity of holding social context and individual psychology in the same analytical frame is one of the primary arguments of this book. Drawing from the pragmatists, Dewey (1922/2002) and Mead (1934/2015), along with the tradition in psychology exemplified by Vygotsky (1930/1980), I maintain that the psychological and the social are too interwoven for either to be studied without the other in view.

In other words, from Durkheim's perspective, social regulation and self-regulation are deeply interdependent. The standards necessary for self-regulation are often internalized from the socially grounded moral order. The social sanctioning and approval of behaviors also becomes internalized as monitors of self-regulation. But it is not only through internalization that self-regulation is deeply social. The dialectic works in both directions. Therefore, we also expect that when a person is regulating in relation to seemingly personal goals, they are simultaneously fulfilling the social goal of maintaining a particular moral order. In the words of the social constructivists, self-regulation that involves a social goal is also an act of objectification and externalization; the unavoidable consequence of individual action is the reification of some collective order. In short, any act of self-regulation is also an act of social regulation. Remaining attuned to this continuity between the individual and society helps us see the way social customs, norms, and values are both established by and mold the processes of self-regulation.

Turning our attention to the social entailments of self-regulatory behavior also casts self-monitoring and motivation in a new light. If Durkheim and the social theorists are correct about the indexical function of regulatory behavior, then we should expect that self-monitoring processes will shift dramatically

depending on the social context. There is already solid evidence suggesting that people change their behaviors to be more prosocial/conforming if they believe they are being watched (Bateson, Nettle, & Roberts, 2006; Haley & Fessler, 2005). As I argued in the previous chapter, this new interpretative framework suggests that it not only matters *if* you are being watched, but *who* is doing the watching. As we will see below, society is not monolithic, it is a mosaic of overlapping and opposing groups; therefore it matters a great deal whether an in-group affiliate, a member of an aspired to group, an out-group member, or an anonymous other is watching. In other words, self-monitoring processes are going to be sensitive to discrepancies between the individual's current state and their goal state along with the relational demands of the social context.

Similarly, if self-regulatory acts signal social affiliation, then this changes the motivational landscape in which they occur. Beyond the direct instrumental payoffs of self-regulating, such as foregoing a small reward to reap large benefits later, these acts may also serve to solidify social bonds or forge new alliances. As humans are deeply social animals, we should expect that such social payoffs will often outweigh directly instrumental costs. The literature on parochial altruism largely supports this broad prediction as it demonstrates the widespread

willingness to incur personal costs in order to benefit an ally[14] (Bernhard, Fischbacher, & Fehr, 2006; Yamagishi & Mifune, 2016). In chapter 4, when we turn directly to psychological research on motivational differences between self-interested and socially-centered actions, we will engage this evidence more fully. For now, the main point is to highlight how attention to the social context of self-regulation changes our conception of the salient pathways between religious systems and self-regulation.

2.3.4 The relevance of religion

At this point in the review we have largely shifted away from talking about religious systems. Instead we are discussing social processes in a way that does not distinguish between a religious community, a bowling league, a nation state, a tribal army, a business, or any other group. This shift in focus raises the question of whether these social dynamics are relevant to our primary concern: explaining the relationship between religious engagement and self-regulation. If these processes occur within any social group, then what is unique about religious systems that should lead us to expect them to influence self-regulation

[14] In this sense, these socially motivated actions are still self-interested, but this is from an ultimate perspective. At the proximate level, the altruistic action is done for the other as an end unto itself. In chapter 4 we will discuss this distinction and its implications for motivation in more depth.

over and above any other social organization? The different theoretical approaches frame their answers in different ways.

This framing depends on another key difference between Zell and Baumeister's (2013) account and that of Durkheim– the relative importance given to beliefs versus behaviors. Within Zell and Baumeister's (2013) account of how religious systems influence the motivation necessary to exercise self-regulation, they suggest:

> Religion provides an array of compelling reasons for moral conduct. The belief that God wants you to behave in a certain way is the ultimate reason to do so (Baumeister, 1991; Emmons, 1999). Particularly motivating may be religious beliefs about salvation or enlightenment (Baumeister, 1991)." (pp. 507-508)

They do go on to discuss how guilt can also operate as a powerful motivator for moral behavior, but this engagement with emotional processes circles back to guilt in relation to transgressing the clear moral standards mentioned above. They are not arguing against the importance of religious emotions or practices, but within Zell and Baumeister's (2013) interpretative framework, beliefs are central. In other words, the defining characteristic of a religious system, that which distinguishes it from other social groups and the factor we should

anticipate as most relevant for its influence on self-regulation, is the content of a religion's particular beliefs.

In contrast, for Durkheim these beliefs depend on particular collective actions amidst the broader social organization. Within this theoretical framework, behaviors provide the crucial object of focus for navigating the complex dialectic between the individual and the social. But this focus on behavior and social organization is also part of what extends this framework beyond religious systems. This extension is not necessarily a problem, but it does raise the question of what, if anything, is distinct about religious behaviors compared to those of any other social group.

In his work on religion, we saw how Durkheim highlights ecstatic, effervescent, rituals as the progenitor of collective identity, religious force, and moral authority (1912/2008, p. 164). Later in *EFR*, he moves beyond these prototypical rituals to consider religious ceremonies and rites more broadly. He is still clear that these rites serve social, religious, and moral functions: "when a rite functions only as entertainment, it is no longer a rite. The moral forces that religious symbols express are real forces to be reckoned with" (1912/2008, p. 284) and later, "rites are, above all, the means by which the social group periodically reaffirms itself" (1912/2008, p. 287). In other words, even when broadened to

include more general forms of ritual, Durkheim still suggests that these ritual behaviors function to instill a sense of group identity with its concomitant moral obligations and religious force.

Later theorists continued this generalizing trajectory. Mauss (1925/2016), extended Durkheim's basic principles of group formation and coherence to analyze how ritual reciprocity can extend relationships beyond group boundaries. Other generations, like that of Douglas (1966; 1970), developed sophisticated analyses about the way conventional taboos reveal the moral order established through social practices, and how this order thoroughly structures our perceptions of reality and each other (see also Bernstein, 1971). Goffman's (1959) analysis of mundane routinized exchanges as interaction rituals that form the substance of the social order, is perhaps the best example of how far this trajectory has traveled from Durkheim's initial focus on rituals of collective effervescence. No matter how basic the ritual, Durkheim's essential point remains–social behaviors bind us together into groups and underwrite (while also depending on) a sense of moral order that forcefully guides our behavior as individuals in relation to that group. One uniting characteristic throughout these accounts is the emphasis on conventional behaviors– acts that follow what is normally done.

The generalizing trajectory of these social theorists was further amplified by the functionalists, who shared the analytical focus on conventional behaviors and the processes that maintained social cohesion. At this point in the movement, however, Durkheim is no longer the primary forebear of the method. Some theorists, such as Parsons (1937/1949), whose influential social action theory provided a separate stream of thought oriented towards the symbolic construction of value systems, drew more explicitly from Weber (1920/2011) and Malinowski (1922/2014). While there were sharp debates among the functionalists, especially regarding the character of objectified social reality, they were largely united in agreement about the foundational importance of social behaviors for maintaining a stable social structure.

In the 1960s and 70s, Geertz (1973) and Turner (1967; 1969) represent the tail end of this legacy.[15] Geertz (1973), whose definition of religion remains a

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15. This narrative about functionalism is woefully incomplete in many ways. I did not mention Radcliffe-Brown (1952) who drew from one of the first functionally inclined theorists, Xunzi (Kline & Tiwald, 2014; Watson, 1996), to give a concise definition of the basic functionalist insight: "Orderly social life amongst human beings depends upon the presence in the minds of the members of a society of certain sentiments, which control the behavior of the individual in his relation to others… Rites can therefore be shown to have a specific social function when, and to the extent that, they have for their effect to regulate, maintain and transmit from one generation to another sentiments on which the constitution of the society depends" (1952, p. 157).Again we see the emphasis on how the regulatory functions of ritual action is necessary for preserving the social order of society.

I also neglect Malinowski's (1922/2014) work on the way rituals serve direct psychological functions for individuals, such as assuaging anxiety prior to dangerous endeavors.

prominent feature of any introduction to religious studies course, brought a shift in this movement towards analyzing the symbolic meaning of actions and cultural elements, especially as that meaning is conceived of within the cultural system itself. Turner (1967; 1969) was more actively concerned with the way rituals served as active mechanisms of change and transformation within societies. While Geertz and Turner had their differences (see Ortner, 1984), I mention them together because they both represent the way functionalism shifted towards a view that symbolic action within the organization of a group served as a means of maintaining that group by embodying and manipulating a structure of meanings that guides an individual's experience of herself. As such, standing at the tail end of the early functionalist project[16], these theorists and those before them carried Durkheim's initial insights into a deeper and more

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This limited survey should also not give the impression that functionalism was the only school of thought interested in religion. As Stausberg's (2007; 2008; 2009) definitive surveys show– there were a plurality of methods and modes at work under the broad umbrella of religious studies throughout the 20th century.

16. Functionalism is still alive today, but in a strange turn of events it is mostly carried forward by behavioral ecologists. In the 1960s, cultural ecologists such as Sahlins and Service (1960) or Steward (1953), would have resisted the label of functionalist. Their primary concern was with the way particular social or cultural elements served as adaptive responses to environmental pressures, not social cohesion. For example, Rappaport's (1967) work on Maring rituals showed how the *kaiko* ritual in particular helped preserve the local ecosystem. But, as cultural ecologists incorporated the emerging insights of cultural evolution, problems of cooperation became one of the field's primary concerns. How a society overcomes problems of cooperation is both an evolutionary and a functionalist question, and as we will see later– morality is a key part of the answer (Curry, 2016; Haidt, 2012).

general analysis of the interpenetration of individual action and social meaning. Even with this later turn to behavior's symbolic dimensions, conventional action remained the essential analytical focus. It provided the way to understand how groups hang together and become collectively committed to a set of norms and moral expectations, which provide a sense of order to social reality and reflexively guide what people in these groups do.

By this point we have extended once more beyond religious systems. But this narrative highlights the aspects of a religious system that we should expect to distinguish its salience for self-regulation. Rather than emphasizing the unique beliefs of religious systems, this theoretical perspective shifts our attention to the conventionalized practices and rituals of religious groups, along with their networks of relationships. This approach asks whether there is something distinct about ritualized action within the social network of a religious group that would impact the self-regulation of individuals embedded within this network. Put differently– do ritual practices instill a particular orientation towards broader moral orders that more mundane practices do not foster? In chapter 3 and 4 I will explore these questions more systematically. For now, the point is that this social perspective, informed by Durkheim and the broader school of functionalists, leads us to expect that the most influential route from religious systems to self-

regulation will be through particular conventionalized behaviors, relationships, and the way they orient the individual towards a social sense of morality.

While I have positioned Zell and Baumeister's (2013) perspective in sharp contrast to that of Durkheim and the functionalists, it is worth noting that the two are not necessarily at odds. Even if one places a primary emphasis on religious beliefs[17] and explicit codes of behavior, there is still space for practices and community to be highly influential in the way people relate to those particular beliefs. Likewise, placing our explanatory emphasis on behaviors and social structure should not obscure the potential importance that beliefs might have for underwriting or amplifying the moral order established through practices[18]. Ultimately, the relative influence of each pathway will be an empirical question and will likely shift from one context to the next. The important point for our inquiry here is to not close off these possibilities.

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[17] Drawing from W.C. Smith's classic work (1964; 1979), it is worth noting that it is a relative recent, and largely Protestant, phenomenon for religious "belief" to mean cognitive assent to propositions about the world. More often "belief" meant one's allegiance to something.

[18] Within this inquiry I am largely bracketing the potential role of religious narratives within these dynamics. This is not because they are unlikely relevant– if anything, religious narratives may provide an especially salient form of behavioral modeling and a potent way for individuals to understand their own religiosity. Studying the role of religious narratives within the construction of religious identities and the commitment to religious standards would be very fruitful for understanding the impact that religious engagement has on self-regulation. But, within the current project, adding this dimension to the discussion would overburden a project that is already conceptually stretched.

2.3.5 Social constraint and individual restraint

Before moving to the theoretical school within religious studies that swamped functionalism, it is worth staying with Durkheim's theory of the moral order for one more point. In the first chapter I discussed the differences between effortful inhibition and automatic modes of self-regulation. This raises the question of whether or not social norms and the attendant moral order demand deliberate self-control or whether they guide behavior automatically.

Throughout his work, Durkheim argues that social force is a form of constraint that shapes the actions, thoughts, and feelings of individuals in such a way that they experience it as coming from something external and transcendent. In the passage above from *Sociological Rules* (1895/1982, p. 127-128), Durkheim discusses social forces as things we bow to, suggesting that they dominate us. We should be careful, though, to temper our interpretation of this concept. In cultures that value individual liberty as highly as the US, for example, it can be easy to confuse social constraint with oppression and assume that individuals should be liberated from this moral order. To import this view onto Durkheim's framework, however, risks distorting his perspective and conflating him with thinkers that he was explicitly arguing against:

> For some, such as Hobbes and Rousseau, there is a break in continuity between the individual and society. Man is therefore obdurate to the common life and can only resign himself to it if forced to do so. Social ends are not simply the meeting point for individual ends; they are more likely to run counter to them. (Durkheim, 1895/1982, p. 142)

For Durkheim, this interplay of social regulation and self-regulation is not necessarily a dynamic where society utterly restrains individuals from pursuing their own ends. Social reality in a very real way exceeds and thereby constrains the individual. Nevertheless, Durkheim (1912/2008) argues that this process also ambiguously has the potential to elevate the individual:

> social action is not limited to demanding our sacrifices, privations, and efforts. For collective force is not wholly external to us; it does not move us entirely from the outside. Indeed, since society can exist only in individual minds and through them, it must penetrate and become organized inside us; it becomes an integral part of our being, and in so doing it elevates and enlarges that being. (p. 157)

Or as he states in the *Division of Labor and Society* (1893/1984): "a group is not only a moral authority which dominates the life of its members; it is also a source of life sui generis. From it comes a warmth which animates its members, making

them intensely human" (p. 26). Given Durkheim's commitment to maintaining the continuity between the individual and society, social forces are an ambiguous but necessary feature for the growth of the individual. By participating in society, by engaging with its norms and regulating our behavior in relation to those around us, we become part of something that transcends our individual self.

Within these passages Durkheim begins with the recognition that social forces do constrain the individual. In this regard it is likely that individuals must exercise an effortful form of inhibition—i.e., self-control—in order to not transgress the established norms. Through an unavoidable process of socialization, these social norms are also internalized as individual standards, which implies a habituation that would largely be automatic. And if Durkheim's more radical point, about the importance of social norms in the humanization and elevation of individuals, is believed, then the motivation to abide by these standards does not require an effortful restraint of our “obdurate” personal selves, instead it may be an end unto itself, motivated by the satisfaction of belonging to something bigger than one’s self.

I have spent so much time on the relevance of Durkheim's work for the relationship between social constraint and self-regulation because his theoretical framework is one of the primary foundations for the alternative explanation

being mounted in this dissertation. Throughout his writing, Durkheim was attuned to the dialectic between the individual and society and provided a nuanced glimpse of the way moral orders emerge in the interconnection between the two. This dialectic turns our attention from the explicit moral codes carried by religious systems to the way a more tacit, permeating, and persuasive set of customs, norms, and values are interwoven with a sense of moral and religious significance. His basic question—how do societies achieve and maintain cohesion?—remains a core question of functionalist approaches and keeps inquiry tuned to the social consequences of seemingly individualistic self-regulation. His answer —that society persists through a collective identity woven with a moral fabric of social habits that each individual encounters as external and transcendent to themselves but gradually internalizes and perpetuates—remains an overarching explanation for understanding how self-regulation is shaped by social context while simultaneously reifying that same context. In short, I am arguing that the social-individual dialectic is the context in which the relationship between religion and self-regulation is forged.

2.4. The critical turn

If we were to stop the review here, then it might seem that we already have a fully developed theory to help us frame self-regulation within the social context of religious systems. But these theorists wrote 60 years ago. What happened since then? Why am I not discussing more contemporary scholars within religious studies that have carried this inquiry further and helped fill in the details that are lacking in the functionalists' general level accounts of how social structures are established, maintained, and transformed?

The short answer is post-modernism. This label has come to mean a wide variety of things in academic and cultural discourse. Rather than sharply define this intellectual trend, it helps to think about the social climate in which it emerged. During the 1960s and 70s, the beginnings of the Cold War were stirring, making the colonial ties of European, US, Soviet, and Japanese powers increasingly apparent and disturbing. Amidst these political events, the civil rights movement, the women's movement, and various countercultural trends were making dramatic strides challenging entrenched social norms and bringing the voices of the marginalized into the forefront of public consciousness. With these pressing social concerns rising to the forefront of intellectual thought, it is no surprise that a large portion of the functionalist agenda was jettisoned. Social

cohesion and stability were largely recast as problematic processes underwriting hegemony rather than necessities of the social system.

As Ortner (1984) notes in her definitive and thorough reflection on anthropology, this shift in thought was largely characterized by a return to Marx (see also Ortner, 2016). Where functionalists analyzed culture in terms of rituals, symbols, expectations of action, and/or moral orders, Marxist theorists analyzed the process of social formation in terms of ideology and the organization of production (Friedman, 1974). This may seem like a minor shift– even if our focus is economic we are still talking about social actions and relationships after all. But it is important to recognize that Marxist theorists often thought the social structure that functionalists studied was concealing the asymmetrical organization of production that was the more fundamental basis for the social system (e.g., Bloch, 1971; 1974). Alongside this shift in methodological focus was an evaluative change in which the normative and moral dimensions of culture came to be construed as ideological expressions of a hegemony bent on domination rather than stabilizing forces.

Within his review of religious studies through the 20th century, Stausberg (2008) argues that this trajectory towards post-modern thought was much more pervasive within anthropology than religious studies as a whole:

> Since the late 1960s, anthropology has been accused of being static, colonial, androcentric, and elitist. Similar criticism has later also targeted the study of religion(s), but post-colonial, post-modernist and post-structuralist critiques have affected anthropology much more than they have the study of religion. The so-called 'crisis of representation' experienced by anthropology since the 1980s was not perceived as a similar challenge in the study of religion(s), at least in Western Europe. (p. 312)

This is true when one regards religious studies from a comprehensive perspective that includes textual analysis, history, and other approaches that are not social sciences. But, if you focus particularly on the social scientific approaches, the aspect of religious studies most relevant for our current inquiry, then the influence of post-modern thought is profound, even if a bit delayed relative to cultural anthropology. This influence is especially apparent in the North American academy, where the overarching institution (the American Academy of Religion) is structured into geographic and traditional particulars, but also with distinct foci on issues of race, class, gender, sexuality, ableism and similar issues of critical concern for post-modernists. Each of these categories

offers a framework for analyzing and critiquing the various ways oppressive forces are enacted within groups.

As we will see below, this turn towards analyzing social dynamics in terms of ideology and oppression can provide an important corrective to the Durkheimian perspective that generally fosters a supportive view of the social order. There are times when maintaining the social order results in radically limited possibilities for people at the margins of that order. Religious engagement may foster self-regulation through a moralized social order, but what are the ethical consequences of this social constraint? Beyond the ethical concerns raised by post-modern theorists, there are also important epistemological issues with my question as currently framed– why suppose that there are general pathways between religious engagement and self-regulation? The post-modern concern for particularity would suggest that this relationship will be different for each context and individual. There are also important methodological critiques that follow as a consequence of these ethical and epistemological concerns. A full review of this movement and its influence on religious studies is well beyond the scope of this chapter or dissertation, but these three critiques from post-modernists can help sharpen and nuance the framework developed above.

2.4.1 The ethical critique

An ethical concern over power differentials embodied and reified in the structures of social relations provides one of the core motivations for this school of thought (e.g., Asad, 1973, Taussig, 1980). Especially within colonial contexts, this concern provided a powerful lens for understanding dynamics that had previously been obscured by a mode of inquiry focused on stability while ignoring those marginalized by the stable center. This method of analysis was also deeply self-reflective as scholars came to see the history of their own disciplines as a reiteration of colonial patterns (Said, 1979). In other words, inquiry itself became portrayed as a potential mode of coercion. For example, Asad (1993) argued that attempts to define religion are part of a historical, discursive process aimed at legitimating western European modes of rational religion, aka Protestantism, and delegitimizing others as superstitious and irrational. In other words, Asad (1993) argued that the work of defining and studying religion in other contexts is a power-laden enterprise that mimics colonial endeavors (see also Masuzawa, 2005). This worry about the misapplication of categories and the potential for social structures to act oppressively made the functionalists' interest in social cohesion seem misplaced.

Since the act of inquiry was an act of legitimation, studying the very structures that could be oppressive became equated with endorsing the oppression.

The ethical concern of these critical theorists can inform our current inquiry in two important ways. First, it helps draw our attention to a salient dynamic within the social processes described by Durkheim and the functionalists– unequal power distributions. From the functionalists we saw the ways that social forces, such as religion, shape individual regulatory dynamics. Added to that, we now see that these social forces are not neutral– they will constrain and elevate different members of a group in different ways. These social forces are also not homogenous. While an individual may be marginalized within one group, she may be central within another. Just as it becomes important to consider her relative position within each group, it is also important to consider the broader relationship between the groups at the social level.

This adds a complex but needed nuance to our previous understanding of how social forces influence self-regulation. Part of what this perspective highlights is that the definition of regulatory "success" will depend on the social context. In one group, success may look like inhibiting the desire to drink alcohol, while in another, overriding the desire to stop drinking may be the regulatory feat. The ethical critique also helps to highlight tensions that are

forced on people and the various tactics for navigating those tensions. For example, consider a Christian woman who is attracted to other women. If her religious community is conservative, then they may wield the moral force of the tradition and her identity as a Christian to tacitly threaten her with exclusion and shame her for these desires in such a way that she learns to interpret those desires as individual failings of self-control. But, imagine that she is also working at a place where homosexuality is welcomed and celebrated. The multiplicity of social groups and our mosaic affiliations can lead to tension, but this complexity can also lessen the threat of exclusion by affording alternatives. From this perspective, the moral force of social groups that Durkheim highlights may be real, but it is a highly ambiguous power.

Second, this ethical concern should inspire self-reflection on the consequences of our current inquiry for broader ideological positions. There are clear ethical consequences to properly understanding the relationship between religious systems and self-regulation. Portraying self-regulation as an individual's capacity to exercise restraint has consequences for how we interpret a person's failure to meet goals. Just recall the APA study (2011) in which the most cited reason for not making lifestyle changes was a lack of willpower. By blaming the individual’s lack of this personal resource as the cause of health,

economic, or environmental problems, we risk obscuring the social dimensions of these problems and abdicate the collective's responsibility to create social changes. No doubt, assessing the ethical dimensions of individualistic narratives about willpower is complicated terrain (see Laidlaw, 2014 for an initial foray). My point is not to resolve these narratives, but to highlight the ethical consequences of continuing to portray self-regulation as individualistic strength. Just as we should keep these consequences in mind about our portrayal of self-regulation, this ethical reflection should also make us wary of misrepresenting religious systems in ways that perpetuate the pejorative biases Asad (1993) highlighted above. While we will address some of these ethical dimensions in the final chapter, throughout the dissertation this critique should encourage extra care around interpretations along with a vulnerable fallibilism that remains open to correction.

2.4.2 The epistemological critique

The connection between ethics and interpretation is further apparent in the way post-modern theorists construe epistemological concerns. One of the primary critiques post-modernists give of functionalist accounts of culture was the overemphasis on central and stable norms within the group. By focusing on the center, such theorists risked obscuring marginalized groups and the

possibility of social change. As above, this critique has a sharp ethical edge, but the epistemological problem is more significant in its consequences for what constitutes viable subject matter and methods.

The core concern is best expressed through Lyotard's (1979/1993) definition for post-modernism as "incredulity towards metanarratives" (p. xxiii). Insofar as they provide broad and unifying explanations for the dynamics of society, the general theories of Durkheim and Weber are metanarratives par excellence. Lyotard (1979/1993) and others' suspicion of these general narratives builds from Wittgenstein's (1953/2009) philosophical argument about language games as constitutive of forms of life. The concept, "forms of life" is under-determined within Wittgenstein's philosophy (it is only mentioned 5 times in *The Investigations* 1953/2009), especially in light of the importance it has come to hold. But roughly it refers to the general patterns and habits of interaction within any particular context or relationship, which Wittgenstein (1953/2009) argues provide the fundamental source of meaning for language.

Within the context of post-modern theory, the concept of forms of life undergirds the larger suspicion that Lyotard (1979/1993) refers to: meanings across different cultural groups vary significantly enough to make them potentially incommensurable. In other words, attempting to generalize about a

relationship between religious engagement and self-regulation that is descriptive of various diverse cultural systems is epistemologically suspect. This critique cuts two ways for the functionalist agenda. First it suggests that the social dynamics at work in one situation are not necessarily applicable to other contexts. This side of the critique has radically challenged attempts at cross-cultural comparisons as a confusion of categories (see Smith, 1982). The second side of the critique is that even within what may appear a united society, there still is no meta-narrative. Instead, there are various groups with contested interests whose forms of life might be distorted if studied solely in reference to the center or norm.

I will linger on this point because it is crucial to our argument. What is being contested is the cohesiveness and homogeneity of any social group. Since I am arguing that tacit social norms of a group constitute a large and influential set of standards relevant for self-regulation, this critique raises the question: how do we know which group's norms are influential for a person? We cannot presuppose that there is only one set of norms within a group and that everyone relates to these norms in the same way.

From the perspective of this critique, functionalists rely on an overly homogenous view of society. After all, cohesion is the very characteristic studied

by functionalism. For example, Shils (1961) characterizes the cohesion of society in relation to a central authority, as he begins his essay: "Society has a centre… Membership in the society…is constituted by relationship to this central zone" (p. 117). He goes on to characterize this center in terms of symbolic value and authoritative governance over expected actions. Despite his emphasis on the center, Shils (1961) is not implying that society is mono-vocal or homogenous. Instead he argues that society is made of many sub-systems, such as kinship, the economy, status, etc., each of which will have its own authoritative center. He is also not suggesting that everyone within a group will endorse the same centers: "there are variants of the central value system running from hyper-affirmation of some of the components of the major, central value system to an extreme denial of some of these major elements" (Shils, 1961, p. 118). While he recognizes diverse value systems and multiple ways of interacting with these value systems, critics would argue that Shils nevertheless organizes his sociological analysis primarily in reference to an orderly center. Society becomes a rose window– there are many different parts, but they all radiate around and orient towards one center.

Compare Shils' account with Eisenstadt's (2000) description of society: "the idea of multiple modernities presumes that the best way to understand the

contemporary world —indeed to explain the history of modernity— is to see it as a story of continual constitution and reconstitution of a multiplicity of cultural programs" (p. 2). Eisenstadt is not even a thorough-going post-modern theorist, but within his analysis we see a shift from focusing on the center of society to analyzing the various competing interests within a group. There is no center. Instead of a rose window, society is a mosaic. Any meta-narrative will give preferential treatment to some specific cultural program thereby eliding or more actively obscuring others.

This epistemological legitimation of marginalized modes of knowledge has been deeply helpful and illuminating. Not only does it recognize the presence of diverse groups within a society, but it also works to elevate the distinct perspectives within this plurality. Within religious studies this method has spurred the recognition of how previously demeaned traditions or practices, such as speaking in tongues, may actually be novel modes of resistance (e.g., Fields, 1982). This epistemological move also set the stage for scholars beyond the European or US context to raise their own voices within post-colonial and anti-colonial studies (e.g. King, 1999; Kwok & Donaldson, 2001; Viswanathan, 2001), which continue to recognize the ethical within the epistemological.

When this recognition of plurality is paired with Lyotard's (1979/1993) point about the incommensurability of different social worlds, however, it can risk splintering a heterogeneous group. For example, a set of scholars within this lineage, such as Said (1979), question whether anyone can truly understand the "other." The same suspicion undergirds the broader wariness about cross-cultural comparisons mentioned above.[19] The differences between forms of life become unbridgeable gulfs. If this extreme version of incommensurability is true, then it undermines the present inquiry: we cannot understand the social world and norms that shape someone else's regulatory processes. From this perspective, my very question presumes a generality of both religion and psychological processes that is suspect. While I believe this epistemological claim within post-modernism carries relativism too far, a point I will elaborate on below, it nevertheless helpfully flags an important point– we may not know the norms or standards towards which someone else is regulating.

Returning to the psychological level of analysis offers a fruitful common ground between the functionalist's cohesive society and the post-modernist's fractured groups. From the functionalist perspective we saw how standards are

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[19] This wariness of comparison is related to the way that Kuhn (1962) discusses incommensurability among different scientific paradigms, as discussed in the last chapter. See Lindbeck (1984) for a similar phenomenon in theology.

internalized from the social context and how regulating in relation to those standards is an act of affiliation that indexes the shared social reality. We can conceptualize the psychological dimensions of this dialectic in terms of an individual's social identity– i.e., their sense of who they are in terms of their relationships or affiliations with particular groups (Brewer, 1991; Roccas & Brewer, 2002; Tajfel & Turner, 1979; 1986).[20] For example, you likely have various social identities, such as parent, scholar, coder, gardener, friend, citizen, artist, etc. The post-modern critique about plurality at a social level makes us attuned to the way that these various social identities may not be easily parsed into Shils' (1961) center and periphery. Instead we should expect an internalized version of Eisenstadt's (2000) multiplicity of cultural programs. One person might have a clear, overarching social identity around which the rest are organized. Another might have various prominent self-concepts that coexist distinctly but harmoniously. And yet another person might experience tension between various identities.

The functionalist insight that we internalize standards and demonstrate our affiliation can be nuanced and complicated so that we are attuned to the

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20. Tajfel and Turner (1979; 1986) developed this concept to help understand the psychology of intergroup conflict. In the next chapter I will describe social identity theory and its relevance for self-regulation in more depth.

degree of integration within this internalized framework and the degree of conflict. For now we will leave this as a hypothetical suggestion to help clarify the salience of the epistemological critique for our present inquiry, but in the next chapter I will draw from psychological work on social identities (e.g., Brewer, 1991; Browman, Destin, & Molden, 2018; Roccas & Brewer, 2002; Tajfel & Turner 1979; 1986) to flesh out this theory more fully. Here the point is that envisioning a plurality of social identities which are integrated and conflicting to different degrees offers a way to accommodate the post-modern insight about the absence of a center while preserving the relevance and accessibility of social processes for self-regulation.

2.4.3 The methodological critique

The third uniting concern for post-modern scholars is practice and performance.[21] As we described above, Durkheim and the functionalists were also clearly interested in action and behavior; so this critique may seem ill-founded. But from the post-modern perspective, functionalists overemphasize the way that actions establish abstract rules or norms, which then guide behavior. In contrast, these theorists articulate the way social practices are

21. Methodologically this also emerges as a new playfulness with language, seeking not just to describe, but through the very act of description to deconstruct the implicit categories and assumptions of language.

influential in and of themselves. This shift is most apparent in the work of Bourdieu (1990): "I can say that all of my thinking started from this point: how can behaviour be regulated without being the product of obedience to rules?" (1990, p. 65). For Bourdieu, the idea of habitus reflexively answers this question. As Swartz (2012) notes, habitus is meant to conceptually transcend that space between individuals and society where both social construction and behavioral regulation occur. Instead, Bourdieu (1972/1977) views habitus as an embodied set of strategic practices molded by the social context but having no reality external to their enactment.

For example, in his ethnographic work among the Kabyle people in Algeria, Bourdieu argues that the social order is founded on each individual's sense of sentiment and honor (Bourdieu, 1979). Instead of portraying action as compliant to norms, he emphasizes the strategic nature of practice occurring in relation to felt dispositions that carry their own tempo and motivations. As Swartz summarizes Bourdieu's position on practice:

> Choices do not derive directly from the objective situations in which they occur or from transcending rules, norms, patterns, and constraints that govern social life; rather, they stem from practical dispositions that

> incorporate ambiguities and uncertainties that emerge from acting through time and space. (p. 100)

In other words, Bourdieu (1972/1977) is working to disengage our concepts of behavior and action from the idea that they occur primarily in relation to an abstracted cognitive realm of representation. This stands in contrast to the functionalists' discussions of moral order, values, and even norms.

While the conceptual contrast intended by this emphasis on practice is clear, we can remain largely agnostic about the actual existence of these norms and moral orders. If people are regulating their own behaviors in relation to the patterns of action within their social context, then it does not necessarily matter whether they are doing so in relation to an abstracted moral order or through ambiguous practical dispositions. As others have argued (e.g., Giddens, 1979), an orientation towards practice does not require opposition to the functionalist emphasis on structures. The two can complement each other. The helpful aspect of this shift in focus is that it reinforces the ways we may not need an abstract, disembodied, moral order to guide behavior. Instead, the moral order with its embedded standards may be deeply embodied within emotions and habitual dispositions such as those that Bourdieu (1979) describes. The standards that guide self-regulation may not be abstract cognitive representations as much as

they are habits of practice and sentiment embodied in the situations in which we act.

2.4.4 Responding to the critiques

The three concerns of post-modern social theorists are well-founded. Inquiry does have ethical ramifications and a critical self-reflective stance is a reliable method for keeping some of those entailments in check. Epistemologically, generalizations are very difficult to justify and meta-narratives often do distort the particular narratives from which they are built. Society is more like a bricolage than a neatly radiating rose window. Given the complexity of social groups, practice is an informative object of study, especially when it is not restricted to the exceptional, ecstatic, or orthodox practices of a religious tradition. And examining the everyday interactions of individuals allows inquiry to work from the ground up towards understanding what social process are relevant in shaping behavior. These critiques of functionalism in particular and enlightenment (i.e., modern) inquiry in general, do more to help correct and advance the functionalist project than undermine it. They decenter the object of focus, allowing us to envision the multiple overlapping social arenas in which any individual is engaged, and provide a method of examining the

everyday actions that allow us to parse the complexity of these social spheres in a way that is relevant for individuals.

For some scholars of religion, the three concerns outlined above motivate a turn towards "lived religion" (McGuire, 2008). Rooted in Bourdieu and phenomenology (e.g. Merleau-Ponty, 1945/2012) scholars of lived religion follow the models of Orsi (1985) and Hall (1997) by focusing on the everyday, seemingly inconsequential, relationships and practices of people within religious communities. As McGuire (2008) describes:

> Lived religion is *constituted by the practices* people use to remember, share, enact, adapt, create, and combine the stories out of which they live. And it comes into being through the often-mundane practices people use to transform these meaningful interpretations into everyday action. Human bodies matter, because those practices —even interior ones, such as contemplation— involve people's bodies, as well as their minds and spirits" (p. 98, emphasis in the original).

The emphasis on practice is interwoven with the ethical and epistemological skepticism of meta-narratives mentioned above. Given the complexity of society as overlapping fields of different strategies and expectations, this emphasis on the mundane action of individuals helps to focus inquiry on the social structures

that actually matter for people rather than bringing a priori judgments about the relevant aspects of religious systems or society at large. Ethically this focused inquiry helps to ensure that voices which might otherwise be marginalized are heard. And by focusing on the actual and mundane practices of individuals, these scholars avoid reference to an abstract system or structure. As a response to the post-modern critiques, the study of lived religion is a welcome adjustment within religious studies.

Given the virtue of this response, one may ask why not simply adopt this approach of lived religion? Surely it could help shed light on the ways a religious group establishes a set of norms, or pattern of practices that become salient guides for self-regulation. The problem is that such a study would not tell us about the more general connection between religious systems and self-regulation. While I appreciate the sensitivities of lived religion, I nevertheless find its resistance to generalization to be a troubling limitation.

This reaction is not simply because of my own fondness towards systematizing, though that probably plays a role. Instead, there is a deceptiveness to post-modern scholars' resistance to meta-narratives because their theoretical position itself is necessarily committed to particular meta-narratives. For example, it is deeply committed to a Marxist interpretation of

social dynamics as fundamentally rooted in power differentials. That is a meta-narrative. More pertinent for the inquiry at hand, these theorists are also tacitly committed to a general psychological narrative that disavows any innate predispositions or structures in the mind.

Consider the way that psychological processes figure into McGuire's (2008) account of lived religion. At first glance, they play an essential role. Emotions, memory, and perception all comprise a large part of her explanation for how religious practices influence an individual's sense of the world, their form of life. For example, she argues:

> Bourdieu suggests that all our senses —not just our physical senses but also our social senses— are involved in remembering practices and embodying practices. Thus our bodies have embedded in them certain learned senses… For instance, our sense of disgust is learned; it is clearly not the same in all cultures, and babies have not yet acquired it (McGuire, 2008, pp. 99-100).

The significance of this quote is the fact that it does not include any references for McGuire's statements about memory, sensation, or disgust. Take disgust in particular, the lack of references is surprising because by 2008 psychologists like Rozin had already spent nearly three decades studying disgust, its cross-cultural

manifestations and similarities, its ontogeny, and the way it influences cultural beliefs, morals, and values (e.g., Rozin & Fallon, 1987). In other words, at the time of McGuire's (2008) writing, there was a respectable pile of psychological evidence contradicting her claim. This is not an isolated instance either. For all of McGuire's discussion about sensation, emotions, and memory, her only reference to psychological or biological research is a Bill Moyer's TV special (McGuire, 2008, p. 234).

My intention is not to lampoon McGuire (2008) or this school of thought. Her achievement within *Lived Religion* and its importance for addressing some of the problems within religious studies are laudable. Instead, this example illustrates how social theorists are unavoidably assuming a general psychological meta-narrative. In particular they are committed to the position that our minds are formed primarily, if not entirely, by the cultures within which we are born. This is the perspective that our minds are blank slates, and since they are formed by social inputs, culture remains the relevant level of analysis for understanding them. The problem with this position is that it is wrong– all evidence suggests a middle ground between biological inheritance, psychological structure, and social processes (see Pinker, 2002). In other words, while outwardly eschewing meta-narratives, post-modern social theorists are nevertheless committed to

generalized positions without making those positions explicit and thereby vulnerable to correction.

Part of the resistance to engaging psychology may be explained sociologically from scholars being educated when the blank slate was a viable psychological position. But, this socialization explanation obscures deeper differences. To engage with psychology and biology would also mean becoming involved in inquiry that is explicitly committed to meta-narratives. Evolution is as general of a narrative as possible within the life sciences, and while the humanities are pushing towards particularity, psychology is urging researchers to engage in cross-cultural studies in order to generalize more effectively (Henrich, Heine, & Norenzayan, 2010). Given the blend of ethical and epistemological concerns outlined above, along with some egregious events in psychology's history, one can understand the social theorists' wariness to engage.

But part of my contention within this dissertation is that these interdisciplinary bridges must be built if we are to understand the relationship between religious engagement and self-regulation. Religious studies scholars are clear stakeholders in this project and as the preceding discussion shows, they have much to contribute. The commitment within religious studies to analyze

religion as a social behavior (e.g., McCutcheon, 2012) provides a helpful corrective to perspectives within the psychology of religion that overemphasize the importance of particular beliefs and construe self-regulation as self-interested restraint. But as the preceding critiques show, this interdisciplinary exchange is also potentially fraught with tension as it engages competing metanarratives and concerns. While the critiques of post-modernism are a helpful balance to functionalist perspectives, they are one voice of many. Recognizing that plurality within religious studies and keeping my own position vulnerable to correction, we can continue to engage across disciplinary boundaries, as we must: the space between the individual and society is necessarily an interdisciplinary space.

2.5 Conclusion

As an interdisciplinary space, it is necessary for the bridge to be built from both sides. Throughout this section I have drawn from religious studies to argue for the importance of social construction within our understanding of self-regulation and religious systems. While the post-modern critiques challenge the functionalists' emphasis on cohesion and stability, it nevertheless remains quite close to Durkheim's basic insights about the individual-social dialectic. As Ortner (1984) summarizes in her review:

> The modern versions of practice theory, on the other hand, appear unique in accepting all three sides of the Berger and Luckmann triangle: that society is a system, that the system is powerfully constraining, and yet that the system can be made and unmade through human action and interaction. (p. 159)

For our inquiry, each of the three sides within this dialectic inform the way social context shapes the dynamic between religious systems and self-regulation.

Durkheim and the functionalists helped us recognize that the standards relevant for self-regulation are internalized from our social context. Not only are these standards socially given, a large portion of them are embedded within a tacit moral order underwriting the customs, norms, and values of a group. Abiding by these norms is crucial for the group's stability, so there is often a strong social pressure motivating the individual to conform. Given the social individual dialectic, regulating in relation to these social norms is also an act of externalization and objectification. Beyond the instrumental purposes of self-regulation, our actions signal particular social affiliations and realities. This social dimension of self-regulatory behavior helps us recognize how the dynamics of self-monitoring and motivation will be highly attuned to situational cues, such as who is present. Post-modern theorists help nuance these insights by pointing to

the plurality within any group. This diversity is also not necessarily harmonious–instead it is often fraught with tension over power differentials. Therefore we should expect individuals to have internalized a diversity of social identities which may be integrated or conflicted to varying degrees. Since each of these social identities will have an associated set of motivations and standards, we should also anticipate that the degree of conflict within their social context and the degree of integration amidst their social identities will both have direct ramifications on self-regulation processes.

In order to flesh that theory out more fully, in the next chapter I will turn to research that helps us understand the contours of these social dynamics at the psychological level. The post-modern theorists are not the only social theorists that tacitly assume psychological theories. Durkheim and the functionalists also depend on assumptions about how the process of internalization occurs and how people behave in relation to these objectified moral orders. In the next chapter we will engage research that helps pull these assumptions into the light and constrain them so that we can gain a clearer picture of the ways that the relationship between religious engagement and self-regulation is formed in the perpetual dialectic between the self and the social.

Chapter 3– The milieu of moralization

3.1 Introduction

In the previous chapter I surveyed the social constructivists' perspective on the relationship between religion and self-regulation. A series of insights emerged from that review that situate this relationship within a more complex social context. We first noted that the standards for self-regulation are internalized from and shaped by a person's network of social relationships. This is not to say that people do not regulate towards highly personal standards as well, but from the social constructivists' perspective, even these standards are absorbed during socialization and shaped by context. Beyond these personal standards, the groups to which a person belongs have customs, norms, taboos, and values, which constitute a set of social standards that exert a significant influence on regulatory behaviors. In short, I argued that action taken in accord with social norms are an overlooked but crucial set of self-regulatory behaviors.

By emphasizing the social origins of standards, theorists from religious studies also helped us recognize that these norms are effective in part because of their affiliative functions. By regulating towards or away from a particular set of social standards, people enact their connection to groups that endorse those

standards. This social function of self-regulation implies that the motivation to regulate is often an end unto itself rather than a self-interested means to another reward. This affiliative signaling also highlights the ways that self-regulation and self-monitoring will be highly sensitive to situational cues, such as who is watching and where the behavior is occurring.

Critically, the previous review also emphasized how complex one's social context can be. Rather than a homogenous society with a central set of norms, societies are mosaics of overlapping and often contesting groups. Since self-regulation is sensitive to group affiliations, I argued that this social complexity implies a degree of internal complexity as each person will have multiple affiliative identities along with their associated standards and motivations. The relative degree of integration and conflict within this internalized network of self-concepts will have consequences for self-regulation.

While these perspectives from religious studies help contextualize self-regulation within a social perspective, they also tend to take psychology for granted. The theorists I engaged are social theorists, so it is appropriate that they work at the level of social behaviors and analyze the consequences of these behaviors for the group. However, there is necessarily a psychological dimension to these social dynamics and understanding the contours of that dimension is

crucial if we are going to say anything about how participation in a group, such as a religious community, shapes an individual's self-regulatory capacity. The task of this chapter is to surface the psychological contours of these social processes.

This chapter begins with a review of social identity theory, which highlights the way people establish a sense of self through affiliation with particular groups. As such, social identity theory highlights one of the crucial motivations for abiding by social standards and will help us articulate why self-regulatory behaviors will vary across different social contexts. Research in this field also suggests that people have multiple social identities, the salience and persistence of which depend on the person's relationship to the associated group. Social identity theory, therefore, suggests that the influence religious engagement bears on self-regulation will largely depend on the nature of the individual's attachment to their religious group, which influences her/his internalization of the group's norms.

Paired with social identity theory, research on the psychology of social norms will highlight some of the basic processes that shape an individual's awareness of and adherence to the social standards of any given group. In particular, the capacity for intersubjectivity and the tendency towards imitation

help to explain why social contexts bear such a powerful influence on self-regulation, while also specifying when this influence is more likely to occur and for whom. A subset of research on social norms focuses on conventional behaviors and the way these behaviors are crucial aspects of social identity. I will review initial evidence that participating in these types of behaviors has downstream effects for other regulatory actions, such as delaying gratification (Rybanska et al., 2018). I suggest that one reason engaging in conventional behaviors may influence self-regulation more broadly is because it leads people to more broadly moralize their standards.

In order to explain why moralization would foster better self-regulation, this chapter will conclude with a section on the psychological differences between descriptive and injunctive norms. In this review, we will see how moralization processes can lead the descriptive regularities within a group to become perceived as injunctive oughts about the way things should be. In short, when standards are imbued with the weight of moralization, they will exert a strong and pervasive influence on self-regulatory behaviors. Furthermore, I will review evidence suggesting that religious engagement tends to foster these moralization processes.

The picture that emerges from this review of social identity theory and the psychology of social norms contrasts with the current explanations for how religious engagement impacts self-regulation. Instead of particular beliefs fostering self-interested restraint, this review motivates my alternative hypothesis: religious engagement influences self-regulation by imbuing conventional behaviors with a morally injunctive weight that makes these norms persistent and persuasive guides for behavior. While each of these research fields is large and complex, they are necessary to hold together in order to fully recognize the psycho-social processes that shape and constrain the relationship between religious systems and self-regulatory behaviors.

3.2 Social identity

"*Internalization occurs only as identification occurs*"

(Berger & Luckmann, 1966, p. 131)

In the last chapter I briefly introduced the concept of social identity to help articulate the ways different affiliations influence an individual's self-regulatory behaviors. There are various important aspects to the connection between social identity and self-regulation. First, an individual's social identity will carry a set of standards; for example someone's identity as a student will contain a different set

of standards from her/his identity as a carpenter or parent or artist. These collections of standards will overlap or compete to different degrees, which leads to the second point. Individuals will have varying degrees of conflict or integration amidst their different social identities and this will depend largely on the way they relate to these different groups. Third, intergroup dynamics, such as perceived threat or status within the wider milieu, determine the extent to which one's social identity is relevant for their regulatory behaviors.

While I argue for the relevance of social identity within self-regulation, this is not the primary reason that the concept was developed. During the 1960s and 70s, social psychology was working to overcome a crisis of confidence rooted in how psychology approached group processes (Elms, 1975). The overall approach during this time was to regard social dynamics as amplifications of individual psychological processes (Hogg & Williams, 2000). For example, prejudice was construed as the manifestation of internal conflicts with overly authoritative parents (Adorno, Fenkel-Brunswik, Levinson, & Stanford, 1950) or other unresolved frustrations (Dollard et al., 1939). Tajfel and colleagues developed social identity theory as a way to foreground intergroup dynamics as psychologically relevant in and of themselves (e.g., Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971; Tajfel & Turner, 1979). Their experiments showed

how intergroup processes, such as prejudice, emerged as a result of situational contexts and behavioral tendencies when people experience themselves as connected with one group and not another.

For example, in these experiments, participants were split into groups on the basis of arbitrary criteria, such as the flip of a coin (Billig & Tajfel, 1973) or whether they over- or under-estimated the number of dots on a sheet of paper (Tajfel et al., 1971). While these group assignments were ostensibly meaningless, participants nevertheless favored their in-group members at the expense of the out-group. These results held, even when their in-group favoritism did not provide any individual benefit to themselves. To explain these responses, Tajfel and Turner (1979) argued that people's self-esteem is interwoven with their affiliation to particular groups so that supporting the group becomes a way to affirm one's self. While current theorists have moved away from the emphasis on self-esteem (see Hornsey, 2008; Turner & Onorato, 1999), they retain the basic insight that group affiliations constitute a significant aspect of a person's self-concept. If something as arbitrary as the flip of a coin is sufficient to evoke these processes, then how much more salient would someone’s religious identity be?

3.2.1 Self-concepts

Stepping back from the social dimension for a moment, it is important to pin down what I mean by self-concept. There are various interpretative frameworks for understanding self-concepts; they can be described as structures, systems, schemas, processes, or sets of representations. Drawing from Markus' (1977) work, I understand a person's self-concept to be a dynamic knowledge structure with information about past experiences, hoped for goals, values, heuristics, action plans, relationships, and characteristic traits. This vague portrayal of self-concept helps maintain the complexity embedded in our tacit and explicit understandings of who we are.

While intrinsically elaborate, an individual's self-concept plays a crucial role in her regulatory behaviors. As Markus and Wurf (1987) note:

> The unifying premise of the last decade's research on the self is that the self-concept does not just reflect on-going behavior but instead mediates and regulates this behavior. In this sense the self-concept has been viewed as dynamic– as active, forceful, and capable of change. It interprets and organizes self-relevant actions and experiences; it has motivational consequences, providing the incentives, standards, plans, rules, and

> scripts for behavior; and it adjusts in response to challenges from the social environment. (pp. 299-300)

In other words, a person's self-concepts are tightly interwoven with the standards, motivation, self-monitoring, and behavioral changes involved in self-regulation and self-control (e.g., Molden, Lee, & Higgins, 2013).

I also follow those researchers who argue that rather than a singular self-concept we have multiple knowledge structures that comprise our sense of who we are (McConnell, Shoda, & Skulborstad, 2012; Oyserman, Elmore, Smith, Leary, & Tangney, 2012). Evidence in support of this position comes from a growing body of research showing that different social identities have distinct goals, motivations, and action tendencies (Browman, Destin, & Molden, 2018; Brown & McConnell, 2009; Hugenberg & Bodenhausen, 2004; McConnell, Rydell, & Brown, 2009). While this multiplicity could be interpreted as distinct contexts eliciting different responses from a single executive self (Baumeister & Vohs, 2014), evidence suggests that these standards, motivations, and habits exist in associative clusters (Klein & Gangi, 2010; Kurzban & Aktipis, 2007) indicative of distinct self-concepts rather than unique responses from a single self. While it is still unclear where debates about multiplicity versus singularity of the self will ultimately land, these studies render plausible the idea that functionally

independent self-concepts are relevant to regulatory processes. As James (1890/1950) argued over a century ago, the plurality within our sense of self is intimately connected with our various social roles.

3.2.2 Social identities

Social identity refers to the way someone's self-concepts are formed in relation to the groups to which they belong. The relevance of social relationships for identity led researchers to initially posit a spectrum along which some self-concepts were primarily individualistic and others were entirely social (Tajfel & Turner, 1979). This original contrast between personal and social identities led Turner and colleagues (1987) to propose a functional antagonism in which the salient identity suppresses the other in a hydraulic-like effect. More recent theorists, however, have contested this principle of antagonism (e.g., Baray, Postmes, & Jetten, 2009; Brewer, 1991; Pickett, Silver, & Brewer, 2002; Roccas & Brewer, 2002). Instead, the prevalent position echoes earlier theorists (e.g., Markus & Wurf, 1987; Stryker, 1980) who argued that the influence of social interactions on all self-concepts blurs the idealized spectrum beyond usefulness[22].

22. This is largely the position I argued for in the previous chapter. For many of these psychologists, the foundation for this position comes from the symbolic interactionists who draw

The significant difference, therefore, is not personal versus social identity, but which self-concepts are salient in any given situation. This leads to a vision of the self as a dynamic process in which different social identities arise and fade with every milieu through which the person passes (Turner, 1968). Some of these identities are more stable and become persistent across contexts, while others will be quite situational[23] (Higgins et al., 1982). The various factors that determine when and how a person's social identity is salient are complicated, and addressing them all is beyond the scope of the current review (Bruner, 1957; Oakes, 1987). Amidst this complexity, however, a key determinant is how readily accessible the self-concept is within the individual's memory (Hogg & Reid, 2006). Regular contextual cues are one way that some identities can become more accessible than others, but another way that social identities become persistently salient is if they are given heightened importance (Oakes, 1987). Through habituation, some social identities can become chronically accessible across contexts that may contain no overt cues. As we will see below, the heightened importance granted to some identities is directly related to the self-assurance

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from the pragmatist Mead (1934/2015) to argue that we rehearse and calibrate our various self-concepts in tune to the reactions of people around us.

23. This point alludes to the situationism/personality debate we discussed in chapter 1, which landed on middle ground allowing for both the importance of stable traits and the influence of situational cues.

gained through affiliation with that group. For now, the important point is that individuals have multiple social identities, some of those identities will be more constant across contexts, and when these identities are salient they are deeply influential on regulatory processes.

Since religious engagement is deeply social, this theoretical perspective suggests that religious individuals will have religiously tinged social identities. Depending on variables like those mentioned above—e.g., frequency, importance—religious identities will vary in the degree to which they are persistent and persuasive for individuals. And given the relevance of self-concepts for self-regulation, these religious identities provide a helpful way to reframe the relationship between religious systems and self-regulation. For example, one would predict that higher frequency of ritual participation would increase the accessibility and salience of a person's religious identity, thereby leading the religious groups' norms to be more influential across a broader range of contexts. While this is a plausible hypothesis, a lingering question remains: since a person's religious self-concept is just one among many social identities, why should we expect it to exert a special influence?

The most direct answer to that question will come further below, when I take up moralization processes. Before we get there, however, we need to

contextualize these processes by considering the salient features of a situation that draw forth different social identities and the psycho-social processes that can make social identities particularly important.

3.2.3 Intergroup processes

An essential part of the dynamic that makes social identities persistent and salient is the cognitive process of categorization, which was Tajfel's primary research focus before his work on social identity (e.g., Tajfel & Wilkes, 1963). When we create categories, we tend to amplify the similarities between group members and exaggerate the differences between groups. This contrasting process occurs in abstract categorizations (e.g., vegetables versus fruits), but is especially apparent when the categories are social. This is the psychological root of the pervasive tendency to draw us-them divisions (Tajfel 1982; Tajfel & Turner, 1986; Turner et al., 1987). At the social level, these distinctions lead beyond simple contrasting and are amplified behaviorally into the favoritism and denigration effects in the experiments mentioned above.

Social identity theory argues that drawing and enacting these social comparisons is a way of affirming and validating one's own self-concept while also gaining a sense of stability and meaning (Hogg, 2016; Hogg & Grieve, 1999). In other words, in-group/out-group contrasts are not just a cognitive side effect

of the way we create categories, they are motivated processes that are deeply interwoven with our sense of who we are. With the goal of maintaining a stable and meaningful self-concept, we amplify the positive characteristics of our affiliated groups and exaggerate the negative aspects of those groups to which we do not belong. It is important to note that these processes are sensitive to individual differences– not everyone will experience involvement in a group in the same way. For example, Mikulincer and colleagues (2007) have developed a robust research program showing how individual differences in attachment styles influence various social processes (e.g., Rom & Mikulincer, 2003). Such variance will undoubtedly moderate the relationship between one's identity as a group member, their sense of self as a result, and their enactment of that group's standards, but the overall relationship between social identity as processes of self-affirmation is robust enough to be a salient factor within our understanding of these dynamics.

Evidence for this connection between social identity and self-affirmation comes from research in terror management theory (TMT). Building off the work of Becker (1973), TMT researchers argue that anxiety about death, the ultimate form of self-negation, leads people to attach themselves to something that will survive beyond them, such as a social group (Greenberg, Pyszczynski, &

Solomon, 1986). In support of this claim, various studies have found that death salience leads people to become more committed to their groups, express more prejudice, and become more stringent towards norm violations (see Burke, Martens, & Faucher, 2010). These studies suggest that when a person's sense of self is threatened, their social comparison processes become amplified in order to compensate. Personal existential threats are not the only thing that leads to this magnification of social identity; perceived threats at the group level also lead individuals to enhance these processes of social comparison (Hogg, 2016). In other words, the psycho-social dynamics between perceived threats and compensatory self-affirmation undergird many of the social identity processes described above.

These dynamics highlight how deeply social the process of identify formation can be. Not only do we create self-concepts on the basis of our various relationships, but the salience and influence of these social identities will fluctuate in response to the hierarchies, status, and power differentials present within any given social milieu (Tajfel & Turner, 1979). For example, the enactment of group norms can be a way to solidify social hierarchies that are perceived as being threatened, such as when men interrupt women at higher rates as power differentials begin to equalize (Jacobi & Schweers, 2017;

Zimmerman & West, 1975). The enactment of new norms can also challenge the status quo, as exemplified by the adoption of non-violent techniques within the civil rights movement (Tajfel, 1974). For the purposes of our inquiry social identity theory highlights the psycho-social processes that can powerfully motivate regulatory behavior in relation to social standards.

3.2.4 Religious identities

The psycho-social dynamics that influence the salience of social identities also shed light on variance in the relationship between religiosity and self-regulation. If the social milieu elicits an individual's religious identity, then she/he will be more likely to embody the prototype of that identity, which acts as a heuristic for the group's norms, values, and behavioral tendencies (Hogg & Reid, 2006). If the setting ignores or denigrates that identity, then she/he may react defensively through a stereotyped enactment of expected religious norms, or may acquiesce and shift into the norms of the opposing group. These differing responses will depend on the broader social context and the individual's own relationship with her/his religious community and tradition. At a social level the crucial questions concern power differentials: is the religious group an oppressed minority, a dominant majority, or an accepted plurality? At a psychological level, the important questions concern an individual's affiliation with her/his group: is

she/he securely attached to the group or is she/he ambivalent about that affiliation? These differences will determine the degree to which she/he has internalized her/his religious identity which will affect the accessibility of that identity, its impact on other self-concepts, and its persistence across situations.

While each of these dynamics will shape the way that religiosity influences self-regulation, they are not unique to religious identities. In-group favoritism, out-group denigration, and other processes of social contrasting occur even in the minimal groups of Tajfel et al.'s (1971) early experiments. Before reviewing moralization processes, which I argue are of primary importance to the influence of religious engagement on these dynamics, we have to ask whether social identity theory reveals a distinct facet of religious identity that would account for its influence on self-regulation?

One promising place to look is TMT. Many researchers within TMT have examined the impact of existential threats on religiosity, with most showing that reminders of such threats lead to a marked increase in religiosity (Vail et al., 2010). Reflecting on the blend of religious social support and beliefs in supernatural realms, Vail and colleagues (2010) suggest that "religious worldviews provide a uniquely powerful form of existential security" (p. 85). More generally, there is strong evidence that broad threats, such as natural

disasters (Sibley & Bulbulia, 2012) or social turmoil (Kay, Gaucher, McGregor, & Nash, 2010; Sosis & Handwerker, 2011) lead to increases in religiosity. These studies suggest that religious identity may be an especially meaningful way to preserve a sense of self in the face of threat. But a recent meta-analysis by Jong and colleagues (2018) found heterogenous and weak effects in this association between religious identity and existential threats. In other words, Vail et al.'s (2010) claim about religion's unique status as a form of worldview defense, though intuitive, does not appear to be on firm ground empirically.

Another place to look for the special salience of religiosity within these dynamics is Whitehouse and Lanman's (2014) work on ritual and identity fusion. Identity fusion is an extension of social identity theory developed by Swann and colleagues (2012) in order to highlight those situations in which an individual's personal identity is thoroughly enmeshed or fused with the group. Swann and Burhmeister (2015) describe identity fusion as "a visceral sense of 'oneness' with the group" in which "strongly fused persons retain their sense of personal agency and channel it into pro-group action… [they] regard other group members as ‘family’ and derive a sense of invulnerability from them" (p. 52). In other words, identity fusion describes an extreme form of social identification in which the

boundary between the individual and the group collapses, with significant consequences for group cohesion and cooperative behavior.[24]

Whitehouse and Lanman (2014) argue that religious rituals, particularly dysphoric rituals, tend to foster identity fusion. This theory helps to explain the prevalence of painful rituals which instill a persisting sense of kinship among participants (e.g., Whitehouse et al., 2017). Where religious systems do foster identity fusion through dysphoric rituals, we should certainly expect that these religious identities would exert a special influence on self-regulation over and above other social identities. The problem with this explanation is that most of the studies reporting the relationship between religion and self-regulation examine WEIRD populations, composed of people who do not typically undergo such rituals.[25] Nevertheless, this extreme form of social identification raises the possibility that other religious rituals, such as those involving synchrony (e.g., Fischer, Callander, Reddish, & Bulbulia, 2013; Wen, Herrmann, & Legare, 2016), and kinship symbols (Nielbo, 2015), may evoke a particularly strong

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24. Cooperative in this sense does not imply "morally good." Indeed, as these researchers show, identity fusion can lead people to extreme forms of violence towards out-groups.
25. Dysphoric is a euphemism for incredibly painful. As Whitehouse and Lanman (2014) share: "In Melanesian initiation cults, for example, boys undergoing initiation rites may be extensively burned, permanently scarred and mutilated, dehydrated, beaten, and have objects inserted in sensitive areas such as the nasal septum, the base of the spine, the tongue, and the penis" (p. 679). It is doubtful whether sitting through a long sermon would have comparable effects.

identification that can become more persistent and influential than other social identities. Though speculative, this unique status for religious identities is plausible and generates a series of testable hypotheses, such as: contextual religious cues will strengthen the effect that religiosity has on self-regulatory behaviors by making the individual's religious identity, with associated standards, more salient; frequency of participation in religious rituals will increase the persistence of an individual's religious identity across a variety of domains, predicting a more consistent adherence to religious norms in seemingly unrelated social milieus; or experiences of ideological threat will lead to a more strict regulation in relation to religious norms. In short, social identity theory provides a helpful, though not definitive, framework for explaining how religious engagement may impact self-regulation without relying on beliefs leading to self-interested restraint. In the discussion so far I have yet to clarify what I mean by social norms and why they are particularly relevant within these processes—that is the aim of the next section.

3.3 Social norms

Within social psychology there is a long tradition devoted to studying social norms and their influence on behavior. Much of this research derives from a set

of psychologists in the 1930s who found that when people make judgments about ambiguous stimuli, such as optical illusions, they tend to shift their personal opinions to match the group's norm (e.g., Jenness, 1932; Sherif, 1935). Since the 1930s, this research flourished and now illuminates the various ways norms take root and spread within a group and how these norms become effective at shaping the thoughts, emotions, and behaviors of people within that group (see Morris, Hong, Chiu, & Liu, 2015). I draw my understanding of norms from Kashima (2014; 2015) who defines a norm as "a psychological structure that is widespread in a group and predisposes a person to exhibit a regular pattern of ideation, emotion, and action" (2015, p. 1307). This definition remains close to the way I discussed norms as social habits of expectation and behavior in the last chapter, though it helpfully gestures towards the psychological processes supporting this tendency towards social habituation.

Amidst the complexity of research on social norms, I will focus on those aspects that are especially relevant for the relationship between religious systems and self-regulation and enjoy broad consensus, such as the research on intersubjectivity and imitation. These deep psychological tendencies appear to undergird the prevalent social tendency to develop conventional behaviors in even the most minimal groups. Because of their integral role within establishing

and maintaining norms, the processes of imitation and intersubjectivity are also important for constraining, and potentially amplifying, the capacity of religious systems to establish patterns of behavior oriented towards social standards.

Recalling the section on social identity, we should bear in mind that the tendency to create and maintain norms will also be sensitive to the psycho-social dynamics spelled out above. An individual's relationship with their group will change their tendency to either enact or react against that group's norms. Perceptions of threat, either social or existential, will also change an individual's engagement with these norms. Social identity and the enactment of social norms are deeply interdependent– for conceptual clarity I focus on each individually, but in action they cannot be so easily parsed. Considering the psycho-social dimensions of norms alongside the dynamics of social identity sets the stage for understanding the moralization processes that I will argue are crucial for the relationship between religion and self-regulation.

3.3.1 Ultimate explanations for norms

Before engaging the proximate mechanisms undergirding social norms, it is necessary to briefly attend to the ultimate context that shapes these norms. Remember that the distinction between these levels of analysis hinges on the type of explanations they give (Tinbergen, 1963). Ultimate explanations will

describe why social norms would have persisted amidst the processes of evolution. Proximate explanations appeal to the mechanisms, psychological or biological, that give rise to a particular feature, in this case norms (Bateson & Laland, 2013). Most of this section will focus on these proximate mechanisms, but it is important to have the ultimate context in mind since it helps highlight the intrinsic importance of norms within any group.

Gelfand and colleagues (2011) have developed a robust research program demonstrating the way social norms correspond to environmental pressures. Their strategy is to track variance in the normative "tightness" of different groups– the degree to which different cultures expect adherence to social norms and punish deviance. For example, what are the range of expected behaviors on a public bus? How about in a park or in a market? How severely will you be sanctioned if you deviate? Across 33 nations, and across the different US states, this research team found that levels of normative tightness increased in response to threats faced by these groups (Gelfand et al., 2011; Harrington & Gelfand, 2014). In other words, the social development of norms and peoples' attitude toward those norms appears to be adaptively responsive to ecological and social pressures, such as natural disaster vulnerability, numbers of life lost to communicable diseases, food deprivation, access to safe water, and population

density (Gelfand, 2018). This research stands in contrast to theories suggesting that social norms are arbitrary social constructions (Ladd, 2002).

These studies advance the research program developed by behavioral ecologists over the past 50 years. These are the anthropologists who eschewed the post-modern route and continued the legacy of Boas (1887), to a degree[26], and Steward (1953) more directly. The general strategy within this line of anthropology is to study the ways that cultural systems are responsive to local ecosystems. For example, turning to religious systems in particular, Sosis (2000; Sosis & Bressler, 2003) examined historical evidence showing that religious communes that enforced stricter norms were also those communes most likely to persist. Sociologists studying religion noted a similar dynamic underpinning the growth of conservative and strict churches within the US religious landscape (Iannaccone, 1994; Kelley, 1972). Again, the stronger the norms, the more

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26. While Boas rejected the application of evolution to the study of culture, his primary objection was against the progressivist anthropologists who misused evolution to suggest that European culture was the pinnacle of progress towards which all "savages" would eventually develop. Boas, rightly, dismissed these theories, so it might seem strange to place him as a predecessor to the cultural evolution camp. But the seed of Boas' thought that was later taken up by sociobiology and behavioral ecologists is that culture responds to the local environment: "Ethnological phenomena are the result of the physical and psychical character of men, and of its development under the influence of the surroundings ... 'Surroundings' are the physical conditions of the country, and the sociological phenomena, i.e., the relation of man to man" (Boas, 1887, p. 588). Boas goes on to say that this study of the surroundings is insufficient by itself, but that anthropologists must also consider the history of a group and the other groups with which it has come into contact. Boas's inspiring vision for anthropology was differentiated into a variety of disciplines. Those that took up the study of 'surroundings' were largely the cultural ecologists.

persistent the community. Other research only bolsters the relevance of this dynamic for religious systems. In a later study, Sosis and colleagues (2007) found that the extent to which a cultural group engaged in warfare predicted the costliness of male initiation rituals within that group. And using a phylogenetic approach, Watts and colleagues (2015) provide evidence that these associations are not just correlational– more strict beliefs about supernatural punishment for norm violations appear to have driven changes in political complexity among Austronesian cultural groups. Much of this research is interpreted within the theoretical framework of cultural evolution—strict social norms provide a form of costly signaling that prevents free-riders from taking advantage of group benefits without contributing (Sosis & Alcorta, 2003)—but they remain ultimate explanations because they are oriented towards the persistence of a biocultural feature, in this case normative tightness, amidst evolutionary change.

For our present purposes, these ultimate explanations for social norms keep us attuned to the evolutionary forces that shape the norms relevant for self-regulation. Just as the research from social identity theory showed how group norms are responsive to intergroup dynamics (Hornsey, 2008), this research from Gelfand and colleagues (2017), along with the behavioral ecologists, demonstrates how these social standards are also influenced by broader

ecological pressures. This ultimate perspective helps us recognize that the norms by which individuals regulate are not arbitrary constructions relative to each group. Instead, these standards, their pervasiveness, and their enforcement, have an evolutionary history tied to the functions they provide for a group.[27]

This evolutionary background influences the connection between these social standards and self-regulation because certain contexts will demand a stricter adherence to and enforcement of social norms. Gelfand's research theorizes that this tightness of social norms corresponds to stronger individual self-regulation (Gelfand et al., 2011; Gelfand et al., 2017). For example, if stricter norms reliably predict better self-regulation, then we should expect that those individuals within the tight religious groups that Iannaccone (1994) and Sosis (2000) studied, would have better regulatory capacities than their peers in less strict contexts. Given the way that norms and their strictness are responsive to ecological pressures, we should also expect that the different groups will establish norms that correspond to the level of threat or precariousness the group experiences. For example, given the systemic violence and marginalization faced

27. As I noted with cooperation above– it is crucial to recognize that a norm being "functional" does not imply that such a norm is morally good. Such false inferences are versions of the naturalistic fallacy that justifies how things ought to be on the basis of how they are (Hume, 1751/1998).

by African American communities within the US (e.g., Alexander, 2012; Muñoz et al., 2015), African American churches may demonstrate tighter social norms and their members may have stronger self-regulatory skills than individuals within white evangelical churches. These specific hypotheses illustrate how ultimate explanations for social norms reframe the relationship between religious systems and self-regulation in a more social context. However, Gelfand's theory about the relationship between normative tightness and self-regulation requires stronger empirical support; for now, it remains a tentative hypothesis capable of guiding future research.

While helpful, these explanations for the ultimate origins of social norms do not shed light on the proximate mechanisms that lead to the development of norms and the dominant theoretical framework that I am arguing against focuses exclusively on the proximate level of explanation. In order to frame the importance of social norms within the relationship between religious engagement and self-regulation, we must now turn to this proximate level.

Many psychological processes are involved in the establishment, persistence, and influence of social norms. Among the various proximate explanations for norms, intersubjectivity continually emerges as a foundational psychological process necessary for the awareness of and engagement with social

norms. The widespread and persistent tendency of individuals to imitate the behaviors of those around them is a related, but conceptually distinct process that is also essential for the development of conventional behaviors within a group. Not only do these psychological tendencies help explain why social norms emerge, they also point our attention to important individual differences in who perceives norms and experiences them as forceful. For example, as discussed below, those whose capacity for intersubjective processing is impaired are significantly less likely to orient in relation to conventional norms, which has important consequences for their regulatory skills as well. Given their important role in the persuasive efficacy of social norms, these psychological processes are critical to consider in the psycho-social dimensions of the relationship between religious engagement and self-regulation.

3.3.2 Proximate perspectives– Intersubjectivity

Intersubjectivity refers to the complex capacity of people to recognize and engage others' unique mental states. Some psychologists call this ability "mentalizing" while others use "theory of mind," a phrase Premack and Woodruff (1978) coined as the capacity to impute mental states—including but not limited to "purpose or intention, beliefs, thoughts, knowledge, likes, guesses, pretence, promising and trusting" (p. 515)—to oneself and others. Intersubjectivity is also

an important concept in psychoanalytically oriented research, which adopts a more relational approach to the concept, defining intersubjectivity as the capacity of mutual recognition (Benjamin, 1990; 2014; Stern, 1985). This perspective is attuned to the challenge of differentiation as a child develops a sense of self amidst awareness of others and their subjectivity. More broadly within this school of thought, intersubjectivity is a theoretical framework for acknowledging and studying "the field of intersection between two subjectivities, the interplay between two different subjective worlds" (Benjamin, 1990, p. 34). Through this section I will take an approach to intersubjectivity that draws more from cognitive psychology than this tradition. But this work helpfully highlights mature forms of intersubjectivity, in which individuals do not simply absorb the surrounding norms, instead they can recognize and respond to the subjective states of others from a personal and stable position. The capacity to hold such a mature, differentiated, position is another individual difference that modulates the impact that social norms will have on regulatory behaviors.

Turning back to the cognitive psychological work on intersubjectivity, research since Premack and Woodruff (1978) has continued to focus on populations where this capacity might be impaired in order to study its distinct processes. For example, Call and Tomasello (2008) revisit Premack and

Woodruff's (1978) initial question —does the chimpanzee have a theory of mind? — with new evidence to argue that primates likely understand other's mental states in terms of perceptions and goals, but not necessarily beliefs or desires. While some of the research on theory of mind has been conducted with an aim towards understanding the cognition of primates (see Tomasello, 2014), a separate strand of research focuses on autism. Baron-Cohen, Leslie, and Frith (1985) were among the first to suggest that the behavioral and social tendencies associated with autism spectrum disorders (ASD) may derive from an impairment in "being able to conceive of mental states: that is knowing that other people know, want, feel, or believe things" (p. 38). More recent research on autism maintains the central role of mentalizing deficits in ASD while recognizing a broader array of other cognitive and affective processes undergirding the diverse manifestations of ASD (Dant, 2015).

The importance of intersubjectivity for social norms and self-regulation is presented most clearly within Tomasello's (2008; 2014; 2016) work on the evolutionary origins of human thought, morality, and sociality. For Tomasello, intersubjectivity is a crucial foundation for all of these other cognitive and social capacities, but intersubjectivity itself is not basic– instead it is the culmination of many other psychological processes. For example, Tomasello and Vaish (2013)

argue that mentalizing by itself is insufficient for supporting the development of social norms. Mentalizing would be necessary for any intensely social primate to navigate the challenges of their social hierarchy and group, and we accordingly find this capacity for theory of mind in most social primates (Tomasello, 2016). But recognizing the thoughts of others is not the same as engaging with those thoughts in a mutually recognized space. For most primates, mentalizing remains a lonely endeavor. In order to psychologically arrive at social norms, humans also engage at the level of shared intentionality. In addition to mere mentalizing, shared intentionality involves joint awareness of mental states and cooperation premised upon that mutual awareness: e.g., Rasheed recognizes: 1) that Sophie has mental states and 2) that she also reflexively knows that Rasheed has mental states and 3) with this mutual awareness both are willing to share attention and create collaborative goals and action plans. Tomasello and colleagues (2005) describe the constellation of psychological capacities necessary for shared intentionality "dialogic cognitive representations." I use the term intersubjectivity to refer to the process in which all of these capacities are enacted.[28]

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28. This rough sketch of mentalizing and shared intentionality is just an initial taste of the complexity within the various cognitive processes necessary for such a seemingly simple thing as

These cognitive capacities are essential for establishing social norms. In the following long passage, Tomasello and colleagues (2005) discuss how our abilities understand others' intentions and beliefs and to form a joint intentionality with shared goals provide the foundation for social norms and regulation:

> Dialogic cognitive representations pave the way for later cognitive achievements that may be called, very generally, "collective intentionality" (Searle 1995). That is, the essentially social nature of dialogic cognitive representations enables children, later in the preschool period, to construct the generalized social norms (e.g., truth) that make possible the conceptualization of individual beliefs and, moreover, to share those beliefs. Sharing beliefs is responsible for the creation of social-institutional facts such as money, marriage, and government, whose reality is grounded totally in the collective practices and beliefs of a social group conceived generally (Tomasello & Rakoczy 2003). Importantly, when children internalize generalized collective conventions and norms and use them to regulate their own behavior, this provides for a new kind of social

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playing a game together. The simplicity and fluidity with which we exercise all of these complex capacities speaks to the deep automaticity of our enactment of social norms.

> rationality (morality) involving what Searle (1995) calls 'desire-independent reasons for action.' (Tomasello et al., 2005, p. 684).

In other words, social norms, experienced as both institutional facts and internalized morality, depend on our ability to recognize the intentions, beliefs, and motivations of others, along with our desire to regulate our actions in relation to this shared reality. Since I am arguing for the social character of self-regulation, then intersubjectivity is a crucial component of regulatory behavior as it undergirds both the capacity to internalize shared goals and the motivation to pursue those goals.[29]

If my general hypothesis about the deeply social character of self-regulation is true, then the relevance of intersubjectivity for regulation should extend well beyond social standards, also impacting what might otherwise seem

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29. Researchers discuss this set of shared goals, beliefs, intentions, and motivations as part of a group's "common ground." The phrase has a complex philosophical history, drawing from Stalnaker (1970) and an older set of concepts including Lewis' (1969) use of common knowledge and Schiffer's (1972) mutual belief. The essential component of common ground for psychological work on social norms is given by Clark (1996): "Two people's common ground is, in effect, the sum of their mutual, common, or joint knowledge, beliefs, and suppositions" (p. 93). This concept therefore extends beyond intersubjectivity to include the broader set of shared assumptions within a group (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010). In other words, the concept of common ground is similar to the socially constructed reality described by social theorists in chapter 3 (see Kashima, 2014). Tomasello (2014) convincingly argues that shared intentionality in particular, and intersubjectivity in general, precede the capacity of two or more individuals to establish a common ground. Therefore I focus on those processes while recognizing the theoretical importance of the more expansive common ground established within a group.

to be personal forms of regulation. In support of this claim, a large body of research among children with ASD shows that deficits in intersubjectivity are deeply interwoven with difficulties exercising self-regulation, especially emotional regulation and executive functioning (e.g., Gomez & Baird, 2005; Jahromi, Bryce, & Swanson, 2013; Loveland, 2005). Importantly, however, these regulatory difficulties do not appear to impact delayed discounting among children with ASD (Demurie, Roeyers, Baeyens, & Sonuga-Barke, 2012), which underlines the importance of differentiating self-regulation as more than just self-control. These differences also suggest that intersubjectivity will primarily influence motivational and goal-specific aspects of self-regulation, especially insofar as the goals and motivations are social or emotional.

Intersubjectivity is clearly important for self-regulation, but does it shed new light upon the relationship between religion and self-regulation? At first glance, intersubjectivity appears to be quite relevant for religiosity. Various studies suggest that individuals with ASD report significantly lower levels of religiosity (Caldwell-Harris, Murphy, Velazquez, & McNamara, 2011), and empirical work from Norenzayan, Gervais, and Trzesniewski (2012) found that deficits in mentalizing mediate this relationship (see Banerjee & Bloom, 2013; Barrett & Keil, 1996; Caldwell-Harris, 2012; or for a counterargument see

Lindeman, Svedholm-Häkkinen, & Lipsanen, 2015). While this evidence suggests that intersubjective processes are related to religiosity, most of this research is aimed at explaining religious belief. In other words, intersubjectivity is taken to be analytically prior to religiosity. It remains possible that this association works both ways, such that certain religious practices and beliefs are both supported by and amplify an individual's tendency to mentalize and engage in collective intentionality (see Gervais, 2013). If that were the case, then increases in intersubjective processing could offer a plausible mediating variable that helps to explain the influence of religiosity upon self-regulation: if religious participation increases intersubjective processing, then it might also increase attunement to the regulatory norms of the group and, ultimately, the religious person's capacity for self-regulation. Though obviously tentative, this hypothesis is both plausible and testable.

While provisional as a mediating variable, considering intersubjectivity nevertheless keeps us attuned to certain dimensions of religious engagement that are relevant for self-regulation. Many of the theorists just mentioned (e.g., Banerjee & Bloom; Norenzayan et al., 2012) emphasize the way theory of mind may lead to belief in anthropomorphic supernatural agents. In contrast, Tomasello's (2016) and other's (Chiu et al., 2010) work on the relationship

between intersubjectivity and social norms points our attention to a Durkheimian possibility– that the relationship between religiosity and intersubjectivity is rooted in experiential access to a shared sense of reality with a transcendent normative and moral force. This is the perspective motivating our engagement with moralization below, but we have one more stop before we get there.

3.3.3 Proximate perspectives– Conventionality

According to Tomasello (2014; 2016), the evolutionary utility of intersubjectivity is primarily grounded in its capacity to coordinate behavior towards instrumental ends. But as intersubjectivity extends into the creation and endorsement of social norms, it also begins to facilitate behaviors that are not directly instrumental. While seemingly extraneous, these non-instrumental conventional norms are the warp and weft of social reality. As such, research on the establishment and dynamics of conventional actions provides substance to our understanding of social norms and integrates these norms more clearly with the work on social identity. The psychology of conventional behavior is a crucial component of the psycho-social foundation of social identity and social norms, and, as such, is necessary for understanding moralization.

Drawing from the work of Legare and colleagues (2015), instrumental actions are those whose causal basis and goals are apparent, or at least knowable.

For example, preparing food for dinner is causally knowable to a learner because all steps of the process have a theoretically clear and direct explanation: "add the onions first so that as they soften they release sugars, creating an umami flavor base. Once they're soft add the garlic, which does the same thing but more quickly, which is why we add it second…" Conventional behaviors on the other hand are causally opaque. They are performed in a particular way for no reason other than "that is the way it is done." Preparing food for a ritual, for example, will follow specific and often strict steps, but the mechanisms by which the ritual is taken to be effective remain obscure[30] (see Legare & Souza, 2012). Most of the work on conventional behaviors takes place among researchers interested in social learning, which analyzes the way information is shared among individuals rather than having to be learned solely from experience (Hoppitt & Laland, 2013). As such, the distinction between these types of behavior depends primarily on the perspective of the learner. By foregrounding the learner, this approach to parsing behavior reveals important differences concerning when

30. Since this distinction depends on understanding causal mechanisms, it may appear to be biased towards a scientific worldview and discounting non-naturalistic explanations as causally opaque. Such a critique broaches much larger discussions about naturalism and scientific inquiry. For our purposes, causal opacity means that the mechanisms by which an action is understood to be effective are intrinsically inaccessible to observers from different perspectives, even if they "make sense" emicly.

people innovate and when they are more likely to follow what has always been done.

While the distinction between instrumental and conventional actions may seem to be splitting hairs, it is supported by an extensive body of research on how children learn new behaviors. Within this work, a persistent finding is that children tend to over-imitate adult models (Over & Carpenter, 2012). For example, Nagell, Olguin, and Tomasello (1993) found that children faithfully copy an adult's inefficient use of a rake to retrieve a reward, even when the more effective use was apparent. Chimpanzees on the other hand would readily flip the rake over to capture the reward. Similarly, Horner and Whiten (2005) found that 3 and 4-year-old children copied every action an adult model performed to open a box to retrieve a reward, even when it was clear that some of these actions were unnecessary. As before, in the same experiment chimpanzees tended to omit the unnecessary steps. This tendency of human children to faithfully replicate instrumentally useless behaviors is found across many studies and is generally taken to be the seed of social norm development (e.g., Claudière & Whiten, 2012; Legare et al., 2015; Schmidt, Rakoczy, & Tomasello, 2011; Whiten, McGuigan, Marshall-Pescini, & Hopper, 2009).

This tendency of children to over-imitate is more nuanced than simply copying whatever adults do. For example, some studies show that children do not copy actions that are clearly mistakes (Carpenter, Akhtar, & Tomasello, 1998) or if the actions do not achieve the intended results (Meltzoff, 1995). In these cases, it seems that the decision to imitate is primarily goal-oriented; in other words it is still instrumental (Bekkering, Wohlschläger, & Gattis, 2000). Over and Carpenter (2012), however, argue that the apparent contradiction between imitation directed at convention versus function can be explained by considering the social functions of imitation. For example, children are more likely to over-imitate if they are primed with ideas of social exclusion (Over & Carpenter, 2009; Watson-Jones, Legare, Whitehouse, & Clegg, 2014), or if the model is prestigious[31] (Chudek, Heller, Birch, & Henrich, 2012).

In other words, children's tendency to over-imitate conventional behaviors appears to primarily serve affiliative functions (Legare & Watson-Jones, 2015; Over & Carpenter, 2012). This reiterates the social identity dynamics highlighted above. Our tendency to conform in both opinion and action begins at an early age (Haun & Tomasello, 2011), is consistently influenced by social context and

31. "Prestigious" in these experiments means that other people involved in the study pay more attention to the individual. Children are highly sensitive to these subtle social indicators and tend to follow the person that others are attending to.

relationships (Nielsen & Blank, 2011), and functions as a way to mark our identification with a particular social group[32] (Legare et al., 2015). Further illustrating the social function of conventional behaviors, children readily assume that normative rules apply to others within their group and actively enforce these norms through sanctioning behavior (Haun, van Leeuwen, & Edelson, 2013; Rakoczy, Brosche, Warneken, & Tomasello, 2009). Even more remarkable, children only protest about norm violations when the violator was part of the in-group (Schmidt, Rakoczy, & Tomasello, 2012). Collectively these studies suggest that conventional behaviors are deeply connected with the group dynamics–e.g., the creation, maintenance, and influence of social groups—highlighted by social identity theory.

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32. Further emphasizing the intuitive pull towards imitation and conformity within a group, research in social psychology continually demonstrates that we tend to prefer and trust individuals who are similar to us. This includes extending trust on the basis of such arbitrary similarities as sharing letters in surnames (Jones, Pelham, Carvallo, & Mirenberg, 2004), or vocal pitch and amplitude (Gregory, Webster, & Huang, 1993). Imitation and conformity are not only useful for indicating affiliation, but also provide effective ways to build social cohesion. As Henrich (2015) and others (e.g., Chudek, Zhao, & Henrich, 2013; Engelmann, Over, Herrmann, & Tomasello, 2013) have argued, these tendencies towards imitation and conformity are likely rooted in a deep evolutionary social history. By preferentially interacting with unknown persons who seem similar to themselves, people increase the probability that these strangers will be bound by the same unwritten rules, sanctions, and reputations. In other words, the psychological preference for conformity acts as a strategy for increasing the likelihood that a stranger will be a reliable collaborator. This point is essential for the dynamics of cooperation, so we will turn to it in depth in chapter 7.

Not only do conventional behaviors lie at the convergence of social identity theory and social norms, there is also preliminary evidence that engaging in these behaviors increases other self-regulatory skills. With children in Slovakia and Vanuatu, Rybanska and colleagues (2018) tested the different impacts on delay of gratification skills of engaging in socially stipulated behaviors versus instrumental behaviors. The experiment involved all of the children regularly playing games in small groups over a three-month period. For children in the conventional condition, the instructions for the games were accompanied with phrases like "'it has always been done this way' or 'those are the rules and they must be followed'" (Rybanska et al., 2018, p. 352). In contrast, when instructions for kids in the instrumental condition were accompanied with phrases to trigger goal orientation, like "'if we do it this way, we will learn how to dance,' 'if we do it this way, we will learn about different animals'" (Rybanska et al., 2018, p. 352). After three months of regularly playing these games and hearing these instructions, children were given a delay of gratification task, one they had also completed at the beginning of the three months. All children showed improvement, but those who were part of the conventional group had a significantly larger improvement than those in the other groups (Rybanska et al., 2018, p. 354). This seems to confirm Gelfand and colleagues' (2011; 2017)

theoretical suggestion that social norms promote better self-regulation, but why did this improvement occur?

Rybanska and colleagues (2018) argue that engaging in conventional behaviors demanded more executive functioning—necessary when attending to strict sequential steps, remembering them, and inhibiting other behaviors—than instrumental behaviors, which are more flexible. In their analysis they found that increases in executive function did mediate the relationship between conventional behaviors and improvements in delaying gratification (Rybanska et al., 2018, p. 354). While this is a plausible explanation for their results, it is not clear that engaging in conventional behaviors more broadly would require more executive functioning than instrumental behaviors, especially since conventions are often internalized and abidance occurs automatically (Cheng & Chartrand, 2003; Chiu et al., 2010). Furthermore, Rybanska and colleagues' (2018) measure of executive functioning was another game, the Head-Toes-Knees-Shoulders task (Ponitz, McClelland, Matthews, & Morrison, 2009). This game requires working memory and response inhibition, but the children's adherence to the rules could also be supported by the same imitative processes fostered by conventional behaviors more broadly. This alternative explanation is not mutually exclusive with the possibility that conventional behaviors increase executive functioning.

Instead, it suggests a mediating link between conventional behaviors and regulation that would remain plausible in those more general cases of automatic abidance by conventional norms. Regardless of whether conventional behaviors lead to conformity, executive functioning, or some combination of the two, this study provides empirical support for the connection between normative conventions and self-regulation.

While the interdependence between conventional behaviors, social norms, and self-regulation is apparent, even if not fully articulated, the relevance of religion for these dynamics is once again less clear. Similar to the work on intersubjectivity as a foundation for religious beliefs, theorists argue that our tendency to infer and abide by conventional behaviors undergird religious rituals (e.g., Legare & Watson-Jones, 2015). These theorists draw from Durkheim (1912/2008) and Rappaport (1999) to argue that religious rituals are an elaboration of more general conventional behaviors and that they play a special role in fostering group cohesion necessary for large scale cooperation in anonymous societies (Hill, Wood, Baggio, Hurtado, & Boyd, 2014; Norenzayan et al., 2016). While well supported by evidence, these explanations occur at the ultimate level– religions promote rituals and conventional behaviors because those religions that did promote these behaviors tended to survive and thrive by

fostering group cohesion (Watson-Jones & Legare, 2016). As we saw with intersubjectivity, these explanations are aimed at answering why religious rituals occur in the first place.

These studies do not exclude the possibility that participating in religious rituals may strengthen the tendency to abide by the conventional norms of a group. As Rybanska and colleagues (2018) demonstrated and Gelfand et al. (2017) have theorized, this increased participation in conventional norms may enhance other self-regulatory capacities as well. Therefore, from a social perspective we cannot rule out the possibility that religiosity impacts self-regulation by facilitating an increased engagement with conventional norms, but currently the causal links in this argument are too tentative to offer this as a strong possibility. Instead, there is a more plausible and direct explanation. Rather than increasing participation in conventional behaviors, religious systems likely influence the way that individuals relate to this conventional reality.

3.3.4 Social norm summary

In the last chapter we surfaced the hypothesis that social norms act as important standards within self-regulation and that the affiliative functions of norms also impact an individual's motivation for engaging in regulation. In this section I reviewed some of the psycho-social dimensions of social norms and

social identity that shape and constrain these processes. Henrich (2015) helpfully summarizes many of these points:

> Over our evolutionary history, the sanctions for norm violations and the rewards for norm compliance have driven a process of self-domestication that has endowed our species with a *norm psychology* that has several components. First, to more effectively acquire the local norms, humans intuitively assume that the social world is rule governed…The violation of these rules could and should have negative consequences. [This] means that, at a young age, we readily develop cognitive abilities and motivations for spotting norm violations and avoiding or exploiting norm violators, as well as for monitoring and maintaining our own reputations. Second, when we learn norms we, at least partially, *internalize* them as goals in themselves… internalizations may provide a quick and efficient heuristic that saves the cost of running the mental calculations that consider all the potential short- and long-term benefits and probabilistic penalties of an action; instead we simply follow the rule and abide by the norm. (pp. 188-189)

Henrich's summary helps draw together the threads from this section so far. Intersubjective capacities equip us to access and navigate the conventional norms

of our group. These norms, in turn, act as standards by which we regulate in order to demonstrate and maintain our affiliative identities. The maintenance and monitoring of these affiliations is a strong motivator for regulation– emerging early in childhood and persisting throughout our lives. We readily conform to the norms we absorb from our group in order to maintain our affiliations within that group.

Throughout this review the persistent question has been whether religious participation would influence these processes of social identity and norm formation more than participation in any other group. I surfaced the possibilities that religious systems lead to a uniquely strong identification with the group and that they amplify our innate tendencies towards intersubjectivity or conformity. While these hypotheses are worth testing, a more plausible explanation is that religious systems change the way that people relate to the conventional norms of their group. In order to clarify this claim, we finally turn to moralization processes.

3.4 Moralization

Among researchers working on social norms, a common distinction is made between descriptive and injunctive norms (Cialdini, Reno, & Kallgren

1990; Lapinski & Rimal, 2005; Rimal & Lapinski, 2015). Descriptive norms are simply what most people do, while injunctive norms refer to behaviors that receive social approval or disapproval (Cialdini et al., 1990). While there is a degree of overlap and congruence between these norms (Brauer & Chaurand, 2010), the theoretical distinction is nevertheless helpful because it points to different ways that norms can influence behavior. Descriptive norms are useful from an information processing perspective because imitating what most people do is often a sensible and efficient guide for behavior. Injunctive norms, on the other hand, motivate behavior by keeping an individual aware of social sanctions that they will incur if they deviate from what ought to be done (Cialdini et al., 1990).

While conceptually distinct, there is evidence that two types of norms readily influence one another (Morris, Hong, Chiu, & Liu, 2015). For example, people soften their injunctive judgments of socially undesirable behavior if the behavior is widespread (e.g., Trafimow, Reeder, & Bilsing, 2001). Similarly, neuroimaging evidence suggests that deviating from a majority opinion, a descriptive norm, activates the same neural networks in the amygdala related to threat detection, which anticipate the punishment of violating an injunction

(Berns et al., 2005). In other words, people readily infer what ought to be done on the basis of what is done and vice versa.

Descriptive and injunctive norms are also jointly effective at guiding behavior and accordingly have become influential parts of public health campaigns to curtail college drinking (Halim, Hasking, & Allen, 2012; Rimal & Real, 2005), reduce gambling (Larimer & Neighbors, 2003), and encourage more recycling (Schultz, 1999). While both are influential guides for behavior, evidence suggests that descriptive norms act as a default– when individuals are under cognitive load, they defer to descriptive norms if there is any discrepancy between the two types (Jacobson, Mortensen, & Cialdini, 2011; Kredentser, Fabriger, Smith, & Fulton, 2012; Yam et al., 2014). Other significant dynamics, such as social identity, influence the interaction between descriptive and injunctive norms as well (see Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007).

For our purposes it is also necessary to distinguish between an individual's perception of these norms and their personal attitudes. For example, drawing from work by Tankard and Paluck (2017), "I support same-sex marriage" as an individual's attitude is different from the perceived descriptive norm that "most US citizens support same-sex marriage." Underwriting the influence of

social norms, research suggests that perceived norms are better predictors of behavior than underlying attitudes (Paluck, 2009; Tankard & Paluck, 2017). For example, Paluck (2009) found that a radio soap opera in Rwanda substantially changed listeners perceptions of descriptive norms about prejudice and violence without impacting their personal beliefs on these matters. These shifts in perceived norms led to behavioral changes such as more open expression about sensitive topics, increased cooperation, and more active negotiations within the community, even in the absence of attitude change (Paluck, 2009).

This creates a complex field for understanding someone's actions. There are plenty of situations in which an individual's personal attitudes will shape his behavior, but if the descriptive norms within his group shift, then he is likely to follow these social tides even if he has not yet changed his mind[33]. Similarly, a group may inscribe a new injunctive rule, but if this rule conflicts with the descriptive norms of the group, then the new norm is unlikely to take hold. This is not to say that social change does not occur; if key figures within the group shift their behavior to abide by new norms, then this change will ripple through the social network, changing perceptions of the norm and increasing the general

[33] Individual differences will also moderate these dynamics. For example, a highly differentiated individual may be aware of the changing descriptive norms but nevertheless act in accord with her own personal standards.

abidance (e.g. Paluck & Shepherd, 2012). If this was not complex enough, these dynamics are also shaped by the character of an individual's association with their group and that group's place within the overall social context. For example, if a person is strongly attached to her religious group and she perceives her group as under attack by the wider culture, then even if descriptive and injunctive norms shift in the wider context, she will likely enact her group's norms even more strongly, say for instance by refusing to sign same-sex marriage licenses.

At this point it is not apparent where moralization fits within this complex terrain. Rather than describing how moral attitudes provide strong guides for people's behavior, these studies suggest that it is actually perceived descriptive norms that rule the day. This poses a critical problem for theories suggesting that religious systems influence self-regulation by providing clear moral standards for behavior (Zell & Baumeister, 2013)– taken alone, moral injunctions are relatively impotent. Regarding religious beliefs about morality as isolated representational injunctions neglects the broader social context that determines when such moral injunctions become effectual. Descriptive conventions may be the most persuasive influence on behavior, but their dominant influence is only detectable when there are discrepancies between descriptive norms, injunctive

standards, and personal attitudes. In many situations these psycho-social forces cohere, and when they do our behavior proceeds quite fluidly. This is where moralization enters the picture.

Morris and Liu (2015) describe moralization as the process by which descriptive regularities become injunctive oughts. That is, conventional regularities about what people typical do become internalized as moral attitudes and injunctive norms about what people ought to do. This process is related to the permeability between descriptive and injunctive norms mentioned above (e.g., Berns et al., 2005), and, as I will describe below, the process can be individually or socially instigated. For our present purposes, the important point is that moralization creates coherence between perceptions of what people typically do and what they ought to do. Rozin's (1999) work on moralization also suggests that moralized norms are more likely to be internalized, become central aspects of the self, and be deliberately passed across generations than other norms (see also Brandt & Rozin, 2013). When individuals internalize a norm as a moral ought, instead of just a descriptive convention, this norm also carries an extra motivational force– personal deviance generates shame or guilt (e.g., Savani, Morris, & Naidu, 2012) and others violating the norm engenders disgust or anger (Rozin, Haidt, & McCauley, 2008). This emotional force is the topic of

the next chapter. Here, the crucial point is that moralization processes tend to create coherence between descriptive conventions, injunctive oughts, and personal attitudes.[34] When people relate to their group's norms in this way, those norms become powerful standards for regulation exceeding the force of conformity alone.

3.4.1 Horizontal moralization

There are two primary dimensions along which the moralization process varies. The first dimension is horizontal– people vary in the extent to which they moralize everyday behaviors. For example, most people agree that behaviors around harmfulness or fairness are morally laden (Graham et al., 2011), but what about sleeping past your alarm, taking the elevator up a single story, or packing late for a trip? Each of these behaviors is taken from Lovett, Jordan, and Wiltermuth's (2012) moralization of everyday life scale, which assesses the

34. To describe moralization as a movement towards coherence is not to say that people always experience this coherence. Individuals will have highly personal attitudes about right and wrong that vary from the conventions and rules of their group. Such personal moral positions can be pivotal sources for social change.
The preceding analysis, however, suggests that these highly personal moral stances have some social origin (likely from encounters with a different group), and that acting upon them will be difficult unless one is able to build a new coalition in which the norm can take root. In cases where the group is unlikely to change and the personal attitude persists, I would predict that the individual will likely disaffiliate.

degree to which people see more quotidian actions and situations as morally laden.[35]

To understand variation in this tendency to moralize across situations, Lovett and colleagues (2012) parse the different moral domains into concerns about deception, harm, laziness, failure to do good, body violations, and disgust (p. 251). A different attempt to classify moral domains is offered by Graham and Haidt's Moral Foundations Theory (MFT; Graham et al., 2011; Haidt, 2007; Haidt, 2013). MFT draws from a social functional perspective to argue that there are at least five domains organizing moral thought, norms, and actions: harm, fairness, loyalty, authority, and purity (Haidt, 2013). As with Lovett et al.'s (2012) scale, people vary in the degree to which they endorse these different concerns, but Haidt and colleagues argue that this variance is not random (Haidt & Graham, 2007). Harm and fairness seem to be primarily oriented towards protecting individuals and are more readily endorsed by politically liberal people. Loyalty, authority, and purity, on the other hand, appear to serve collective binding functions, which conservatives tend to endorse and liberals tend to oppose

35. This scale asks individuals to judge others' actions rather than their own. One could object that this is an inaccurate index of moralization, but research shows that these judgments strongly relate to one's own personal moral standards and motivations (Stoeber & Yang, 2016; Yang, Stoeber, & Wang, 2015).

(Graham et al., 2011). This is a relatively new research terrain, so there are debates about how many domains there are and how to organize them (e.g., Curry, 2016; Suhler & Churchland, 2011), whether results are generalizable to more diverse populations (Davis et al., 2016) and whether all of the moral domains reduce to different conceptions of harm (Gray, Schein, & Ward, 2014; Schein & Gray, 2015), to name a few (for responses see– Graham, 2015; Haidt & Joseph, 2011; Koleva & Haidt, 2012). While engaging and important, most of these debates are tangential to our current inquiry.

Regardless of whether researchers converge on moral domains based on individualistic versus binding social functions (Haidt, 2013), evolutionary cooperative challenges (Curry, 2016), elaborations of harm (Gray et al., 2014), or some other framework (Lovett et al., 2012); my primary question concerns whether religious engagement would lead individuals to treat more norms as morally laden or not. This is not to say that the content of religious moral concerns is irrelevant– it will clearly be important to consider whether individuals who are religious are more likely to endorse some domains over others. But the more basic dimension I am referring to concerns the extent of moralization: are religious individuals more likely to consider more behaviors as morally charged than other individuals?

Theoretical arguments suggest that religious systems engage a broad range of moral domains (Graham & Haidt, 2010; 2012), but few empirical studies connect religiosity in general with pervasive moralization. Graham et al. (2009) found that different religious communities tended to differ in the moral foundations they endorsed. This has been confirmed and nuanced by Davis et al. (2016) who showed that the association between religiosity and conservative moral intuitions may be unique to white US populations. Johnson et al. (2016) furthered the argument by showing that there are important individual differences beneath the umbrella of religiosity. For example, holding a literal vs. metaphorical view of religious scriptures predicted the endorsement of different moral concerns over and above political leanings (Johnson et al., 2016, p. 59). These studies on religiosity and moralization lend plausibility to the hypothesis that religious individuals moralize to a broader extent than their nonreligious peers.

For now, I flag this tendency to moralize conventional norms as one pathway through which religious engagement may shape an individual's relationship with social norms. Importantly, as noted above, when conventional norms become internalized as morally laden they evoke strong emotional responses to deviance, which increases individual commitment and abidance

(Hosey, 2014). In other words, pervasive moralization would have direct consequences for regulatory behaviors as well.

3.4.2 Vertical moralization

People also differ in the degree of force they give to injunctive norms. This is the vertical dimension of moralization. For example, Goodwin and Darley (2008) asked people whether they regard statements such as "Robbing a bank in order to pay for an expensive holiday is a morally bad action" (p. 1343) as true, false, or an opinion. Regarding the moral judgment as true or false, versus an opinion, demonstrates a degree of objectivism– the moral value of the situation is not relative, it is a knowable part of reality. Goodwin and Darley (2008) also assessed the way people regard disagreement over moral judgments– it is possible to regard a moral judgment as true or false but still consider that truth to be relativistic. A stronger form of objectivism does not tolerate disagreement over moral judgments. These two aspects create a spectrum along which people can be more or less objective regarding moral judgments. This variation is distinct from horizontal moralization. Rather than turning conventional behaviors into injunctive norms, objectivism takes what are already considered injunctive norms and gives them a firmer status. Rather than being relativistic opinions, some oughts are regarded as objective and certain truths.

The process by which moral concerns become unimpeachable truths can be assessed in a variety of ways. Some researchers, such as Goodwin and Darley (2008; 2012), examine whether a moral behavior is perceived as relative or objective. Using such a measure, Wainryb and colleagues (2004) found that children tended to become more relativistic regarding preferences and ambiguous beliefs as they got older, but regardless of age they continued to consider moral judgments objective (see also Nichols & Fold-Bennett, 2003). Other researchers explore this vertical dimension by assessing whether people engage in utilitarian or deontological reasoning about moral issues (Piazza & Landy, 2013; Piazza & Sousa, 2014). Utilitarian thinking assesses moral situations in terms of the consequences of actions, while deontological reasoning is based on moral rules that are regarded as an objective feature of reality.[36]

The classic test of these different meta-ethical positions is the trolley problem. First emerging in the 1960s and 70s (Foot, 1967; Thomson, 1976), the gist of this dilemma is that a runaway trolley that is about to kill five people who are stuck on the tracks, but you have the option to save them. Saving them, however, would require you to kill another person. There are many varieties of

36. Importantly, these researchers are not making philosophical claims in support of either meta-ethical position. Instead they are studying how and when individuals employ each type of moral thinking when they reason about morality.

this dilemma and some critiques (see Bauman, McGraw, Bartels, & Warren, 2014), but it effectively illustrates the difference between utilitarian reasoning, kill one to save five, and deontological thinking, killing is wrong regardless of the outcome. This conceptual difference also shows up neurologically– Greene et al. (2001; 2004) found that increased emotional processing corresponded with the likelihood of engaging deontological moral reasoning (though see Kahane, 2012). For now, the point is that this tendency to assess the morality of a scenario in terms of an inviolable rule rather than a utilitarian outcome is analogous to the objectivism described above– both see moral truths as parts of reality that are inalterable, regardless of opinions or judgments about them.

A third way to think about this vertical dimension of moralization is through research on sacred values, which are those issues around which people are unwilling to negotiate (Ginges, Atran, Medin, & Shikaki, 2007; Tetlock, 2003). For example, Ginges and colleagues (2007) found that if people were offered material incentives to compromise on certain issues (in this case regarding the Palestinian/Israeli conflict), then, rather than negotiating, some people became even more entrenched in their position. In other words, if a norm had become sacralized, then attempts to change someone's position only led them to hold their position more strongly. The moral norm is not only an objective part of

reality, it is inviolable (see also, Atran & Ginges, 2012; Baron & Spranca, 1997; Graham & Haidt, 2012). When individuals reason about sacralized norms, they engage the same neural networks as those involved in reasoning about norms that are treated as deontological (Berns et al., 2012).

Further empirical work is needed to differentiate these processes of vertical moralization. For example, it is plausible that perceiving a moral norm as an objective part of reality is a necessary but not sufficient condition for sacralizing that norm as inviolable. Regardless of how they are ultimately determined, each of these processes point to a vertical dimension of moralization along which conventional norms are not just transformed into injunctive oughts, they are further enshrined as objective and/or inviolable parts of reality. Given the vehemence of reactions when Ginges and colleagues (2007) attempted to negotiate around these norms, we can expect that this vertical dimension of moralization has strong downstream effects for self-regulation.

Importantly, religious engagement also appears to be deeply interwoven with this tendency towards objectifying or sacralizing norms. Across three experiments Goodwin and Darley (2008) found that individuals who grounded their moral judgments in a religious system were the most likely participants to be objectivists. Piazza and colleagues (2012; 2013; 2014) found religiosity to

reliably predict deontological reasoning about morality, even when controlling for other factors like disgust sensitivity or preference for intuitive thinking. Young, Willer, and Keltner (2013) nuance this general association with evidence that religious fundamentalism may be a primary driver in the relationship with objectivism. Researchers on sacred values also repeatedly find that religiosity, measured by frequency of participation in religious rituals, predicts individuals' likelihood of sacralizing behaviors. Sheikh and colleagues (2012) found that not only was ritual participation correlated with the likelihood to sacralize, but priming individuals with reminders of religious rituals causally increased the tendency to sacralize.

3.4.3 Moralization summary

As relatively new fields of research, there is still important work to be done in delineating the boundaries and entailments of moralization. The vertical and horizontal dimensions I propose are deeply interwoven, but conceptually it helps to distinguish the process of broadly turning conventional behaviors into morally laden actions, from the tendency to ground these moral judgments in an objective and inviolable sense of reality. The conceptual distinction is also supported by the neurological evidence cited above, which illustrates distinct cognitive systems engaging objectified norms (Berns et al., 2012; Greene et al.,

2001). Regardless of where these distinctions are ultimately drawn, the evidence is strong that religious engagement influences each of them. Beyond the general association between religiosity and moralization, individual differences in fundamentalist stances (Johnson et al., 2016; Young et al., 2013), participation in ritual (Sheikh et al., 2012), and religious ideology (Davis et al., 2016; Graham et al., 2009) all shape the way that individuals relate to norms.

These associations do not imply that moralization processes are only influenced by religious systems. The tendency towards pervasive moralization is mediated by individual differences, such as disgust sensitivity and empathic concern (Koleva, Selterman, Kang, & Graham, 2014). Moralization is also subject to the same psycho-social dynamics as other norms. For example, Goodwin and Darley (2012) found that people were more likely to treat norms as objective when the norms were perceived as being widely conformed to within the group. Sheikh and colleagues (2012) found that people were more likely to sacralize beliefs if they felt that their in-group was being threatened (see also Jetten, Postmes, McAuliffe, 2002; Wan, Torelli, & Chiu, 2010). Moralizing conventional norms also acts as a buffer against general forms of insecurity, such as epistemic uncertainty (Chao, Zhang, & Chiu, 2010; Chiu, Morris, Hong, & Menon, 2000) and existential uncertainty (Arndt, Greenberg, Solomon, Pyszczynski, & Simon,

1997; Greenberg, Porteus, Simon, Pyszczynski, & Solomon, 1995). Finally, one of the most persistent findings is that the salience of a moral norm is a key determinant of behavioral outcomes (Cialdini, 2011). This salience may be prompted by situational cues; it might also depend upon how deeply embedded the moral norm is within an individual's social identity. In other words, even though religious engagement shapes moralization processes, this influence never occurs in isolation– it will always be partially determined by the way broader social contexts evoke and constrain different aspects of our psychology.[37]

While other psycho-social dynamics influence moralization, the evidence that religious engagement shapes this process remains substantial. As such, I argue that moralization provides a highly plausible explanatory route connecting religious engagement with self-regulation. Current theories argue for the importance of religion's injunctive oughts—such as the Ten Commandments—in

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37. With these psycho-social forces in mind, it is also important to question religiosity may be shaped by these same processes rather than influencing their enactment. Supporting this objection, individuals do tend to report higher levels of religious commitment when experiencing existential and social threats (Kay et al., 2008; Sibley & Bulbulia, 2012; Vail et al., 2010), and the need for cognitive closure correlates with more rigid adherence to moral norms and religious fundamentalism (Gribbins & Vandenberg, 2011; Saroglou, 2002). But other evidence suggests that this is not so simple. Piazza and Sousa (2014) controlled for such potential psychological confounds as disgust sensitivity or preference for intuitive thought, and religiosity still reliably predicted the tendency to objectify moral decisions. Sheikh and colleagues (2012) found that rather than being explained away by social factors like out-group threats, religiosity amplified the effect these forces had on sacralization. Instead of explaining away the role of religiosity in these dynamics, the collective bulk of evidence suggests that these psycho-social dynamics are deeply reflexive; they shape and are shaped by religious engagement.

order to provide clear standards for regulation and self-control (Laurin & Kay, 2016; Zell & Baumeister, 2013). But the research on social norms suggests that these injunctive standards are ineffectual without the foundation of perceived descriptive norms and the force of internalized moral attitudes. Undeniably religious systems contain clear standards for behavior, but in order for these standards to persuasively guide self-regulation, they must be moralized. As we will see in the next chapter, once these injunctive norms are moralized, they gain the motivational force of emotion compelling regulation. As we saw above, moralized norms can also gain the seriousness of a sacred rule, which forestalls considerations of deviation. While descriptive norms retain their influence on behavior, the evidence above and elsewhere (e.g., Hertz & Krettenauer, 2016; Hosey, 2014) suggests that the integration of descriptive conventions, injunctive standards, and moral attitudes exerts a powerful pull on self-regulatory behaviors and self-control.

3.5 Conclusion

This chapter described some of the basic psychological processes that were raised by religious studies scholars in chapter 2. Most of the reviewed research confirms the social dynamics anticipated by Durkheim and company, but it also adds

some important nuances that help us generate more specific predictions about the psycho-social dimensions of the relationship between religiosity and self-regulation.

Work on social identity theory highlights the way affiliation acts as a basic motivation for many behaviors– we often regulate in order to index the groups to which we belong (or hope to belong) and to create boundaries. Given the strong pull of affiliative demarcation, work on social identities and self-regulation suggests that different contexts will evoke different motivational needs, which will determine the strength or likelihood of regulatory adherence by the group's standards. Social identity approaches also suggest that people navigate multiple social identities, which will vary in their salience and persistence. This variation will largely be determined by the quality of an individual's association with their group. For example, identity fusion suggests that the more deeply an individual is connected to their group, the more coherence exists between their social identity and personal identity, leading to a more persistent relevance of that social identity (and its associated motivation and behavioral tendencies) across situations. This stream of research raises the hypothesis that religious systems influence self-regulation by fostering a strong identification which leads an

individual's religious identity and its associated norms to be more salient and persistent across contexts.

In order to fully articulate the relevance of social identity for self-regulation, I turned to research on the establishment of social norms and how they help groups to cohere. This work highlighted the basic psychological processes of intersubjectivity and imitation, which likely precede both religiosity and self-regulatory capacities. As noted above, however, a strictly linear model of this relationship distorts the ability of cultural systems, such as religions, to reflexively shape these psychological processes, thereby encouraging deeper modes of collective intentionality and conventional participation. Religious systems may partially emerge as elaborations of these basic psychological tendencies, but participating in these systems may also reflexively habituate intersubjective processes and/or imitative tendencies, with downstream effects for self-regulation.

Examining our innate tendencies to conform turned our attention to the pervasiveness of conventional behaviors and how these behaviors become engrained and reinforced by our social identities. Initial evidence from Rybanska and colleagues (2018) suggests that the simple act of participating in these conventional behaviors boosts what may otherwise appear to be individualistic

capacities to delay gratification. In other words, conventional norms may not only guide behaviors through conformity, they may also have auxiliary effects on self-regulation more generally. To understand how and why such influences might occur, along with the specific relevance of religiosity, we turned to moralization processes.

Within work on social norms, researchers draw a basic distinction between descriptive and injunctive norms. Descriptive norms refer to what people typically do, while injunctive norms are those behaviors that evoke social approval or sanctioning. There are plenty of situations in which these norms conflict, both with each other and with an individual's personal attitudes or beliefs. When such conflict occurs, descriptive norms continually emerge as the most reliable guides for behavior. However, moralization processes can integrate these norms and personal attitudes, so that conventional regularities become injunctive oughts and internalized moral attitudes. When injunctive standards are imbued with the weight of moralization, they will carry a particularly strong influence on self-regulatory behaviors.

The impact of moralization on self-regulation motivates the hypothesis that religious systems impact regulatory behaviors by leading individuals to more pervasively moralize across different domains and to grant moral norms

the extra imperative weight of objectivity or sacralization. Substantial evidence already suggests that various forms of religious engagement influence moralization in both ways. At present, however, further research is required to assess whether these moralization processes mediate the relationship between religiosity and self-regulation. In chapter 5, I will test this mediation hypothesis.

Throughout the preceding review, we have seen evidence that moralized norms are effective guides for regulatory behavior. Why is this so? The answer to that question is complex, but a growing body of research demonstrates that much of the behavioral efficacy carried by moralized norms occurs through emotional processes. These processes have popped up during the review above–for example, disgust sensitivity and empathic tendencies appeared as important determinants of how likely people were to abide by normative behaviors. In the next chapter we will take up these emotional processes directly, as they clarify the psychological processes through which religious engagement shapes self-regulation.

As noted throughout, each of these fields of research is massive and complex beyond the material I was able to cover within this survey. In this case, sacrificing depth for breadth is necessary in order to surface the constellation of psycho-social forces at play within the relationship between religious

engagement and self-regulation. We could have simply focused on the moralization processes just mentioned, but the norms around which people moralize are subject to their own dynamics and these normative processes are influenced by affiliative motivations. Thus, we gain a broader social perspective on the relation between religious engagement and moralization: religious individuals may indeed be more likely to moralize and thereby self-regulate, but this relationship will be shaped by their sense of belonging in their religious group, which also will be shaped by social context and whether they perceive external threat or are actively working to demonstrate their affiliative strength.

Social identity, normative tendencies, and moralization processes are each relevant for the relationship between religiosity and self-regulation. Only by holding them all together can we appreciate the contrast between this way of construing the relationship and the current model, in which religious beliefs provide injunctive standards for behavior, along with supernatural rewards for compliance. Instead we see a rich social fabric woven through interactions that shape an individual's sense of who they are, where they belong, and what is good and bad.

Chapter 4– Valleys in the motivational landscape

4.1 Introduction

The preceding chapters worked to shift the way we understand the regulatory standards that religious systems endorse. Rather than seeing these standards as injunctive oughts—i.e., moral dictates that individuals restrain themselves to abide by—the picture emerged of norms that are deeply social, tied to one's sense of identity as a religious individual, and thereby enacted as a social index. This view of standards led us to the argument that religious systems work to entrench particular norms so that they become perceived as moral imperatives instead of conventional regularities. Within this chapter I turn from examining the character of these regulatory standards to consider the psychological processes that make these standards persuasive and effective guides for behavior. In other words, this chapter will deal with the motivation undergirding self-regulation.

Throughout this dissertation, motivational processes have played a tacit role. For example, abiding by group norms to enact social identity is intrinsically motivated by our need to affirm our sense of self and feel that we belong. The motivational pull of self-affirmation will shift depending on social context; for example, it is especially attuned to the presence of perceived social or existential

threats, and is also heavily dependent on the quality of an individual's affiliation with her/his group. While this pull towards self-justification figured prominently within the last chapter, it is just one aspect of motivation. If I am advocating for a social perspective on regulatory standards, it is necessary to characterize the other social dimensions of motivation in order to clarify the ways in which moral norms exert their regulatory force.

In this chapter I argue that an overemphasis on the role of religious beliefs has obscured the significant ways that the symbolic and actual relationships embedded within religious systems shape an individual's emotional experiences of the world. These emotional experiences involve immediate appraisals of situations and direct forms of feedback that reliably guide one's response to a situation in light of the broader social context. I will discuss these processes in depth throughout this chapter, but first it is important to return to the perspective on motivation that currently prevails in the literature on religion and self-regulation, which we reviewed briefly in chapter 1.

Laurin and Kay (2016) separate their explanations for religions' impact on self-regulation into skill-based and motivation-based accounts. There are two main points to be drawn out from their motivation-based explanations. First, they adopt a perspective on motivation that is heavily dependent on cost-benefit

analyses: "self-control comes not only from a person's absolute ability to exert it but also his or her analysis of the costs and benefits of doing so" (Laurin & Kay, 2016, p. 313).[38] This *homo economicus,* or rational choice perspective on human behavior is a favorite whipping boy of social scientists and humanities scholars, so I will not rehearse their critiques except to say that it is a limited perspective on what motivates action at the proximate level[39] (see Kahneman, 2003; Sen, 1977). By framing motivation as cost-benefit analysis, Laurin and Kay (2016) are committed to a specific perspective on what elements of religious systems would impact this analysis. In particular they suggest:

> From a motivational perspective, religion provides more or less clear ideas about what kinds of behaviors will receive divine reward. As a result, religion may motivate people to engage their self-regulatory efforts in moral domains, or domains that they believe God will reward. (p. 316)

Not to belabor the point, but they go on to articulate the specific ways that belief in divine rewards interacts with the other beliefs within a religious system:

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38. A reminder— in their review Laurin and Kay conflate self-control and self-regulation; so when they say self-control here, they are not using it to refer only to that subset of regulatory behaviors which require the active restraint of prepotent impulses. It is an open question whether self-control in this specific sense and self-regulation in a broader sense are activated by different motivational processes.

39. There is still good reason, however, to believe that such "rationality" emerges at the ultimate level of selection. Game theoretic perspectives on natural selection depend on this idea.

> the concept of divine reward can reinforce any religion's specific moral code, motivate people to avoid violating that code and, to the extent that people believe in a predictable interventionist God, bolster their sense of contingency, which can encourage motivation across all domains. (p. 317)

While these quotes focus on religious beliefs, Laurin and Kay (2016) do go on to tentatively explore how religious behaviors could also shift motivational tendencies. These behaviors, however, are still framed by the overall commitment to cost-benefit analysis; exercising restraint either increases one's perception of her or his capacity, thereby driving down the sense of cost, or causes cognitive dissonance in which the presumably unpleasant religious behavior is justified by increasing the perceived value of the reward (p. 317). In short, Laurin and Kay's account for why religious systems will motivate self-regulation is focused on the way that particular beliefs about divine incentives, and behaviors enacted in relation to those divine rewards, shift the motivational cost-benefit analysis enough to make it worth abiding by moral dictates. All this is a complicated way to say that religious people self-regulate in order to buy supernatural goods.

This could be the case, and for some extrinsically motivated religious individuals it likely is. But the previous chapter raises the question of whether

this is a complete or even sufficient account of religion's impact on motivation. Recall Atran and Ginges' (2012; Ginges et al., 2007) work in which certain norms were deeply resistant and reactive to utilitarian bargaining– if these norms are still subject to cost/benefit analyses, then the analysis is being done with an utterly different set of symbolic costs and rewards. These symbolic costs/benefits often de-center the individual self as the arbiter of what counts as a cost and benefit and instead place that judgment at the feet of the group. This inverts the traditional cost/benefit calculus and undermines the theoretical efficacy of that self-centered frame of analysis for understanding motivation.

If the moral standards endorsed by religious systems are established through processes of social affiliation, as I argued in the preceding chapter, then motivation may be less about particular beliefs shifting rationalistic incentive structures and more about religious systems inculcating an acceptance of these moral standards as a way to be part of the symbolic community. By itself, however, the claim that moral standards are normative social conventions is not sufficient for arbitrating between these two interpretations of motivation. It could be that this social perspective just implies that the rewards are more immediate, rather than forestalled in the afterlife; the reward of belonging to a group can still be self-centered. But, there is a fundamental motivational

difference between treating a relationship as a means to an end and regarding that relationship as an end unto itself. In the religious context, Allport and Ross (1967) drew this distinction fifty years ago: extrinsically religious individuals are motivated to be religious in order to gain some other benefit, such as social connections; intrinsically religious individuals are religious for its own sake[40]. Recall from chapter 1 that the bulk of evidence suggests that it is intrinsic modes of religiosity, not extrinsic orientations, that are associated with better self-regulation (e.g., Bergin et al., 1987; Bouchard et al., 1999; Hosseinkhanzadel, Yeganeh, & Mojallal, 2013; Jonas & Fischer, 2006; Klanjšek et al., 2012; McClain, 1978). This evidence poses a serious problem for theoretical explanations that suggest religious engagement motivates self-regulation through extrinsic means, such as promised rewards.

Building from the intrinsic/extrinsic distinction, I argue that in order to understand the motivational force that religious engagement exerts on self-regulation, we have to recognize the ways that some religious adherents view regulating by religious standards as an end unto itself, not a means towards

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[40] Allport and Ross' (1967) distinction between intrinsic and extrinsic religious orientations has been a mainstay within the psychology of religion, but there are other religious orientations as well, including but not limited to religious questing (Batson & Schoenrade, 1991a; 1991b) or fundamentalism (Altemeyer & Hunsberger, 1992).

some other reward. Pairing this perspective on motivation with the accounts of social identity and moralization developed in the previous chapter, our analytical attention turns to the way that religious engagement shapes adherents' emotional experiences. As I will argue throughout this chapter, emotions are deeply social, intrinsically motivational, and undergird the moralization process. Therefore, drawing emotions into view helps us recognize that beliefs about divine rewards are just one thread of a much richer motivational fabric that religious (and other cultural) systems weave. Understanding how these emotions guide motivation will also reflexively help us articulate those features of religious engagement that we should expect to influence both moralization and self-regulation.

4.1.1 What is an emotion?

If I am going to spend the chapter discussing the importance of emotions within the relationship between religiosity and self-regulation, then I better be clear about what I mean by emotions. Adopting a prevalent stance among psychologists, my understanding of what constitutes an emotion draws from the two major theorists, Lazarus (1982; 1991) and Frijda (1986). There are two main components within this conception of emotion.

The first component is that emotions are appraisals of events or situations. Building from work by Magda Arnold (1960), Lazarus (1991) remains one of the most prominent figureheads for the position that emotional responses depend on minimal cognitive appraisals. By appraisals, Lazarus (1991) means an interpretation of a situation's goal relevance– i.e. whether it is goal congruent or incongruent. This cognition of goal relevance does not need to be conscious or conceptual in order to give rise to an emotion. Instead it highlights the way that emotions arise from changes in the relationship between an individual and their environment which the individual registers as significant.

By arguing for the necessity of this minimal cognitive content, Lazarus, and subsequent appraisal theorists (see Scherer, Schorr, & Johnstone, 2001), distinguish themselves from other theorists, such as Zajonc (1980; 1984; 2000) who suggest that affect precedes and does not require any cognitive activity. At the other theoretical extreme, even though Lazarus (1991) emphasizes the necessity of cognitive content for emotion, appraisal theory remains distinct from Schachter and Singer's (1962) two-factor model of emotion, which suggests that emotions are a combination of diffuse physiological arousal and a cognitive label

for this arousal.[41] Situating appraisal theory amidst the various other conceptions of emotion is beyond the scope of this chapter, but it is worth noting that it occupies a balanced middle-ground. The part of Lazarus' (1991) theory that I rely on is that emotions emerge from a minimal, conscious or non-conscious, cognitive interpretation of a situation as pertinent to one's concerns.

The second component within my understanding of emotion comes from Frijda's (1986) work on the action tendencies associated with emotions. Frijda's (1986) position is committed to the view that emotions are functional in a Darwinian sense (Frijda, 2003). While this view emphasizes the responses that emotions motivate, it is harmonious with appraisal theory since these action tendencies are shaped by the goal relevance of the eliciting situation. As Frijda (2003) explains:

> Emotions can roughly be regarded as motivators for the behavior meant to deal with the emotional event… The best characterization of what they aim at is the production of relational behavior; that is, they motivate

41. Schachter and Singer's (1962) theory of emotion provides the empirical basis for Proudfoot's (1987) argument that there are no simple religious experiences– instead, he suggests, these experiences are differentiated and labeled by the person within a unique social context. While this makes intuitive sense, the problem is that Schachter and Singer's (1962) empirical results failed replication efforts (e.g., Marshall & Zimbardo, 1979). This makes Proudfoot's (1987) work a revealing case study in interdisciplinary efforts within religious studies– ideally demonstrating the need for rigor, not the impossibility of such efforts.

> behavior meant to maintain or modify a particular kind of relationship with the environment. (pp. 133-134).

Frijda (1986) is not the only theorist to argue that a key aspect of emotions is their capacity to elicit functional behaviors– for example, within attachment theory sorrow is framed as a motivator for recuperative behaviors (Bowlby, 1969/1999). Importantly, the functional action tendencies that emotions motivate are not solely based on individual interests– instead they often serve social functions. For example, anger likely serves an important role in stabilizing cooperation within groups (e.g., van Doorn, Zeelenberg, & Breugelmans, 2014). I will discuss these prosocial dimensions of emotion below. For now the primary point to draw from Frijda's (1986) work is that emotions motivate action tendencies that are directed by the appraisal of the eliciting event.

Combining these two components, my conception of emotions is deeply functional. Emotional responses depend on appraisals of an individual's relationship with her/his environment and this appraisal occurs quickly and often unconsciously as a positive or negative evaluation. This emotional response then elicits a behavioral response that flexibly seeks to either maintain the current relationship, if the appraisal is largely positive, or adjust to remedy the source of any negative appraisal. From this theoretical perspective, emotions

play a prominent role in the monitoring and maintenance of goals. Therefore it is a short step to posit their importance in motivating regulatory processes.

The perspective I am advancing, which posits the importance of emotional responses for motivating self-regulation, is distinct from two other dominant perspectives on emotion and self-regulation. Within Carver and Scheier's (1998; 2016) model of self-regulation, affect serves as an index of whether or not regulatory efforts are successful. In other words, you attempt to reduce the discrepancy between your current and desired states, and if you succeed then you will experience positive affect and if you fail you will experience negative affect. This is a crucial role of emotion, but it risks misplacing emotion as primarily subsequent to regulation. As we will see throughout this chapter, there are many times when one's emotional response occurs prior to and determines one's attempt at regulation.

Other theoretical perspectives see emotions primarily as a target of regulation. For example, Gross' (1998; 2015) account of emotional regulation construes it as a subset of self-regulation in which the goals are affective:

> Emotion regulation refers to shaping which emotions one has, when one has them, and how one experiences or expresses these emotions…Thus emotion regulation is concerned with how emotions themselves are

> regulated (regulation *of* emotions), rather than how emotions regulate something else (regulation *by* emotions). (Gross, 2015, p. 6)

No doubt people actively regulate their emotional experience: we call friends to help get out of a bad mood, or breathe deeply to overcome the nervousness of public speaking. While drawing a sharp distinction between emotional forms of self-regulation and others may be helpful for research purposes, it also risks obscuring the way that emotional regulatory capacities shape other forms of self-regulation. For example, as we will see below, the capacity to modulate one's experience of temptation likely determines their capacity to resist that temptation.

In contrast to Gross' (2015) sharp distinction, other accounts of emotional regulation see it as the primary mode of self-regulation. For example, Skowron and colleagues (Skowron, 2000; Skowron & Friedlander, 1998; Skowron, Holmes, & Sabatelli, 2003) draw on Bowen's family systems theory (Bowen, 1978; Kerr, 1984) to develop a perspective on self-regulation that is composed of an individual's emotional reactivity and her or his capacity to maintain a sense of self (Skowron et al., 2003). As noted in chapter 1, there is already a substantial body of research showing that this form of self-regulation impacts the ways in which someone is religious (Jankowski & Vaugh, 2009) and mediates the

relationship between religiosity and various other psychological and social outcomes, such as mental health, social justice commitment, or intercultural competence (e.g., Sandage & Jankowski, 2010; 2013; Sandage, Jankowski, Bissonette, & Paine, 2017). This understanding of self-regulation as deeply emotional and relational is closer to that which I am advancing in this chapter.

But my own understanding of emotional regulation is somewhere in-between Gross' (2015) and Skowron et al.'s (2003) accounts. I believe it is analytically useful to distinguish the capacity to modulate one's emotions from the capacity to pursue other goals, so long as we keep their mutual relevance in sight. Since emotions involve initial appraisals of situation, I will argue that this emotional regulatory processes are most often crucial antecedent motivators for other regulatory efforts. Importantly, I also understand emotional regulation to include both the explicit modes of managing emotions, such as those of interest to Gross (2016), and the implicit ways that emotional responses may be habitually modulated, which we will discuss below.

Since I am discussing the ways that religious systems may shape emotional responses, this inquiry is also bumping up against debates about the universality (e.g., Ekman & Friesen, 1971; Ekman, 1992) versus the socially constructed character of emotions (e.g., Lutz, 1988). My position within this

debate is moderate. Arguing for the universality of emotions helps to highlight their evolutionary histories and functions, but risks oversimplifying the cultural differences in experience, expression, and interpretation of emotions. While these cultural differences are apparent and should be accounted for within experimental designs (e.g., Gendron, Roberson, van der Vyver, & Barrett, 2014), overstating the relativity of emotions risks obscuring their common functional dimensions. The foregoing conception of emotions as involving both appraisals and behavioral responses is flexible enough to permit vast cultural differences—in what situations are considered goal relevant and what responses are effective—while preserving functional commonalities that are likely to emerge from universal evolutionary challenges, such as maintaining cooperation partners without exploitation.

Adding emotion to my theoretical framework continues my trend of incorporating wildly complex topics in order to clarify a simpler point. I do this because the terrain between the individual and social *is* wildly complex and we do it a deep injustice when we simplify it to meet the demands or limits of our inquiry. Throughout this dissertation I have been advocating a different method–one in which we do not need to fully understand these psycho-social dynamics in order to appreciate their influence. In other words, I do not need to completely

explain the nature of emotion in order to recognize its importance within the relationship between religion and self-regulation. Instead, I merely need to demonstrate that it is important. That is sufficient to broaden our explanatory scope away from sole dependence on a rational construal of religion as a system offering divine rewards and motivation as sensitive to these rewards.

4.1.2 An example

In a recent study, Lamm and colleagues (2017) took the classic marshmallow test to Cameroon. After becoming familiarized with the setting, 76 Nso preschoolers were offered a puff-puff, a local doughnut, and then told it was theirs to eat, but if they waited until the assistant came back into the room, then they would receive a second puff-puff. The assistant then left for 10 minutes, unless the child ate the treat, at which point the assistant returned and test was completed. This is pretty much the normal set-up for this test. What is not normal is that nearly 70% of the Nso children waited. Eight of them even fell asleep while waiting (Lamm et al., 2017, p. 6). So much for temptation.

The surprising nature of this result is driven home by the fact Lamm and colleagues (2017) ran the same test with 125 German preschoolers, though they were offered lollipops or chocolate instead of puff-puffs. Only 28% of the German preschoolers held out for the second treat (Lamm et al., 2017, p. 6). This

significant difference was not just a matter of the different treats– all the children wanted the treat when it was first presented and eagerly ate the treats at the end of the test. Instead, the difference seems to come down to the way the different children waited. The German kids tended to try and use distraction behaviors, such as turning away or singing in an attempt to avoid thinking about the treats. They also showed more negative arousal, such as frustration or anger. In contrast, the Nso children did not attempt to distract themselves, nor did they express frustration with the situation– they simply waited.

Why am I beginning the chapter with this example? This study illustrates two critical points that this chapter will elaborate. First, it shows the crucial role that emotional regulation plays within self-regulatory tasks. I will discuss emotional regulation more fully below, but within this study it determined the different reactions the children had to the desirable treat. The German children's tendency to be excited by the treat and frustrated by their inability to have it immediately led them to deploy distraction behaviors in an unsuccessful attempt to handle the negative emotions and wait. Lamm and colleagues (2017) argue that the Nso children's lack of frustration indicates that "[they] had more success in down regulating negative emotions or might have experienced fewer negative emotions" (p. 8). In other words, the emotions these children experienced and

how they handled them were a significant determinant of whether or not they successfully waited.

Second, this study helps to explain why the Nso children may have developed more effective emotional regulatory capacities. Lamm and colleagues (2017) interviewed the mothers of children about their socialization goals and watched how they interacted with their children. Nso mothers tended to emphasize goals of respect, obedience, and social harmony, while adopting a parenting style that directed the child's activity with highly structured exchanges (Lamm et al., 2017, p. 12). German middle-class mothers on the other hand emphasized socialization goals oriented towards psychological autonomy, such as developing and expressing interests and preferences. Their parenting style tended to let the children initiate activity within a minimally structured setting (p. 13). In short, the different capacities to regulate their emotions and behaviors seem to develop in response to these different socialization goals and habits.

4.1.3 Where we are headed

One study does not prove the case. Instead of being a decisive experiment, this study acts as a helpful example for orienting the following review. I have been building the argument that religious engagement can change peoples' relationship to the norms that are prevalent within their affiliative networks. At

the end of the last chapter we arrived at the research on moralization as a description of this changed relationship. In this chapter I will argue that the morally injunctive weight that makes such norms persistent and persuasive guides for behavior is primarily emotional. The study by Lamm and colleagues (2017) helps to reveal the critical role that emotional processes play within the broader scope of self-regulation. This chapter will extend this point to argue that self-regulatory outcomes are often decided within the emotional response to a situation, not by any subsequent capacity to restrain or inhibit.

Furthermore, these emotional responses and the capacity to manage them are both trainable. Throughout the preceding review we saw how the relationship between religiosity, moralization, and self-regulation cannot be taken up in isolation; these are three threads of a rich psycho-social fabric that is responsive to intergroup dynamics, such as perceived threats, and psychological dynamics such as self-validation, intersubjective engagement, and tendencies towards conformity. While this previous review surfaced some of the determinants governing when religious engagement is likely to lead to moralization, it did not clarify how moralization would impact self-regulation. The training of emotional responses is a crucial link in this explanation. Just as the mother's parenting style and socialization goals shaped their children's

emotional experiences, so too a person's engagement within their affiliative networks will shape their emotional responses and their capacity to regulate these responses.

With these two points in mind, we will finally be in a position to discuss what it is about religious groups in particular that shapes self-regulation. The preceding chapters laid out various ways that social dynamics impact regulation, but a nagging problem throughout this review was that these dynamics were never unique to religious groups. This broad scope was deliberate. We should not expect religious groups to be special or disjunct from other types of social groups– instead they should be functioning in pretty much the same way. Furthermore, we should expect that any dynamics that may seem particular to religious groups, such as the tendency towards sacralization, will not be universally present within all religious groups, and will be present in many non-religious groups. For example, we may expect to see a stronger tendency towards "sacralization" in political parties or gangs than in a US Presbyterian congregation in which involvement does not extend beyond sharing casseroles on Sunday afternoon.

Nevertheless, the evidence does suggest that there is something about religiosity that impacts self-regulation uniquely. Within this chapter I will argue

that this "something" has less to do with the conceptual content of beliefs in the afterlife or supernatural agents and more to do with the symbolic relationships that religious systems tend to embed individuals within. If the different socialization habits of the Nso and German mothers led to such dramatically different emotional and regulatory outcomes, then we need to ask whether a form of socialization occurs within religious engagement that could have similar effects. In section 4.4 I will argue that religious systems tend to enact a set of highly structured actual and symbolic relationships, which inculcates values that closely resemble the Nso mothers' goals of respect and obedience.

4.2 Moral emotions

The psychological research on moral emotions is one of the areas where the importance of emotion within decision-making and behavior has become increasingly clear. Over the past two decades, researchers have tracked a variety of ways in which particular emotions shape behavioral responses to moral situations. Through a review of this research I will argue that these particular cases are indicative of the more general ways in which emotional responses to situations provide an immediate judgment that persuasively motivates behavioral reactions. Throughout this review, religious engagement will recede

into the background, but the next section will address the ways in which these emotional responses are shaped through socialization processes, which will provide the basis for understanding how religious engagement impacts the emotional processes relevant for motivating regulatory behaviors. Before getting into this research, however, it is important to engage the philosophical commitments of these researchers since this can be conceptually fraught terrain.

4.2.1 The philosophy of moral emotions

Often the research on moral emotions is framed as a riposte to the view that deliberative reasoning is the crucial determinant of moral behavior. This rationalistic perspective is not a straw man. Through most of the 20th century, the psychological study of morality relied on a rational theory of moral judgment. Kohlberg's (1969; Kohlberg, Levine, & Hewer, 1983) hierarchy of moral reasoning embodies this rational focus as it describes the way people engage conscious reasoning processes to resolve moral dilemmas and how learning more mature forms of reasoning leads to improved moral judgments. Researchers since Kohlberg have largely moved away from his stage-based perspective on internal development and instead emphasize the way moral reasoning processes grow through social interactions (e.g., Nucci & Turiel, 1978). But Kohlberg's main idea,

that moral judgments are made through a process of reasoning and reflection, remains a central tenet of this branch within moral psychology.

Drawing from Hume's (1739/2000) argument that reasoning is always subservient to emotions, researchers working on moral emotions have challenged Kohlberg's emphasis on reasoning in moral decision making. This rebuttal began in the 1980s as Kagan (1984) forcefully argued that most reflective moral judgments are post-hoc justifications for emotional reactions that have already been made. Harris (1989) documented the development of moral emotions in young children and how these emotions drove responses to any norm violations. More recently, these arguments have been taken up by Haidt (2001; 2003) and others (e.g., Greene, 2013) who integrate evidence from a wide range of disciplines to provide a solid foundation for the growing perspective that emotions are steering moral judgments with a force that swamps the influence of reasoning processes.

In many ways this philosophical debate seems uniquely decidable on the basis of evidence. For example, there is strong evidence that manipulating peoples' emotional responses to situations has downstream effects for their moral judgments of those situations. In one such experiment, Wheatley and Haidt (2005) hypnotized participants to experience disgust connected to a specific,

otherwise arbitrary, word. When these participants then made judgments about different moral scenarios, if the description of the scenario contained the disgust laden word, their judgments became more severe. Other studies have induced disgust using fart sprays, dirty rooms, (Schnall, Haidt, Clore, & Jordan, 2008), or bitter drinks (Eskine, Kacinik, & Prinz, 2011) with similar effects (see Chapman & Anderson, 2013). In each case the studies confirm that changing an individual's emotional experience, in this case disgust, affects their moral response.

This is not to say that the rationalist theory of moral judgment lacks evidence. For example, many studies have found that people tend to cite the presence of harmful consequences as a determinant of whether an action is morally right or wrong (e.g., Turiel, Hildebrandt, & Wainryb, 1991). These results suggest the importance of reasoning based on expected consequences as a crucial factor in moral judgments. But, part of the force in the arguments for emotion over reasoning comes from the fact that these previous experiments do not strictly rule out the possibility that these reasons are post-hoc justifications for judgments already made. Directly testing this possibility, Haidt and colleagues (1993) found that participants' affective responses to moral dilemmas, presented as vignettes, were better predictors of their moral judgments than the rational claims about harm that participants gave (see also Haidt & Hersh, 2001). Other

experimental designs undermine the importance of reasoning within moral judgments by thwarting the reasons people typically give. These dilemmas are written to exclude the possibility of harm, unfairness, or coercion. For example, Haidt, Bjorklund, and Murphy (2000) presented participants with a story about two siblings making love. The story is written to explicitly exclude any possibility of hurt or danger, but even in the absence of any justification participants nevertheless stick by their initial judgment– "I can't explain it, I just know it's wrong" (Haidt, 2001, p. 814). In other words, even when their reasoning is unfounded or explicitly confounded, people do not change their initial moral judgments (see Prinz, 2006; 2009). Collectively the evidence appears to substantiate Hume's position– emotions seem to be reliably steering the moral wagon, though this is not uncontested (see McAuliffe, 2018).

It is worth pausing here to consider the conceptual entailments of this claim. More specifically, this distinction is not drawing a sharp line between emotion and cognition. Instead, Haidt's (2001) social intuitionist model distinguishes between two types of cognitive processing: intuitive and reasoning. Since writing in 2001, Haidt's model of dual-process theory, which provides the basis for this distinction, has become somewhat dated. For example, he relies on the language of "systems" rather than "types" and draws the contrast along a host

of characteristics—such as effortless/effortful, automatic/controllable, unconscious/conscious, parallel distributed processing/serial, holistic/analytical (Haidt, 2001, p. 818)— which more current research suggests are distinct characteristics of information processing (see Evans & Stanovich, 2013). The current theoretical consensus on dual-process theory largely brackets these various dichotomies and leans towards the specific distinction between intuition and reflection based on the engagement of working memory and mental simulation (cf. De Neys, 2018). This current conceptualization, however, does not radically change Haidt's (2001) argument; the majority of moral judgments may still be made by quick intuitive responses that are largely emotional.

It is crucial to recognize that this is not a contrast between emotion and cognition, because the role of cognition within these intuitive responses preserves a place for the importance of belief and rationality. For example, Mercier and Sperber (2017) argue that even though rational justifications may not be faithful representations of the process by which we arrive at moral judgments, they may nevertheless serve important social functions. In particular, when people produce reasons for their judgment, they are committing themselves and their reputation to these reasons, while also enacting a process through which these reasons can be corrected by social feedback (Mercier & Sperber, 2017). In

other words, our moral responses may not be guided by ratiocination in the moment, but attempting to reasonably justify these responses among peers provides a way, over the long run, to either confirm and solidify the judgment or arrive at a new judgment. Arguing that emotions, not rationality, drive moral reasoning risks obscuring the importance of such processes. This balance between the drawn-out social functions of reason and the immediate appraisals of emotions is illuminating for our purposes because it acknowledges the possible influence of beliefs and explicit standards even while highlighting the importance of tacit emotional appraisals. Along these lines, within my argument I am not arguing that religious beliefs are irrelevant or inconsequential for the motivational processes within self-regulation. Instead I am arguing that we must consider these beliefs alongside the relational and emotional processes that likely shape how these beliefs are engaged.

As we turn to the research on the importance of emotions within the development of moral responses in particular and self-regulation in general, it is important to keep this philosophical terrain in mind. My emphasis on emotion is meant as a corrective to the current emphasis on religious beliefs. Rather than drawing a dichotomy between emotion and reason and then defending one side, I am attempting to highlight the way that both processes are crucial within the

motivations people have for self-regulation. Adopting a social perspective on the relationship between religion and self-regulation demands that both processes stay in view.

4.2.2 Mapping the terrain

To clarify the crucial role of emotions within the motivational processes that guide self-regulation, it is necessary to first highlight the key feature of those emotions that researchers have designated as particularly "moral." Recall Frijda's (1986) functionalist position that all emotions have action tendencies; the essential feature of moral emotions is the type of behaviors they tend to elicit. Within the theoretical work on moral psychology, Haidt (2003) distinguishes moral emotions as those that impact prosocial behaviors in particular.

> Emotions generally motivate some sort of action as a response to the eliciting event. The action is often not taken, but the emotion puts the person into a motivational and cognitive state in which there is an increased tendency to engage in certain goal-related actions (e.g., revenge, affiliation, comforting, etc). These action tendencies (Frijda, 1986) can be ranked by the degree to which they either benefit others, or else uphold or benefit the social order. (p. 854)

In other words, moral emotions are characterized as those that are responsive to deviations from or abidance by the social order and correspondingly increase the tendency to act in prosocial ways, i.e., ways that stabilize that order.[42] If we recall from the previous chapter, the social order is a set of norms, which I argued are highly relevant for regulation (both by directly providing standards for regulation and by shaping the overall social context within which regulation occurs). Suggesting that there is a set of emotions, what we are calling moral emotions, which are directly tied to upholding that social order, also therefore suggests that these emotions are crucial for motivating self-regulatory efforts.

A clear example of this process emerges from Tangney and colleagues' (1991; 2003; 2007) extensive research program on shame, guilt, embarrassment, and pride. These emotions "function as an emotional moral barometer, providing immediate and salient feedback on our social and moral acceptability. Moreover, these emotions provide a countervailing force to the reward structure based on more immediate, selfish, id-like desires" (Tangney, Stuewig, & Mashek, 2007, p. 347). This later point, about moral emotions functioning differently than

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42. Haidt (2003) also suggests that moral emotions are distinct in that they are elicited by situations that are not directly connected to the self (p. 853-854), but if this was a necessary feature of moral emotions, it would rule out self-conscious emotions such as shame, guilt, embarrassment or pride, which tend to powerfully motivate prosocial behaviors as we will see below.

motivation based around individual reward, echoes one of my primary arguments about the crucial difference between self-centered versus socially-centered reward structures. As such, moral emotions, with their prosocial action tendencies provide a way to incorporate social dimensions within our understanding of the relationship between religion and self-regulation.

Tangney's (1991) early research worked to differentiate between shame and guilt, both in character and in consequence. Drawing from Lewis (1971), Tangney offers a substantial body of empirical work showing that shame is primarily about a negative evaluation of the whole self, while guilt involves a negative response to particular behaviors (Tangney et al., 2007). This distinction helps explain the different phenomenological presentations of the two emotions––e.g. shame tends to be more devastating—and the different ways people explain the cause of their distress (see Tangney & Dearing, 2003; Tracy & Robins, 2006). Since our inquiry is focused on the influence of emotions such as these on self-regulation, we are more interested in the different behavioral outcomes of shame and guilt.

These differences are substantial. There is a large body of research tracing these differences (see Tangney et al., 2007), so I will only briefly summarize some of the major points. Motivationally, shame spurs action tendencies that lead

individuals to withdraw, hide, and become more defensive. Guilt, on the other hand, leads individuals to engage the eliciting situation and constructively make reparations (Dickerson, Gruenewald, & Kemeny, 2004; Ketelaar & Au, 2003; Tangney, 1995). Shame and guilt also appear to have different effects on an individual's access to empathy and their enactments of anger—shame tends to impede empathy and amplify aggression while guilt produces opposite effects (Harper, Austin, Cercone, & Arias, 2005; Leith & Baumeister, 1998; Paulhus, Robins, & Trzesniewski, 2004; Tangney & Dearing, 2003). More pertinent to our current question, guilt also appears to be effective at preventing a variety of anti-social[43] behaviors, such as criminal delinquency, substance abuse, unsafe sex, and recidivism among inmates (Dearing, Stuewig & Tangney, 2005; Stuewig & McCloskey, 2005; Tangney, Mashek, & Stuewig, 2007; Tibbets, 2003). Shame, on the other hand, has no reliable impact on preventing these behaviors.

These impacts on antisocial behaviors is especially salient for our purposes because much of the evidence connecting religiosity and self-regulation comes from similar behavioral outcomes. For example, religiosity is associated

43. While "anti-social" carries connotations of a value judgment, I mean it in the technical sense of behaviors that deviate from the prevailing social norms. Given the fact that many social norms can actively marginalize particular groups, it is important to note that deviating from these norms is not necessarily a "bad" thing to do.

with lower incidence of substance abuse (e.g., Desmond, Ulmer, & Bader, 2013; Hoffmann, 2014; Montgomery, Stewart, Bryant, & Ounpraseuth, 2014) and other delinquent behaviors (e.g., Klanjšek, Vazsonyi, Trejos-Castillo, 2012). Some of these studies even directly test the role of self-regulation in mediating this influence (e.g. Kim-Spoon et al., 2015; Pirutinsky, 2014). Given the preventative impact that experiences of guilt can have on these behaviors, it is worth questioning whether these emotional processes may be playing a mediating role here as well. Could the self-regulation itself be a result of the way that religious engagement fosters experiences of guilt around particular behaviors?

Since both of these emotions are typically construed as reactions to a situation, they may seem to be subsequent to any regulatory act (or failure) and therefore unlikely mediators. But this is not necessarily the case. As Tangney and colleagues (2007) argue:

> Actual behavior is not necessary for the press of moral emotions to have effect. People can anticipate their likely emotional reactions (e.g., guilt versus pride/self-approval) as they consider behavioral alternatives. Thus, the self-conscious moral emotions can exert a strong influence on moral choice and behavior by providing critical feedback regarding both anticipated behavior (feedback in the form of anticipatory shame, guilt, or

> pride) and actual behavior (feedback in the form of consequential shame, guilt, or pride). In our view, people's anticipatory emotional reactions are typically inferred based on history—that is, based on their past consequential emotions in reaction to similar actual behaviors and events. (p. 347)

Below I will discuss more thoroughly how these forecasted emotional responses are constructed as a way to preempt sanctioning. For now, though, the salient point is that the action tendencies and the influence of shame and guilt on other psychological processes can be elicited through prospection alone. In other words, if the initial emotional appraisal of a situation does not already tilt the motivational scales one way or another, the prospective consideration of possible actions, shaded by learned emotional responses, may prove decisive.

Shame and guilt are not the only emotions to prospectively and retrospectively shape social actions. Prior to the recently revived interest in moral emotions, sympathy was one of the commonly recognized emotional tendencies connected to morality (Hoffman, 1982; Lewis, 1971). More recently Tomasello (2016) argued that sympathy remains one of the evolutionary foundations upon which the rest of morality is built:

> Our first step on the road to modern human morality is an expanded sympathetic concern for nonkin and nonfriends, which leads to helping them and, possibly, to a qualitatively new Smithian empathy in which the individual identifies with another in his situation based on a sense of self-other equivalence. Because of interdependence, this sympathy and empathy for others presumably contributes to the helper's reproductive fitness on the evolutionary level, but, to repeat, the evolved proximate mechanism contains nothing about interdependence and reproductive fitness. It is based only on an unalloyed sympathy for others, which may then compete with a variety of other motives, including selfish motives, in the actual making of behavioral decisions. (p. 49)[44]

In the last chapter we saw that intersubjectivity was a crucial component in the psychological process by which people internalize shared goals and become motived to abide by those norms. Here, Tomasello (2016) is arguing that the emotional experience of sympathy is a necessary foundation for intersubjectivity. In other words, the feeling of sympathy towards one's group members may be a

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44. By "Smithian" Tomasello is referring to Adam Smith's (1759/1976) account of human action as largely modulated by the natural affective bonds we share with those around us. Smith's account is often cited in contrast to Hobbes' (1651/1994) theory of humans as inherently selfish. Modern evolutionary accounts, such as that advanced by Tomasello (2016) strike a balance between these tendencies towards competition and cooperation.

more fundamental emotion that elicits the salience of the group's norms and the motivation to abide by those norms.

Behaviorally, the influence of sympathy on moral behaviors shows up through a variety of studies. For example, oxytocin, the likely hormonal component of sympathetic feelings (Carter et al., 2008), reliably leads people to distinguish between in-group and out-group members while motivating cooperative behaviors towards the former (De Dreu, 2012). In a longitudinal study, Malti and colleagues (2016) found that feelings of sympathy interacted with experiences of guilt to facilitate sharing and other forms of cooperation among children. Extending beyond humans, Tomasello (2016) cites experiments suggesting that chimpanzees and other primates feel sympathy—inferred by increased levels of oxytocin—for those individuals they are helping (e.g., Crockford et al., 2013; Wittig et al., 2014). Collectively the research supports the crucial role that feelings of sympathy play within both attachment to the group and abidance by the group's norms.

Just as the question emerged for guilt and shame above, the important role of sympathy within norm abidance demands that we consider whether religious systems foster a sympathetic concern for the group that would intrinsically motivate regulatory behaviors considered relevant for the group. If

so, then as Tomasello (2016) notes above, this motivational landscape would be "based on an unalloyed sympathy for others" (p. 49), which is distinct from, and potentially in competition with, more self-centered motivational tendencies.

Disgust, shame, guilt, and sympathy are not the only moral emotions. To name only a few, researchers also include embarrassment, pride, elevation, gratitude, loyalty, and anger (see Tangney et al., 2007; Tomasello, 2016). These emotions can be sorted in different ways: they vary in whether they are negatively or positively valanced; some are predominately about one's self and some are other-focused; and as we saw with guilt and shame, some lead to approach behaviors while others lead individuals to avoid (Janoff-Bulman & Carnes, 2013; Janoff-Bulman, Sheikh, & Hepp, 2009; Sheikh & Janoff-Bulman, 2010). These differences matter for how the moral emotions functionally impact prosocial behaviors. For example, Ugazio, Lamm, and Singer (2012) found that inducing anger, which involves a negative appraisal and a motivational tendency to approach, led to different moral judgments than disgust, which is also negative but more likely to elicit avoidant behaviors. These different moral judgments also depended on whether the situation was personal or impersonal. In short, the impact of emotions on moral judgment and action is complexly

determined by various features of both the emotion itself and the eliciting situation.

Given this complexity, the research fields investigating these differences in the character and function of moral emotions are vast. Some moral emotions have entire handbooks devoted to them. In other words, the preceding review is hopelessly sparse if my intention were to cover the nuance present in each moral emotion and the ways it impacts prosocial behaviors. Instead my purpose is simpler and broader– my aim is to highlight the fact that these emotions guide the regulatory processes, especially those relevant for social behaviors. Disgust can lead standards to become more stringent, which impacts the severity of one's social- and self-sanctioning. Guilt can motivate reconciliation or preemptively discourage behaviors that would demand such reparations. Sympathy fosters the internalization of moral standards and thereby motivates cooperative actions. The impact these emotions have on regulatory moral behaviors is direct, therefore they are highly plausible factors within the relationship between religious engagement and self-regulation. The possibility of their influence becomes even more likely when we consider what these emotional processes reveal about motivational tendencies more broadly.

4.2.3 The motivational landscape

One of my primary arguments within this chapter is that drawing moral emotions into view forces us to re-evaluate explanations of regulatory motivation that depend on a self-centered cost-benefit analysis. As Tangney and colleagues (2007) argue, these emotions often run counter to the selfish instincts that otherwise may provide the motivational basis for regulation. Tomasello (2016) makes the same point by noting how sympathy can be a motivational foil to selfish goals. It could be argued, however, that the motivational import of these emotions is only relevant for social or relational standards and if we turn to focus on personal goals, then selfish motivations again take center stage. But, throughout this dissertation I have argued that any sharp distinction between the personal and the social becomes blurred beyond meaning once we consider the pervasive exchange between the two domains. The most seemingly personal standards are absorbed from the social order and acting in accord with those standards signals one's relational position. From beginning to end, personal standards have a social dimension. Therefore, arguing that self-centered motivations govern personal goal pursuit while prosocial motivations govern social goal pursuit, relies on a sharp distinction that crumbles under scrutiny.

As a way around this false dichotomy, moral emotions direct our attention to the powerful concern individuals feel for the social orders within which they are embedded. The personal and the prosocial blend. From the ultimate perspective of evolution, maintaining this order is a self-serving endeavor as it likely increases individual, or kin, fitness. At a proximate level, however, the continuation of this order (either by individual abidance or through the social sanctioning of others' deviance) is an end unto itself.[45] The costs and the benefits that shape morally relevant behaviors are registered directly in the emotion experienced when prospectively or retrospectively considering these behaviors. This immediacy is rooted in the way emotions index one's relationship to the group: the cost of deviance is the experience of potential rupture within that relationship and the prevailing sense of order, which is part of why even subtle forms of social sanctioning can be so effective; the reward of abidance is an assurance of belonging and the continued stability of the perceived order. In other words, moral emotions force us to recognize the ways in which motivation is not a calculus weighing future benefits versus present

45. This framework for understanding moral emotions is heavily dependent on evolutionary perspectives in which emotions act as ways to encourage people to engage in strategies that are optimal for their good in the long run but may not immediately appear to be beneficial within the moment (see Frank, 1988; Greene, 2013; Ridley & Dawkins, 1981).

costs to the self, but instead is a socially oriented system that shapes the very experience of what is a cost or a benefit.

This is not to say that all motivation is socially-centered. Clearly, we often act with our own self-interest in mind and from an evolutionary perspective purely altruistic behaviors are unsustainable. But within our deeply social species, these prosocial behaviors are also unavoidable. My point is simply that a great variety of motives, both selfish and social, come into play when an individual is faced with a regulatory dilemma. When we consider the ways in which religious engagement influences regulatory decisions, we should at least consider the possibility that such engagement is not primarily oriented by selfish motivations but instead is shaped by a social landscape within which the individual's concerns are continually made subservient to the broader values and norms carried by the community.

Put differently, when people are regulating by religiously endorsed moral standards, are they relating to their god as a shop-keeper who will dole out rewards for good behavior, or are they reaffirming to themselves their identity in relation to that god? Of course, the answer is both– different people will relate in different ways. But, given the divergent motivational tendencies that emerge

from these different ways of relating, we should ask– which way of relating is more effective at fostering self-regulation?

Remember that while the German children struggled to resist the enticing treat, the Nso children did not seem to experience the puff-puff as a temptation. The primary determinant that Lamm and colleagues (2017) found was how these children were socialized to handle their emotions. For the Nso children, the decision was embedded within a broader socio-emotional context that was structured by hierarchy and concern for the social consequences of individual decisions. For the German children, the decision was experienced as a highly individual choice about what they wanted and when. Acknowledging the role of moral emotions in the regulatory process forces us to recognize that this motivational landscape is at least partially shaped before any deliberation occurs. Below I will argue that religions are precisely the sort of institutions that lead practitioners to experience standards as socially relevant rather than just personally significant. In order to construct that case, we must first engage research about the highly relational process through which emotions are shaped.

4.3 Relational emotions

My focus up until now has been on the way emotions shape regulatory processes, especially when those processes are socially relevant. Rather than portraying emotions as an index of regulatory success, as they are construed within the typical model (Carver & Scheier, 2016), this social perspective on regulation helps to recognize the role that emotions play in the antecedent motivational decision of whether to regulate or not. While this role may seem obvious at this point, it is far from clear how and why we should expect religious systems to bear any special influence on these emotional processes. In order to clarify this pathway, I will turn now to psychological research that highlights how those anticipatory emotional responses that Tangney and colleagues (2007) discussed are formed not only through past personal experiences but also through a persistent flow of social sanctioning and approval.

"The baby, assailed by eyes, ears, nose, skin, and entrails at once, feels it all as one great blooming, buzzing confusion" (James, 1890/1950, p. 488). William James' point was that perception is not a ready formed package that a child arrives with in the world. Instead, perception must be worked out through exploring the environment and discriminating feedback. By moving and bumping up against things a child's nervous system learns the contours of his

body. By integrating the swirling mess of greens and blues with her head bobbing and bold crawling, a child learns to see the horizon. Feedback hones ambiguous stimuli into a coherent experience of the world. I argue that a child's emotional experience is shaped in the same way, but the environment that provides the formative feedback is social as much as it is physical.[46]

In a helpful review, Morris and colleagues (2007) offer a three-part structure to organize the various ways that children learn to experience emotions and develop the capacity to modulate that experience through emotional regulation (ER):

> Firstly, children learn about ER through observation. Secondly, specific parenting practices and behaviors related to the socialization of emotion affect ER. Thirdly, ER is affected by the emotional climate of the family, as reflected in the quality of the attachment relationship, styles of parenting, family expressiveness and the emotional quality of the marital relationship. (p. 362)

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46. This does not imply that emotion is purely cultural any more than it means that visual perception is cultural. Twin studies continually find genetic influences on emotionality (e.g. Montag et al., 2016). The balance here is similar to that advocated throughout the book– biology provides the basic working material that culture shapes, and that biological starting point constrains and guides the directions that culture can take.

While Morris et al. (2007) are discussing emotional regulation in particular, these channels of influence also helpfully organize the various ways that a person's emotional experience more generally is shaped by their social context. Within this chapter, I take the third influence to be a more generalized effect of the second– the overall emotional climate emerges from the cumulative impact of socialization. Regardless of how you organize these processes, however, they all support the basic point that an individual's emotional experience is shaped through relationships with significant others.

4.3.1 Observation

One approach to understanding the formation of emotional experiences is research on social referencing. Klinnert and colleagues (1983) first describe social referencing as the way that people actively seek out emotional information from others in order to appraise an ambiguous situation. For example, in a classic experiment, researchers use a visual cliff, which is a large box, about as big as a dinner table. One side of the box is solid, but the other half is constructed to look like a drop-off or a short cliff. This drop-off side is covered with plexiglass at the same level as the other side, so any child or animal can safely move wherever they wish on the box. The point of this experiment is to see how children or other animals react as they approach the apparent drop-off (see Gibson & Walk, 1960).

In the context of social referencing, this apparent drop-off provides the ambiguous context. Is it safe or dangerous? As babies approached the drop-off, they looked to their mothers, who were standing on the other side of the box so that the child would have to cross the plexiglass to reach them. One set of mothers gave a happy, positive face, and the others were instructed to give a fearful or negative face. When the mothers expressed happiness, 14 out of the 19 babies crossed the plexiglass. When the mothers expressed fear, 0 out of 17 of the babies crossed (Sorce, Emde, Campos, & Klinnert, 1985). As an example of social referencing, this study and others like it show that, when children do not know how to feel about a situation, they will look to parents or trusted adults for emotional cues that then shape their experience.

Subsequent studies have repeated and nuanced these effects. Flom and Bahrick (2007) found that infants are aware of and can discriminate between others' emotions as early as 4-5 months old. This capacity also appears in young chimpanzees and other primates (Russell, Bard, & Adamson, 1997; Suddendorf & Whiten, 2001). The rate at which children look to their parents as emotional referents increases significantly from 6 to 24 months (Klinnert, 1984; Walden & Ogan, 1988), though the rate and character of social referencing is also influenced by the familiarity of the environment and the valence of the affective expression

(Walden & Baxter, 1989). Social referencing is not limited to parents– children also reference other adults who are familiar or who their parents appear to trust (De Rosnay et al., 2006; Klinnert, Emde, Butterfield, & Campos, 1986; Zarbatany & Lamb, 1985). Furthermore, children are not simply mimicking these adults' emotional reactions; Egyed and colleagues (2013) found that infants tend to differentiate between those emotional expressions that are communicative and those that represent another's own preferences. This finding also highlights the way that social referencing is a reciprocal process– for example, mothers regularly adjust their vocalization tones in order to communicate emotional information to their children, a habit called "motherese" (Gleitman, Newport, & Gleitman, 1984). Moving beyond the simple use of others' emotional reactions as data to inform immediate decisions, Hertenstein and Campos (2004) found that infants selectively retain this emotional information and that it shapes their later behaviors toward target objects. In other words, not only are children attentive to the emotional reactions of relevant adults, these reactions provide the basis for the children's own appraisal of similar situations and objects. So, imagine a child who regularly goes to temple and watches his parents' reverence towards the space and particular objects and people within that space. The seeds of his own

emotional experience towards religious objects and symbols will be sown by watching his parents' emotional cues.

Most of the work on social referencing focuses on early development, but adults appear to use similar processes—with a broader and more discriminating pool of possible referents—in order to interpret ambiguous stimuli (Walle, Reschke, Knothe, 2017). For example, Latane and Darley (1968) had participants wait in a room that was gradually filling up with smoke. If the other people in the room, confederates of the researchers, did not show any worry about the smoke, then the participants also appeared unworried. This study is commonly taken to show how conformity leads to by-stander effects, but it is also an early example of social referencing since participants are taking their cue from the emotional reactions of those around them.

The research that examines such processes among adults often occurs under the name social appraisal. This field of study dates back to Campos and Stenberg (1981) but was formalized later by Manstead and Fischer (2001). Social appraisal refers to the way that people's interpretation of an event or object is influenced by the appraisals that others give. A variety of studies now have shown that adults modulate their emotional expression and experience based on the presence and emotional expressions of peers (Jakobs, Manstead, & Fischer,

2001; Yamamoto & Suzuki, 2006). People use these social appraisals not only as templates for their own emotional experience but also as guides for their behavior. For example, Parkinson and colleagues (2012) had participants inflate a balloon as full as they thought it could go. Each of these participants also had a friend watching. If the friend expressed any anxiety, then the participant tended to stop inflating sooner, suggesting that they modulating their risk-taking behavior on the basis of others' expressions. Other studies have found that people tend to prefer objects if they see others attending to it with positive emotions (e.g., Bayliss, Frischen, Fenske, & Tipper, 2007; Bayliss, Paul, Cannon, & Tipper, 2006). In short, our emotional experience of the world—along with our resultant actions—is built, at least partially, from the emotions that we see others express.

It is also worth noting that these social appraisals often occur automatically. Mumenthaler and Sander (2015) showed participants images of faces that expressed ambiguous emotions, such as a blend of fear and surprise. While being shown these ambiguous expressions, participants were also subliminally (10 ms) shown a face that was either looking towards or away from the target face with the ambiguous expression. Importantly, this subliminal face was expressing unambiguous anger. If the subliminal prime face was looking

towards the target face, then participants were significantly more likely to judge the target face as fear rather than surprise. In other words, people were automatically registering the emotional significance of the situation and assessing it based on unconscious information.

The work on social appraisals is closely related, but distinct, from research on emotional contagion. The primary difference between these two processes is that emotional contagion is essentially a form of mimicry in which people match the emotional states of those around them (Hatfield, Cacioppo, & Rapson, 1994; Parkinson, 2011). This convergence of emotional responses among groups varies depending on the emotion (see Bruder et al., 2012), but is generally well-documented. Whether it is the spread of crying among infants in a nursery (Martin & Clark, 1982) or becoming sadder after speaking to a depressed individual (Coyne, 1976), emotional contagion is commonplace.

Analytically, emotional contagion is distinct from social referencing and social appraisals because the person is not responding to another's emotional assessment of the environment, instead they are matching the other's emotional state (Saarni, Campos, Camras, & Witherington, 2008). Some researchers, such as Cléments & Dukes (2017), argue that social referencing and social appraisals are also distinct because in the former case emotional information is being

communicated intentionally. But others maintain that the two processes are functionally equivalent (Walles et al., 2017). Regardless of how we distinguish these processes, the collective evidence suggests that people readily gather emotional information about their environment and this information shapes their own emotional experiences and their actions.

The fact that we form our emotional experiences based on the emotional information expressed by those around us is not surprising. But, consider the implications of this fact for the emotional experiences one has around religion. In order for a religious system to foster a sense of guilt around particular behaviors, it does not need to explicitly teach that those behaviors are bad; if other adherents express that guilt, then through these social processes of referencing, appraising, and mimicking, these emotional responses can become an established norm. Similarly, feelings of respect, authority, and loyalty towards one's religious symbols and group do not need to be explicitly taught, they need to only be present amidst salient members within the group. Given the importance of these emotions for regulation, discussed above, we are beginning to see how it is that religious systems might shape the emotional experience of adherents in ways that foster self-regulation.

4.3.2 Socialization and sanctioning

Beyond the ways that people absorb emotional information about their environment, there are also routes of influence in which others actively attempt to mold someone else's experience. The research literature on direct emotional socialization and sanctioning is vast (see Eisenberg, Cumberland, & Spinrad, 1998; Reeck, Ames, & Ochsner, 2015; von Scheve & Ismer, 2013), but it generally supports the significant role that trusted figures have in directly guiding the formation of a child's emotional landscape. For example, Gottman and colleagues (1997) tracked the various ways parents tacitly and explicitly teach their children to understand and manage their emotions. They found that when parents adopted active and warm emotional coaching strategies their children tended to internalize these capacities and develop more effective forms of emotional regulation (Gottman, Katz, & Hooven, 1996). Eisenberg and colleagues (1998; 1999) also developed a strong research program showing how parents' emotional expressivity and their reactions to a child's emotional displays are internalized by the child with downstream consequences for the child's emotional responses and social functioning. Recent studies have more specific foci, such as the way emotional disorders interact with socialization processes (e.g., Hurrell, Houwing, & Hudson, 2017), or the neurological-cognitive mechanisms that mediate these

processes (Reeck et al., 2016). In all these studies, the foundational tenet—that active emotional socialization has a significant impact on later emotional experiences—remains intact.

The simplicity of this point should not obscure the complexity of these processes. The socialization process is reciprocal, such that the child's own emotional expressivity in turn shapes the parents' reactions over time (Eisenberg et al., 1999; Morris et al., 2007). Furthermore, these repeated interactions accumulate into an overall emotional atmosphere within the family, which can set an influential tone for subsequent socialization processes. For example, the child's acceptance of emotional information from their mother depends on the quality of their attachment, such that securely attached children tend to rely on their mother's emotional information, while those who are insecurely attached, with avoidant tendencies, are less accepting of this information (Corriveau et al., 2009). This overall climate can also predispose children to recognize particularly relevant emotions with greater ease. For example, Pollak and colleagues (2002; 2009) have shown that children from physically abusive homes are especially attuned to subtle expressions of anger that children from non-abusive homes tend to miss. Again, the developmental psychology literature extends well beyond the limits of this review as it engages the complexity of this terrain, but

the key point is that emotional experience and the capacity to handle that experience is forged in relation to the people that are significant to the child.

While these examples are focused on the family, the same dynamics emerge in other social groups, whether they are as minimal as partners within an economic game or as complex as religious communities. The minimal context of economic games afford researchers the chance to investigate the nuanced role emotions play in shaping social behavior. For example, in an early neuroeconomics study Sanfey and colleagues (2003) tracked people's decisions and responses during an ultimatum game[47]. They found that increased neural activity in the anterior insula, indicating a heighten emotional response, was a significant predictor of people's tendency to reject unfair offers. While this study primarily analyzes the perspective of the person who sanctions, other research has found that there are individual differences in the way these sanctions from others are internalized. People systematically vary in the extent to which they experience pleasure from behaving fairly, and these experiences of pleasure are predictive of cooperative behaviors (Haselhuhn & Mellers, 2005). More recent

47. There are two players within the ultimatum game. One is the proposer and she gets to choose how to divide a sum of money with the other player. The other player, the responder, gets to either accept or reject the proposed split. If the responder accepts the split, then each player gets the proposed amount. If the responder rejects the offer, then neither player receives anything.

studies using similar games have replicated and nuanced these results. Van der Schalk and colleagues (2012) used an autobiographic recall task—essentially asking participants to remember a time when they felt pride (or regret) about acting fairly—to prime anticipatory emotions before playing the ultimatum game. Those who were primed to anticipate pride acted more fairly while those primed with regret behaved more selfishly (Van der Schalk et al., 2012, p. 4). Harkening back to the social appraisal literature, the same research team also found that observing others' emotions after a resource allocation game changes how people play. Specifically, seeing others' regret leads individuals to shift their choices to avoid the same emotion (Van der Schalk, Kuppens, Bruder, & Manstead, 2015). While these studies suggest the fluidity of emotional appraisals, they also point to the way that habituated emotional appraisals functionally guide social behaviors. Such experimental games are a highly idealized mode of social interaction, but they align with the developmental psychology research and collectively gesture toward a broader point– our emotional responses and the actions they elicit are shaped largely by the social environment in which we experience sanctions and approval from significant others.

The fact that others' direct expressions of emotion and communications about emotion shape one's own emotion experience is relatively unsurprising.

More pertinent for our current inquiry, research also shows that this emotional information is actively used in order to convey norms. Returning to the example above about motherese, the intonations that parents make are nuanced so as to convey various forms of emotional sanctioning and approval. Studying these vocalization patterns, Dahl and colleagues (2014) found that the emotional tones mothers use systematically vary based on their child's transgression: if the two-year-old children were harming others, the vocal tone was reliably intense and angry; if they were at risk of harming themselves, then mothers used more fearful tones; and if the children simply had an accident, then the tone was more comforting or playful (see also Dahl & Tran, 2016). In other words, before the children can register the semantic meaning of injunctions, emotional sanctions are used to convey moral rules and shape the child's appraisal of what constitutes right and wrong behavior. These studies on vocalization patterns are part of a larger research field in developmental psychology that analyzes the formation of morality through social interactions (see Smetana, Jambon, & Ball, 2013). The prevailing view among these researchers is that children actively rise to the developmental challenge of discerning the social rules and expectations surrounding them, and that parents aid in this process through direct forms of predominately emotional feedback.

For our purposes, the important point of this research is that the normative web of morality, through which individuals navigate the social world, is woven by the individual's observations of others' emotional reactions and through the internalization of others' direct sanctioning and feedback. This creates a network of emotional responses that guide one's sense of appropriate and inappropriate behaviors. As we saw in the previous section, these socialized emotional responses, especially in so far as they embody the group's norms, hold a powerful motivational sway on regulatory behavior. Since we are seeking to understand what facets of religious systems might lead to an increased tendency towards moralization and self-regulation, this body of research suggests that the answer lies within these social emotional processes. Rather than looking to the explicit moral teachings of a religious system, this research turns our attention to the relational fabric that permeates religious symbols, communities, and behaviors, and how it may shape the adherent's emotional experience of the world.

4.3.3 A sociological summary

The perspective I am advancing is aligned with work by the sociologist Randall Collins (2004). Collins draws from Goffman's (1959; 1967; 1971) work on micro-interactions to argue that the social order is woven by everyday rituals

formed through repeated social exchanges, which he calls interaction rituals. This is salient to our present purposes because Collins (2004) argues that emotional experiences are the key determinant in how people navigate this ritualized social environment. More specifically he argues that people are always actively seeking emotional energy:

> Everyday life is the experience of moving through a chain of interaction rituals, charging up some symbols with emotional significance and leaving others to fade… we are constantly being socialized by our interactional experiences throughout our lives. But not in a unidirectional and homogeneous way; it is intense interactional rituals that generate the most powerful emotional energy and the most vivid symbols, and it is these that are internalized. (p. 44)

When Collins (2004) is discussing symbols, he is referring primarily to representations of a group or a relationship. For example, an intimate conversation between two husbands will charge their marriage, the symbol in this case, with a positive emotional energy that is internalized and furthers their commitment to the relationship. When interaction rituals fall flat, on the other hand, then the participants' emotional energy drops and they become less committed to the joint symbolic reality of that relationship. Collins' (2004) theory

acts as a dynamic framework for understanding why relationships and allegiances shift and how these shifts change people's emotional experiences and their commitments to the relationship or group and its norms.

As such, interaction ritual theory helps to flesh out the perspective that I am advancing. We are both focused on how the social fabric within which we act is woven largely by emotional experiences of coherence or disruption. Collins (2004) also helpfully recognizes how commitments are formed through a blend of both intense and mundane rituals. Clearly, strong emotional experiences, fostered through intense rituals, act to solidify social bonds– this is present from military boot camps to fraternal hazing to religious rituals (Durkheim, 1912/2008; Whitehouse and Lanman, 2014). But, these conspicuous rituals may distract us from the mundane, habituated rituals, such as a mother's gentle admonishments or a friend's consistent support, which are also capable of fostering deep and abiding commitments.[48] Given the relative rarity of intense ritual and emotional experiences, I believe that if we are looking for the way norms are developed and

48. The contrast I am drawing here is similar to McCauley and Lawson's (2002) distinction between high frequency and high arousal rituals and Whitehouse's (2004) similar distinction between imagistic and doctrinal modes of religiosity. Both of these theoretical frameworks, however, are primarily considered with the question of religious transmission and persistence.

become impactful, then we must also remain attuned to the routine social interactions that provide habituated checks on an individual's behavior.

These checks bring us to a point of disagreement between Collins' (2004) account and my own. He continues Durkheim's (1912/2008) emphasis on collective effervescence, which is largely a positive experience of absorption into the group. Along the same lines, Collins (2004) argues that people actively pursue positive experiences of emotional energy. While I normally share such optimism, this focus on the pursuit of pleasure may neglect the important role of pain. More recent work on intense rituals and attachment to collective symbols suggest that dysphoric rituals are a more prevalent and influential way to foster strong attachment to the group (Whitehouse et al., 2017). I do not want to rule out the importance of positive feedback, but most moral standards appear to be communicated through sanctioning when they are transgressed. In other words, just as the child learns the contours of his body by bumping into objects, he learns the moral environment largely through transgressing and being reprimanded.

This point of divergence, however, is minor when compared to the larger perspective that I share with Collins (2004). Conventions and moral norms are passed along to children through direct and indirect socialization processes,

which shape their emotional interpretations of the social world. These emotional responses provide quick appraisals of situations and guides for what constitute appropriate behavioral reactions. In short, the normative fabric of the social world is largely woven from emotional threads upon a relational loom.

This point may seem so obvious that it needs no argument. But my claim is that viewing emotional development as a form of social learning helps us see that it is not just any relationship that matters. The particular effectiveness of a relationship in shaping emotional responses will be subject to the same pressures that constrain social learning processes. Sanctioning from a stranger will not carry the same weight as sanctioning from a respected authority figure. Social accolades from a friend will be more highly valued than applause from a set of strangers. In short, one is most likely to absorb the emotional reactions of family, peers, and prestigious, successful, or trusted figures within one's broader social group. This aligns with the research highlighted in the last chapter on the social dynamics that influence the development of normative behavior (Chudek, Heller, Birch, & Henrich, 2012; Legare & Watson-Jones, 2015; Over & Carpenter, 2012). If moral emotions provide the push and pull of norms, then we should not be surprised that their development occurs through the same social dynamics that shape conventional behavior.

In the previous section I argued that emotional responses not only shape the contours of what we perceive as right and wrong, but they are also a powerful motivational force that brings the costs and benefits of action into the present by judging prospective responses on the basis of past experiences. Furthermore, these judgments are made on a relational scale, because the cost of transgression is the threat of fracturing the relationship and losing the order that relationship provides. The importance of emotion within motivation forces us to recognize its role within self-regulatory processes. The fact that these emotional responses are shaped through relational dynamics directs our attention to those facets of religious systems that are likely to be influential determinants of an individual's self-regulatory capacities. Alone, the commands of a parent do not carry weight; they become persuasive when embedded within the fabric of the relationship. Similarly, it is not the moral rules of a religion that carry weight; it is the way those rules are enforced and embodied through the actual and symbolic religious community.

4.4 Relational religion

Throughout this chapter religion has receded into the background. This was necessary in order to foreground the psycho-social processes that determine

when conventional or moralized norms become persuasive guides for behavior. My emphasis on these processes is part of my larger commitment to the view that religion is natural and therefore subject to the same psycho-social dynamics as any other natural system. As McCutcheon (2012) said: "it is only when we start out with the presumption that religious behaviors are ordinary social behaviors—and not extraordinary private experiences—that we will come to understand them in all their subtle yet impressive complexity" (p. 14-15). In other words, religious systems—along with the norms they induce, the social processes that entrench those norms, and the resultant emotional responses—are no different than any other social system. These psycho-social processes provide the channels through which we should expect religious engagement to shape self-regulation; just because the group or behavior is "religious" does not mean that it has special access to alternative routes of influence. This raises the important possibility that "religious" engagement may bear no special influence above and beyond that of engaging within any particular social group.

While this remains a possibility, the bulk of empirical studies suggest that religiosity does bear an influence on self-regulatory capacity (Laurin & Kay,

2016; Zell & Baumeister, 2013).[49] My naturalistic commitment to religion as ordinary therefore suggests that any special influence is a difference in degree rather than kind. In other words, there are ways by which norms become particularly persuasive guides for behavior, and religious systems tend to engage these persuasive means—though they remain available to other social systems as well. In the previous chapter, moralization processes emerged as a likely candidate for how norms become persistent and influential guides for behavior. The psychological efficacy of these moralized norms, however, remained a lacuna within my explanatory framework. Now that we have unpacked some of the emotional processes by which norms are persuasive and how these processes are shaped, we are in a place to discuss how it is that religious engagement might influence this dynamic. That is the purpose of this section.

Before discussing the ways that religious engagement may shape the emotional processes relevant for motivating self-regulation it is worth briefly recalling my argument from the last chapter in more depth. We began that chapter by recognizing that the standards endorsed by religious systems are

[49] These studies do not directly compare religious engagement with other forms of social engagement such as joining a sorority, the army, a service club, or a sports team, so the claim of a special influence is tentative. But it is unlikely that the less religious individuals within these studies are utterly unengaged socially, so it remains reasonable to suppose that religious engagement could provide an especially effective influence on self-regulation.

social norms. As such, when people abide by these standards, they are not only pursuing the goal itself, they are also indirectly pursuing the goal of enacting their affiliation. This affiliative function raised the point that an individual's religious identity—with its associated motivational and behavioral tendencies—is a social identity. As social identities vary in their degree of salience and persistence across domains, the initial hypothesis emerged that religious identity may be a special case of social identity with strong salience and persistence ranging over various arenas of life. In order to articulate this hypothesis more clearly, I reviewed the research on social norms that distinguishes between descriptive conventions (what people typically do) and injunctive oughts (behaviors that garner social approval or sanctioning). If conventions are moralized into injunctive norms, then they become particularly persuasive guides for behavior. Recognizing the importance of such moralization processes for self-regulation led me to re-articulate the initial hypothesis with more specific terms for what the salience and persistence of religious identity would mean: religious engagement impacts regulatory behaviors by leading individuals to more pervasively moralize across different domains or to grant moral norms the extra imperative weight of sacralization.

I am recalling this hypothesis here because it has a motivational dimension that was previously left unspecified. As I have argued throughout this chapter, the moralization of norms is largely an emotional process wherein abidance and deviance (or the prospect of either) evoke strong visceral responses that bring the rewards and costs of regulation into the immediate moment. By lacing a norm with emotions, such as guilt or sympathy, the moralization process can change the motivational landscape surrounding that norm from one that is self-centered to one that is more socially-centered. As we turn now to religion, this motivational difference helps to highlight the features of a religious system that we should expect to be influential in determining whether or not a person tends to moralize those norms relevant for self-regulation.

As we saw in the previous section, the shaping of emotional processes—such as those involved in moralization—occur largely through relationship. This is not to say that explicit injunctions are not important, just that their internalization and efficacy will depend on their embeddedness within a relationship. This relational stance provides a marked contrast to the current explanations for why religious engagement would motivate self-regulation. Recall from the beginning of this chapter that those explanations depend largely on the conceptual content of religious systems: explicit moral dictates are

motivationally loaded by belief in divine reward or punishment which shifts the rational calculus in favor of abidance. I am not arguing that the conceptual content of these beliefs is insignificant. But, if that content were the primary motivational driver within this relationship, then we should be very surprised by studies where religious engagement has varying or inconsequential impacts on self-regulation (e.g., Morgan, et al., 2016, Paglieri, et al., 2013; Shenhav, et al. 2017), because whatever that content might be, it is a stable feature of religious systems. Therefore, while beliefs may be influential, we are likely to gain better explanatory traction by adopting a perspective that can accommodate the different ways that people relate to these beliefs.

For example, two people may share the belief in a god that watches them, but if one relates to this belief in warm fashion that is focused on the attributes of forgiveness, then she will have different behavioral outcomes from the other who relates to this belief fearfully with a continual concern about punishment (e.g., Good, Inzlicht, & Larson, 2015; Ironson et al., 2011). One could argue that this is still a difference in content, and it is, but the content varies based on the relationship between each person and the symbolized entity. Since we are seeking to understand how religious engagement shapes a motivational landscape, then this relational perspective will keep us attuned, not just to the

content of belief, but also to how that content can become influential within an individual's emotional experience.

It is worth noting that I am far from the first to suggest a relational perspective on religiosity. William James defined religion as "the feelings, acts and experiences of individual men in their solitude so far as they apprehend themselves to stand in relation to whatever they may consider divine" (1902, p. 42). Even though this definition is often critiqued as overly individualistic, it is noteworthy that it is still a deeply relational definition. The feature that makes particular feelings, actions, or experiences "religious" is their occurrence within a context in which the individual perceives herself *in relation* to what she considers sacred. More recently, Sandage and colleagues (Sandage & Harden, 2011; Sandage, Jensen, & Jass, 2008; Shults & Sandage, 2006) advanced a similar perspective that suggests a relational perspective not only helps explain the developmental transitions people experience within their spiritual or religious lives, but also is uniquely suited for understanding the social and interpersonal dimensions of religiosity. In this section I continue these lines of thought to argue that a relational perspective can also help us reinterpret the moralization processes that mediate the connection between religiosity and self-regulation.

In particular I argue that, insofar as religious systems differ from any other social system in their capacity to foster moralization and self-regulation, this difference emerges because religious systems encourage moralization by symbolically instantiating the social order within beliefs about supernatural beings, which are uniquely capable of drawing the religious participant into an obligatory relationship with that order. There are two pieces to this hypothesis: first, the social order of a group is part of what is woven within their supernatural beliefs; second, by being anthropomorphic, these beliefs activate many of the same social processes that prevail within any group, which leads adherents to subordinate their personal emotional response to the dictates perceived within that order. I will take up each of these pieces in turn.

4.4.1 Anthropomorphism

Within the cognitive science of religion, research on the ways people relate to the supernatural tends to focus on the content of these beliefs and the way they arise from our predispositions toward anthropomorphism. We see faces in the clouds (Guthrie, 1995), hear voices in the bushes (Barrett, 2004), and regularly assume intentionality behind processes that we otherwise know are agentless (Bering, 2006). Each of these psychological tendencies have been offered as

proximate by-product explanations for the prevalent belief in supernatural beings– they seek to explain how such beliefs arise.

While these accounts may be true, it is worth pausing to ask: *what* is being anthropomorphized? When we see a face in the clouds, the stimuli that are interpreted as a face are the light-waves reflecting off of the cloud. What are the stimuli that are interpreted as a supernatural being? Durkheim (1912/2008) posed a similar question over a century ago: "the totem is above all a symbol, a material expression of something else. But of what?" (p. 154). His answer provides the foundation for our own:

> The totem expresses and symbolizes two different kinds of things. On the one hand, it is the external and tangible form of what we have called the totemic principle, or god. But on the other, it is the symbol of that particular society we call the clan… it is the sign by which each clan distinguishes itself from others… So if the totem is both the symbol of god and of society, are these not one and the same? (p. 154)

Durkheim's rhetorical question elaborates beyond the totem and reiterates one of the primary points we drew from his work in chapter 2: "the idea of society is the soul of religion" (p. 314). In other words, from a Durkheimian perspective, the

social order—the idea of the group with its associated expectations for behavior—is that which is anthropomorphized into the supernatural.

This is a strong expression of the more reserved claim that I am advancing– the social order is part of what is symbolically instantiated as the supernatural. My claim is more reserved than Durkheim's thoroughly social etiology because I believe that the supernatural also symbolically represents hoped for answers to existential problems surrounding origins, death, meaning, goodness, and value, to borrow a few from the philosopher Robert Neville (2014). But even if the social order of any given group only constitutes part of what is symbolically instantiated as the supernatural, it remains significant that people continually compose this symbol in forms to which they can relate. Within Durkheim's (1912/2008) analysis this is the totem, but the prevalent belief in supernatural beings—whether they are spirits, ancestors, deified saints, or gods—provides a more cross-culturally apparent form of this symbol. Below I will review evidence that supports this claim by showing that people tend to perceive supernatural beings as especially concerned with the moral issues of their group, but first it is worth unpacking the second part of this argument.

By anthropomorphizing the social order, religious adherents are brought into relationship with it and this relational dimension lends the social order its

emotional efficacy. Durkheim (1912/2008) provides a helpful entry into this point as well:

> An individual or collective object is said to inspire respect when the conscious representation of it is endowed with such power that it automatically stimulates or inhibits behaviour, regardless of any relative consideration of its practical or harmful effects. When we obey someone because of the moral authority we recognize in him, we follow his advice not because he seems to be wise, but because a psychic energy immanent in the idea we have of this person makes us bend our will and incline to compliance. Respect is the emotion we experience when we feel this internal and entirely mental pressure. We are then moved, not by the advantages or inconveniences of the behaviour prescribed or recommended to us, but by the way we imagine the person who has recommended or prescribed it. (p. 155)

There are several important points within this quote. One, it is deeply relational. The influential force exerted by moral authority is not about the conceptual content of our belief in this person or her moral dictates—it is not because she seems wise—it is about the respect people feel towards her. Durkheim's (1912/2008) uses the term 'respect' very broadly to capture the felt sense of moral

authority carried by a person or object; in contemporary psychological terms, this respect could be decomposed into various social-emotional attributions such as prestige, status, honor, or authority, any of which would lend the individual or object extra persuasive influence. Second, the influential force carried by respect is not instrumental or utilitarian. Religious individuals do not follow the moral dictates of their religion because of what they hope to gain, they abide in order to maintain the relationship they perceive themselves to be in with the supernatural as represented and reinforced by their community. This point unpacks some of the social dimensions carried within intrinsic religiosity– the effective weight of moral norms is carried by the emotions that embed the norm within a relationship. Below I will review evidence that this dynamic is especially salient within the influence religion bears on self-regulation.

In many ways we have returned to the place we arrived in chapter 2 with Durkheim's claim that the religious, the moral, and the social order are inextricably interwoven: "religious force is nothing but the collective and anonymous force of the clan… [Religious forces] are moral powers since they are wholly constructed from the feelings the collective moral being arouses in those other moral beings, the individuals" (1912/2008, p. 166-168). What we can now bring to this place is a richer understanding of the psycho-social processes

through which moral authority is formed and gains its force. In order to give substance to that formative process, consider three examples.

4.4.2 Examples

Imagine being a child and joining your parents on a trip to the local pagoda. They bought flowers, fruit, and gold leaf beforehand. They also brought along a picnic to enjoy. You and your family remove your shoes and flip flops before entering. The complex itself is incredible– bustling with other people, some strangers and some friends. Some are carrying flowers and fruit, just like your parents, though many of them look urgent. Others are relaxing with each other and eating their lunch. The building is beautiful, unlike any home or shop you have been in. Bells are ringing. The floor and walls are marble, the ceilings are high, and there are paintings and statutes everywhere. In one alcove people are giving a small statue their flowers and pouring water over the statue's head. Your mother leads you through a different hallway. Then you enter a space that seems to be the center of the complex, where you can see a huge statue of the Buddha. It is covered in gold leaf. The space is quiet, nothing like the normal bustle and noise of the street. There is a side door, a special door, where only certain people can enter to lay the flowers, fruit, and gold at the feet of the Buddha. Your father takes the gifts your family has brought and heads that way.

You sit with your mother, feet carefully pointed away from the Buddha, and you are surrounded by people bowing, or quietly watching the Buddha. Some have their eyes closed, hands pressed to their lips. Your mother bows. You bow. What do you feel?

Does that seem too exotic? Imagine being a child again and seeing your mother sick. She has not been able to work for the past two weeks. Your father is worried and you can hear him talking with your grandmother and the rest of the family each night. You do not know what is wrong, but you know everyone is worried. One day your father takes you with him, you buy gifts again, this time strange liquids from a shop you do not know, and go to a house a little outside of town where a man you have never seen before lives. Your father gives the man the liquid and some other gifts along with an envelope. Then the man leaves and you and your father wait. Another guy brings you lunch. Later in the afternoon, the man returns and speaks to your father briefly before taking you both behind the house. There is a statue, it looks like a horse but is painted with white and red stripes and is surrounded by candles and flags. The man lights a fire near the horse statue. He throws strange plants on the fire and sings songs you do not understand. Your father is very serious this whole time. He is watching the man, cautious and respectful. At one point the man begins to shake, his voice raises

and it sounds like he is arguing with someone, but there is nobody else there. Your father looks slightly afraid. Then the man slumps, quiet as if napping. This all takes the rest of the afternoon, and you and your father are exhausted as you make the long trip home. The next day, your mother is out of bed, still sick but certainly feeling better. What do you feel?

Still too foreign? Imagine you go every weekend with your family to church. You sit through the service, you like the singing, but not the long readings or the sermon– both are hard to understand. In the middle of each service, everything seems to shift. The priest, the main guy everyone's been watching the whole time, moves to a large table, that is elevated above everything else. There are candles, gilded cups and a silver tray. He begins reciting a whole different sort of reading from a special book, speaking fast. Everyone is silent as he bows, lifts up a large wafer and then a fancy cup. His actions seem exaggerated and very deliberate. Then, all the adults and older children silently make their way up to the table, but your parents tell you to stay in the pew. Everyone bows in front of the priests receives a small piece of bread and a little sip of from a gilded cup. You watch this every week, until one week your parents tell you it is finally your turn to join. What do you feel?

My point is not that you will all feel the same thing or even that you will feel awe or reverence or some presumably prototypical religious-y feeling. For all I know you are more likely to feel bored and eager for lunch. My point is that all of the trappings of social learning are infused throughout these rituals. Grant me one more example.

Imagine that instead of a statue or a healer or communion laying at the center of these rituals there was a person. Week after week you and your family go this amazing and wealthy building. You bring gifts, wear your nice clothes, and your parents always carry an air of reverence. Each week there are elaborate rituals building up to a moment when your parents are finally allowed in to visit this person. You are kept outside, but can see in through a window. Your parents bow before this person. They give her gifts. Then they leave. There are lots of people and all of them are behaving the same way towards this mysterious person in a special room, in a special building, that you go a visit at set times or particularly urgent times. Now, say you finally met this person, what would you feel? Respect? More importantly for our inquiry about self-regulation, imagine she asked you to do something for her. Would you do it? Why?

4.4.3 Symbolic relationships

Of course these examples are idealized reconstructions and as such do not prove my point, but they hopefully help to highlight how a person's symbolic representation of the supernatural is woven from deeply social processes. While the content of these representations may be filled in through explicit teachings and stories, the relational posture towards the supernatural is composed more tacitly– through the behavioral and emotional cues of friends and family. These cues are the same sort of signals that we use to understand the contours of our social environment– through social referencing and appraisals we use these sorts of signs to understand who and what is important, prestigious, valuable, dangerous, etc. We not only tacitly absorb these signals and their significance, we are also directly sanctioned into following them– if the child points her toes towards the buddha statue, she is reprimanded. In short, the moral authority of the supernatural is enacted by the same social learning processes that bestow prestige, authority, and respect on any other member of the group. The explicit content of this morality is as variable as the norms of any group, but its efficacy will depend on this relational dimension.

Clearly I respect Durkheim, but his authority does not guarantee my argument. Fortunately, there is evidence that the relational authority that one

bestows on the supernatural is an influential factor in whether one tends to moralize conventional norms and whether religiosity fosters self-regulation. This evidence can be organized along three different routes. First, I will consider evidence that the social order, especially in the form of moral norms, are instantiated within religious beliefs. After that point is developed, I will review evidence that one's relationship to these beliefs is largely determined by social learning processes. And finally, I will engage the line of research that suggests it is this relational posture towards particular beliefs that determines the relationship between religious engagement and self-regulation.

Some of the evidence that the social order is symbolically woven within religious engagement was covered in the previous chapter. Recall the work on moralization and objectification processes. Throughout this research, one of the consistent findings is that religiosity predicts the tendency to see moral norms as objective parts of reality (Goodwin & Darley, 2008; Piazza, 2012; Piazza & Landy, 2013; Piazza & Sousa, 2014; Sheikh, Ginges, Coman, & Atran, 2012). While this does not directly show that the social order is that which is symbolized within religious beliefs, it suggests that the two are not easily parsed. In other words, part of the system of religious beliefs links a sense of the supernatural with a sense that moral rules are objective.

A separate stream of evidence in support of this point comes from recent work on religion within cultural evolution. While these researchers are particularly interested in the way religious systems may have facilitated the expansion of large-scale prosociality (see Norenzayan et al., 2016), one of their key hypotheses is that "representations of gods as increasingly knowledgeable and punitive, and who sanction violators of interpersonal social norms, foster and sustain the expansion of cooperation, trust, and fairness" (Purzycki et al., 2016, p. 327). Setting aside the capacity to foster cooperation, the more primary part of this hypothesis is that people tend to form representations of gods as morally concerned. This assumption is based in other research, such as Purzycki's (2013) fieldwork in the Tyva republic where he studied how people think about the mind of god. Christians reliably reported that god was actively concerned with moral behaviors, and even though people did not explicitly attribute Tyvan spirit-masters with any particular moral concern, they nevertheless tacitly rated these spirit-masters as more knowledgable about moral information than non-moral information (Purzycki, 2013, p. 172-173). In short, people's representations of what supernatural beings care about is interwoven with the moral norms of their group. This research field is relatively new, and it has found mixed results in the efficacy of these sorts of beliefs for supporting

cooperation (e.g., Purzycki et al., 2018; Watts et al., 2015), but a fairly stable finding amidst these studies is that one of the things the gods often care about is maintaining the moral norms that prevail within a group.[50] My claim is not that this is a universal feature of religious systems, but instead that it is a common feature and that when present we should expect religious engagement to foster self-regulatory capacity. This is not the only component of our framework however.

Not only is the social order interwoven within religious beliefs, evidence suggests that people do not hold these representations as they do other beliefs–instead they relate to these beliefs through the processes of social learning. The examples given above hint at the ways social referencing and social appraisal would foster particular emotional responses toward the supernatural. These social learning processes, however, depend on the more fundamental signaling process of credibility enhancing displays (CREDs; Henrich, 2009). CREDs are actions that help people assess the reliability of someone else's beliefs. As Henrich (2009) puts it:

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50. Other concerns include environmental management and ritual performance as well (see Purzycki, et al., 2012; Purzycki & Sosis, 2011).

> [CREDs] provide the learner with reliable measures of the model's actual degree of commitment to (or belief in) the representations that he has inexpensively expressed symbolically (e.g., verbally). Learners should use such displays in determining how much to commit to a particular culturally acquired mental representation such as an ideology, value, belief or preference. (pp. 244-245)

So in the example where the family brought gifts to leave with the statue of the Buddha, this act not only signals the importance of the represented being, it more fundamentally demonstrates the reliability of the family's belief in that supernatural being. More simply CREDs reiterate the common aphorism "practice what you preach."

Henrich (2009) developed this concept to help explain how, within an evolutionary context in which we are heavily dependent on social knowledge, we need to be able to discern what is reliable information from that which is likely false. Subsequent research on CREDs has focused on how they determine the acquisition and transmission of religious beliefs. For example, Lanman & Buhrmeister (2017) found that exposure to CREDs predicted religiosity and theistic belief, even when controlling for other forms of religious socialization and practice. Willard and Cingl (2017) found similar results in the Czech

Republic and Slovakia, with exposure to CREDs being the most reliable predictor of why people held religious beliefs and participated in religious practices (see also Langston, Speed, & Coleman, 2018; Turpin, Andersen, & Lanman, 2018).

These studies on CREDs continue and nuance the long line of research showing that social processes have a strong impact on an individual's religiosity (e.g., Baker & Smith, 2009; Dudley, 1999; Hood, Hill, & Spilka, 2009; Hunsberger & Altemeyer, 2006; Hunsberger & Brown, 1984). For our purposes, the work on CREDs in particular helps to demonstrate that the cognitive content of these representations is not the primary determinant in its transmission or efficacy. In other words, religious adherents are much more attuned to what others' actions signal rather than what others' explicitly say. While not definitive, this stream of evidence suggests that an individual's relationship to the instantiated social order is established by watching the way that salient models orient in relation to these symbols.

The final component of my argument is that it is the character of this relational orientation to the supernatural that determines the relationship between religious engagement and self-regulation. This point gets us back to Allport and Ross' (1967) distinction between intrinsic and extrinsic forms of religiosity. These religious orientations are complex variables that likely capture

a variety of psychological processes and tendencies. The preceding analysis of social processes involved in religiosity, however, raises the question: what are the social and relational dimensions of this difference between intrinsic and extrinsic religious orientations? My hypothesis is that the distinction Durkheim (1912/2008) drew between following a moral command out of respect for the issuing authority versus out of instrumental interest captures an essential component of the social relational difference between intrinsic and extrinsic religious orientation. Moreover, the impact of religious engagement on moralization and self-regulation depends on intrinsic, respectful, orientation. As I reiterated in the introduction, when studies include Allport and Ross's (1967) distinction between intrinsic and extrinsic religiosity[51], it is only intrinsic religiosity that is positively associated with self-regulatory capacity. This divergent impact is well corroborated across a variety of studies (e.g., Bergin et al., 1987; Bouchard et al., 1999; Hosseinkhanzadel et al., 2013; Jonas & Fischer, 2006; Klanjšek et al., 2012; McClain, 1978). What Durkheim and the preceding analyses add to this body of evidence is a social interpretation.

[51] Typically this distinction is measured with Gorsuch and McPherson's (1989) more recent version of the religious orientation scale.

The different effects that intrinsic and extrinsic religiosity have on self-regulation is especially revealing for the difference between the self-centered, restraint-based account of motivation and the socially-centered account that I have developed through this chapter. One can safely assume that the intrinsically and the extrinsically religious hold similar conceptual content about god as omniscient, capable of punishing, morally concerned, etc. If that content were the primary motivational driver for the association between religiosity and self-regulation, then it should not matter how individuals orient to the supernatural. But, it does matter, in a significant and reliable way. Not only does it matter, but it is only those modes of religiosity in which religious engagement is an end unto itself that foster self-regulation.

These streams of evidence do not directly prove my alternative explanation for the motivational routes by which religious engagement would influence self-regulation, but they do pose important challenges for the existing explanations that focus on conceptual content while lending support for my relational alternative. The picture that begins to emerge is of the religious individual being brought into relationship with a symbolic world that is interwoven with the norms of the group. As that relationship develops, through regular enactment within the community, the individual becomes more attached

to the group and the symbolic supernatural beings or processes that the community is enacting. As that attachment grows, the individual begins to perceive the moral concerns of that group as an objective part of reality, which occurs as much through a gradual carving of her or his emotional landscape as from explicit teachings and stories of the tradition. Once those norms have become moralized and objectified, then the possibility of transgression is experienced as a potential rupture in the relationship the individual now feels with the group and the supernatural. This rupture is not only a loss of the relationship, but also a threat to the social order that the relationship embodies. This shift fundamentally changes the calculus of abidance and deviance from an analysis that weighs what is best for the self to a posture that is ready to subordinate personal proclivities to the needs and demands of the group as symbolically instantiated within the supernatural.

4.5 Conclusion

Not everyone who is religious follows this type of trajectory. People vary in the degree to which they are attached to their religious groups, the pressure they experience from conventional norms, their willingness to objectivity those norms, etc. Religious systems also vary in the degree to which they symbolically

represent moral concerns, how much they anthropomorphize those concerns, and the extent of ritualized practices that lend those symbols authority, respect, and prestige. Religious engagement, motivation, and self-regulation are complicated constructs.

As such, we should be attending to the various facets of each if we hope to gain explanatory traction on why religious engagement bears a reliably positive association with regulatory behaviors. The current explanations—that the conceptual content of religious beliefs motivate regulation by shifting self-centered incentives through promises of divine rewards—may explain a portion of the relationship. But, it relies on a very narrow construal of motivation, especially when the motivated behavior is as deeply social as regulating towards a religiously endorsed moral norm. The research on moral emotions from Tangney et al. (2007), Tomasello (2016), and Haidt (2003) collectively suggests that the motivational landscape guiding moral behaviors is so thoroughly social that a self-centered conception of motivation is inadequate to describe its contours. Therefore, a more promising route for explaining how religious systems foster self-regulation should account for these social dimensions of religious engagement and how they might shape the motivation landscape through which moral behaviors flow.

Turning to these relational dimensions of religion showed how religious communities, like any social group, are likely to establish moral norms by inculcating particular emotional responses among their members through processes of social referencing, appraisal, emotional contagion, and direct sanctioning. In this way, religious systems are no different than any other social group. Yet the evidence suggests that there is something distinct about religious systems. The current explanation focuses on the unique conceptual content of religious beliefs—i.e., divine rewards and punishments—but this explanation struggles to account for the variance between religious individuals, all of whom likely endorse these beliefs, but not all of whom show the religion/self-regulation association. Following Durkheim (1912/2008) I hypothesized that the salient difference lies within the way religious groups symbolically represent aspects of the moral order within their beliefs, such that people are drawn into a respectful relationship with that order as authoritative. This symbolic relationship is established through the same social learning dynamics that designate any authority within the group and as such is subject to the same dynamics that can erode that authority. Recognizing this relational dimension of religious beliefs helps explain the variance within the religion/self-regulation relationship by

highlighting who is motivated to regulate based on their connection with the group, and who is motivated to regulate for their own good.

Throughout this chapter I have supported this distinction between self-centered motivation and socially-centered motivation by emphasizing the emotional processes salient for self-regulation. Returning to a point I made earlier, this emphasis should not be taken as an antagonistic stance against cognitive content or rational processes. As Turiel (2010) put it: "thought and emotion are not independent pieces of a puzzle… [They] are interdependent parts of a whole" (p. 557). My focus on emotion was a corrective to the dominant emphasis on the content of belief and how it motivates restraint. Emotions balance this perspective while also drawing forth the important relational dimensions of the association between religiosity and self-regulation. One can analyze this dynamic in terms of belief and restraint, but that is only a narrow slice of a much richer relational fabric. The challenge of our inquiry is to draw that relational fabric into view for empirical study. That is the task of the next chapter.

Chapter 5– An empirical investigation

5.1 Introduction

The preceding chapters aimed to advance the plausibility of an alternative explanation for the relationship between religious engagement and self-regulation. The prevailing accounts focus on how the conceptual content of religious beliefs provides clear moral standards, along with the motivating force of promising divine rewards, which leads people to abide by those standards (e.g. Laurin & Kay, 2016; Zell & Baumeister, 2013). My alternative account takes a more social perspective on this dynamic, arguing that the standards of religious traditions are moralized social conventions and that, as such, abidance by these standards is intrinsically motivated by adherents' relationship to the symbolic and actual religious community. The differences between these two accounts are largely conceptual, but both explanations nevertheless function as broad working hypotheses. While I have been arguing that my alternative account is more plausible in its description of psycho-social dynamics, this claim is not a test for or against either hypothesis– instead it acts to motivate empirical tests in new directions.

The difficulty of directly testing these hypotheses is rooted in their vagueness and complexity. In the next chapter, I will engage the philosophy of science in order to contextualize the challenge of testing theoretical claims. Stated briefly, the problem is that these theories are not conceptually specific, so they rely on nested sub-hypotheses to generate specific predictions.[52] This complex structure can obscure which sub-hypothesis is the target of contravening evidence and whether that empirical challenge threatens the general theory. To help mitigate this challenge, I have articulated the specific hypotheses of my general theory during the preceding chapters. For example, in chapter two I arrived at Durkheim's (1893/1984; 1912/2008) hypothesis that religion, morality, and the social order are intimately interwoven. In chapter three I reviewed the broad social-psychological context for Durkheim's claim in order to argue that the process of moralization is a likely mediator within the relationship between

[52] For example, the core hypothesis of the current theory is that religious beliefs encourage restraint. One specific hypothesis nested within this theory is that the Protestant belief in an afterlife that is determined by moral behavior in this lifetime leads some Protestants to not use elicit substances. If research finds evidence for or against this specific hypothesis, then how does that impact our confidence in the broader hypothesis? The picture becomes even more complex because this general hypothesis about belief and restraint is actually a sub-hypothesis of the broader claim that religious engagement influences self-regulation. The theoretical argument I built in the previous chapters—that focusing on belief and restraint obscures other religious and regulatory processes that are arguably more relevant—is targeted at this secondary level of explanation. The next chapter will reflect on the plausibility of this theoretical argument and the way it is influenced by the evidence presented in this chapter.

religious engagement and self-regulation. And in chapter four I argued that moralization is linked to the emotional processes that emerge when individuals are brought into a respectfully subordinate relationship with an authoritative social order.

Even these sub-hypotheses, however, are too vague to directly test. Ultimately, arbitrating between the complex theoretical networks of the current account and my alternative explanation can only occur in the long-run through the gradual accumulation and careful interpretation of evidence. While recognizing that fact, it is nevertheless important to contribute to that body of evidence with particular tests that help to draw neglected processes into view and test their relevance for the relationship between religion and self-regulation. The purpose of this chapter is to offer a series of empirical tests that will examine condensed and sharper forms of the preceding hypotheses. If my alternative explanation is correct, then social, moral, and emotional processes will significantly determine the relationship between religion and self-regulation. The next section articulates my predicted relationships in detail.

5.2. The hypotheses[53]

Durkheim's claim is a broad interpretation of the relationship between the personal and the social, and the way this tension forges our engagement with religion, morality, and the group. A hundred years of evidence have neither solidified nor dethroned this perspective. As such, I do not expect that the current study will tip the scales. But, the value of Durkheim's claim is that it can turn our attention to otherwise obscured evidence, and lead us to make more specific hypotheses about the way religion, sociality, and morality relate.

In chapter four I argued that it was not simply religiosity that is bound within these Durkheimian processes; instead it is the way religious engagement leads a person to subordinate or align their personal proclivities with the demands of their tradition and group. Below I call this type of religious engagement "conventional." Similarly, sociality is not a monolithic concept. Durkheim (1893/1984), and subsequent social theorists such as Bernstein (1971) and Douglas (1970), argued that one of the most important differences in sociality is whether it is characterized by tight and familiar interactions that are

[53] The preceding chapters have been a gradual process of motivating the following hypotheses. As such, the brief explanations and clarifications that I offer here serve as reminders rather than full justifications for the specific hypotheses. Where appropriate I have noted the specific sections from previous chapters in which the motivation for the hypothesis is more fully articulated.

bound by tacit norms, or whether it is more loose, due to the anonymity of interaction partners. Colleagues and I (Morgan, Wood, & Caldwell-Harris, 2018) more recently characterized this difference in terms of social density – which refers to a mode of sociality in which a person is engaged in frequent and obligatory relationships. Finally, as we saw in chapter three, there are various forms of morality. In particular, Haidt and Graham's (2007) influential moral foundations theory suggests that there is a set of "binding" moral intuitions—loyalty, authority, and sanctity—that are functionally concerned with preserving the group. Recognizing these more specific forms of religiosity, sociality, and morality leads me to re-articulate the Durkheimian hypothesis as:

- H_{1a}: Conventional forms of religiosity will predict higher degrees of social density and the endorsement of binding moral intuitions.
- H_{1b}: Social density and the endorsement of binding morality will be positively associated.

Throughout chapters two, three, and four I argued for the relevance of these moral and social processes for self-regulation (see sections 2.3, 3.4, and 4.2.2). Therefore, the crux of my alternative explanation is that social density and moralization mediate the relationship between religiosity and self-regulation. Throughout this dissertation (see sections 1.2.1 and 1.5), however, I have also

argued that self-regulation is a multi-faceted construct that varies depending on the type of goal-state (i.e., is it emotional or behavioral?) and on the degree of effort required (i.e., is it effortful or automatic?). Drawing on recent evidence (Lamm et al., 2017; Luerssen & Ayduk, 2014) in chapter four (4.1.2) I suggested that emotional regulation is an important determinant of the capacity to exercise self-control, such as that indexed by delayed discounting tasks. These insights combine into my second and third hypotheses:

- H_2: Degree of social density and endorsement of binding morality will mediate the relationship between conventional religiosity and the capacity for emotional regulation.
- H_3: The relationship between conventional religiosity and lower impulsivity on the delayed discounting task will be mediated by the capacity for emotional regulation.

Finally, the relationship between religious engagement and self-regulation does not exist in isolation. As noted in chapter 1, this relationship is often cited as an explanation for the connection between religiosity and other important behavioral outcomes such as cooperation (Ainsworth & Baumeister, 2013) and health (Koole et al., 2010; McCullough & Willoughby, 2009). For example, Ainsworth and Baumeister (2013) argue that "human cooperation and fairness

depend on self-regulation" (p. 79). Similarly, within their groundbreaking review of religiosity and self-regulation, one of McCullough and Willoughby's (2009) key propositions is that "religion affects health, well-being, and social behavior through self-regulation and self-control" (p. 71). Given the current emphasis on effortful modes of self-regulation, however, this mediating role for self-regulation is often construed solely in terms of self-control. In order to assess whether other modes of self-regulation are relevant within these dynamics, I will also include a public goods game—a standard index of cooperation with experimental economics (Zelmer, 2003)—and a public health survey about depressive symptoms (Kroenke, Spitzer, & Williams, 2003) as an indicator of well-being. Including these measures as dependent variables will allow me to directly assess whether delayed discounting or emotional regulation are relevant mediators. In contrast to accounts that emphasize the importance of restraint, my final hypotheses are:

- H_{4a}: Emotional regulatory capacity will mediate the relationship between conventional religiosity and levels of cooperation within a public goods game.
- H_{4b}: Including emotional regulatory capacity within the mediation model will reduce the relationship between impulsivity on the delayed

discounting task and cooperation in the public goods game to non-significance.

- H_{5a}: Emotional regulatory capacity will also mediate the relationship between conventional religiosity and depressive symptoms.
- H_{5b}: Impulsivity on the delayed discounting task will not be related to depressive symptoms.

These are not the only hypotheses that emerged during our theoretical analysis. For example, I also claimed that moralization and sacralization are two distinct processes (see section 3.4.1) and that attachment styles would bear a significant influence on an individual's relationship to their community's moral norms (see section 4.4.3). This set of five hypotheses, however, captures the crucial elements of my alternative explanation by highlighting the social, moral, and emotional processes that have previously been neglected when researchers move to explain why religious engagement would influence self-regulation.

In order to test this model, I recruited an online sample of predominately Christian participants. There is a clear need for psychology as a whole and psychology of religion in particular to include more diverse samples (Henrich, Heine, & Norenzayan, 2010), but my argument is primarily directed at theoretical explanations for how religion impacts self-regulation. These

explanations are built from studies using predominately Christian samples from North America and western Europe. My argument is not that the dynamic between religion and self-regulation is different in different cultural and religious contexts (though this is likely true); my argument is that the current explanation misconstrues the dynamic in general. Therefore, it is important to use a similar sample in order to test my alternative explanation.

5.3 Methods

5.3.1. Sample & variables

This study was approved by Boston University's Institutional Review Board as protocol #4869X. I recruited participants through the online research platform Prolific Academic (Prolific.ac). This platform, similar to Amazon's Mechanical Turk (MTurk), is an online venue for interested people to register and participate in research for compensation. Research shows that recruitment through these platforms produces high-quality and representative data (e.g., Buhrmeister, Kwang, & Gosling, 2011; Crump, McDonnell, Gureckis, 2013; Rand, 2012), but recently concerns have been raised that MTurk participants may no longer be naïve to common behavioral surveys (Chandler et al., 2015). In response to these concerns, Peer and colleagues (2017) found that Prolific.ac still offered a highly

naïve pool of participants that were also more diverse than samples found on MTurk.

A power analysis based on 10 variables (specified below), desired statistical power of 80%, small to moderate anticipated effect sizes ($f^2 = .15$), and a statistical significance level, $p = .05$, indicates a necessary minimum sample size of 118. Given available funds, we recruited 615 participants. Participants were older than 18 and spoke English as a primary language.

5.3.2 Demographics

In addition to our predictor variables, each participant completed a brief demographic survey to indicate their age, ethnicity, gender, education, and subjective social status. These questions are especially important since they can each influence the other variables of interest (e.g., Wink & Dillon, 2003; Zuckerman, Silberman, & Hall, 2013).

5.3.3 Religiosity

As an initial measure of conventional religiosity, I included three questions: "How important is religion in your life?" (ranked 1- very important to 4-not at all important); "I consider myself orthodox or conventional in my religious or spiritual beliefs" (1-strongly disagree to 7-strongly agree); and "Thinking about your life these days, how often do you attend religious services,

not counting social obligations such as weddings or funerals?" (1-never to 6-every week or more than once a week). While these items track different dimensions of religiosity, they coalesce as a rough index of religious conventionality and commitment. In previous studies, similar indices for religiosity predicted moralization and sacralization processes (Sheikh, Ginges, Coman, & Atran, 2012) and delayed discounting (Paglieri, Borghi, Colzato, Hommel, & Scorolli, 2013). The three items had a standardized internal consistency of Cronbach's $\alpha = .76$.

Within the analysis, responses to these three items were combined into a composite score. Religious importance was reverse-scored, so that higher scores indicated more importance, and the composite index was formed as an addition of z-scores in order to standardize the different scales. The resulting index ranged from: -5 to 5.5, with higher scores indicated more conventional religiosity.

In order to nuance this general measure of conventional religiosity, we also included the Multidimensional Religious Ideology (MRI) scale (Wildman et al., in prep.). This scale captures a spectrum of religious ideologies that range from liberal to more conservative perspectives. These perspectives are further differentiated into how people engage their religious beliefs, practices, and moral systems. With 51 items measured from 1-7 on a Likert scale, the results of the

MRI scale provide a religious profile indicating the conservatism or liberalism of their religious beliefs, practices, and morality. This scale will serve as a measure of participation in conventional religious practices, adherence to traditional religious beliefs, and endorsement of binding moral intuitions. An individual's support for conventional religious practices is measured by the average of four sub-dimensions: formation of community, spiritual growth as submission, traditional use of rituals, and adherence to institutional structures. Cronbach's α reliability for this scale was .80.

Endorsement of traditional religious belief is also indicated by an average of four sub-dimensions: views on religious authority, views on religious texts, whether reality includes a transcendent dimension, and if purpose comes from that supernatural dimension. The internal consistency of this dimension was α = .90.

5.3.4 Morality (BM)

As noted, the MRI also includes a truncated version of the Moral Foundations Questionnaire (MFQ; Graham, Haidt, & Nosek, 2009). This questionnaire includes sub-dimensions for an individual's concern for fairness, harm, loyalty, authority, and sanctity. The average endorsement of loyalty, authority, and sanctity will serve as our variable for binding moral intuitions

(Graham & Haidt, 2010), with a range from 1-7, higher scores indicate consistent endorsement of these moral positions. The MFQ is common in research on religiosity and moral intuitions (Graham et al., 2009), even when that research suggests that binding moral dimensions are not uniquely relevant for all forms of religiosity (see Davis et al., 2016; Johnson et al., 2016) The Cronbach reliability for this short version of the scale was $\alpha = .76$.

5.3.5 Social density (SD)

We assessed social density using seven items from the mini-k subscale on the Arizona Life History Battery (Figueredo, Vásquez, Brumbach, & Schneider, 2007). The entire subscale uses self-report questions to assess individual differences in life history strategies. The mini-k subscale includes items that directly assess the degree to which an individual is connected to their friends, family, and community, as well as the amount of support they give and receive in these relationships. For example: "I am often in social contact with my friends," "I often give emotional support and practical help to my blood relatives." Each item is scored from 1 (strongly disagree) to 7 (strongly agree), resulting in a total score ranging from 7 to 49, with higher scores indicating a higher degree of social density. The internal reliability of this scale was $\alpha = .84$.

5.3.6 Emotional regulation (ER)

We assessed emotional regulatory capacity with a sub-dimension of the brief Differentiation of Self Inventory– revised (DSI-r; Sloan & van Dierendonck, 2016). This measure of emotional regulation assesses how stable a person feels in their sense of who they are (IP), along with the degree of emotional reactivity they experience in potentially evocative situations (ER; Skowron et al., 2003). This brief version of the DSI-r includes 10 items such as: "At times my feelings get the best of me and I have trouble thinking clearly." Each item is scored from 1 (not at all true of me) to 6 (very true of me), with some reverse scored, to give a total score ranging from 10-50, with higher scores indicating greater emotional regulatory capacities. The full DSI has been used in various studies on self-regulation and religiosity (see Jankowski & Vaughn, 2009). The DSI-r is strongly correlated with the full DSI ($r = .95$; Sloan & van Dierendonck, 2016, p. 149) and has a high Cronbach reliability $\alpha = .90$. Within our sample the internal consistency was $\alpha = .82$.

5.3.7 Delayed discounting (DD)

As an index of self-control, we used Kirby and Maraković's (1996) Monetary Choice Questionnaire to assess individual discounting rates. The task includes 21 questions which ask individuals to choose between a small reward

offered immediately and a larger reward delayed over a certain period. For example: "Would you rather have $40 today or $65 in 70 days?" By varying the magnitude of the offered reward and the time interval, this measure provides a stable estimate of an individual's discounting rate, which is commonly interpreted as their impulsivity (Kirby, 2009; Odum, 2011). This task is prevalent in work on self-regulation (Madden & Johnson, 2010) and has been used in many of the studies connecting religiosity to self-control (e.g., Carter, McCullough, Kim-Spoon, Corrales, & Blake, 2012; Kim-Spoon, et al., 2015; Shenhav, et al., 2017).

Following conventions, we excluded discounting data from any participant who selected the larger later (n = 9) or smaller sooner (n = 5) option for all trials, since their discounting rate cannot be reliably estimated (Kirby & Maraković, 1996; Paglieri, et al., 2013). We normalized raw discounting rates with a natural log transformation, resulting in a range of: -3.15 to -0.87, with higher scores indicating more impulsive responses. The MCQ also contains an internal measure of consistency by estimating the percentage of choices that are compatible with the discounting rate estimate (Kirby & Maraković, 1996). The mean consistency score for our study was 93%, which supports the accuracy of our parameter estimation.

5.3.8 Public goods game (CO)

As our measure of cooperation, we used an online, one-time public goods game modeled after a survey version of the dictator game (see Piff et al., 2015). Each participant was presented with the following scenario:

> You have automatically been given 10 raffle tickets. Each ticket is equal to one entry into the raffle for the extra $50. These 10 tickets are yours to keep.
>
> However, you have also been teamed up with 5 other participants, each of whom also has 10 raffle tickets. Within your team, everyone has the option to contribute as many tickets as they like into a group pot.
>
> The number of tickets that end up in the group pot will be doubled and then split evenly among all team members, regardless of their contribution.
>
> How many of your 10 raffle tickets would you like to contribute to the group pot?

The number of tickets that individuals contributed to the public pot will serve as our measure of cooperation, ranging from 0-10.

5.3.9 Depressive symptoms (PHQ-2)

As a very brief index of depressive symptoms, we included the two-item Participant Health Questionnaire: Depression screener (Kroenke et al., 2003), a common measure within public health research. This survey asks whether the participant has been bothered by "little interest or pleasure in doing thing" or "feeling down, depressed, or hopeless" over the last two weeks. Each symptom is ranked in terms of frequency from 0- not at all to 3-nearly every day, resulting in a score from 0-6. The PHQ-2 is prevalent in research on mental health, with current citations over 2,000. The reliability of these two-items within our study was Cronbach's $\alpha = .80$.

5.4 Results:

5.4.1 Preliminary analyses

621 participants completed our surveys. The MRI survey includes two catch and calibration questions, which force respondents to use the two extreme ends of the scale in order to detect insincere respondents. The items are: "When you decide whether a person's action is right or wrong, it is relevant what that person's favorite color is," which should produce Strongly Disagree; and "In general, all other things being equal, it is better to be kind than cruel," which

should produce Strongly Agree. Following the guidelines for exclusion that we articulated within our pre-registered hypotheses, we excluded participants who failed to answer within 1 point of the appropriate extreme for both questions (*n* = 182).

We also included a five-item socially desirable response set, with questions such as: "No matter who I'm talking to, I'm always a good listener" ranked from 1-definitely true to 5-definitely false (Hays, Hayashi, & Stewart, 1989). Following our pre-registered protocol, we also excluded participants who gave the socially desirable response for four or five of the five items (*n* = 27). While these may seem to be extreme exclusion criteria, it represents a conservative approach to internet sampling that prioritizes the removal of statistical noise from insincere respondents rather than broad inclusion.

For the remaining 412 participants, 58% (*n* = 238) were female, 41% (*n* = 170) male, and 1% (n= 4) other. They ranged in age from 18 to 74 years old, with a mean of 34.7 (SD = 12.3). Participants were from the UK (*n* = 169), the USA (*n* = 136), Mexico (*n* = 22), Canada (*n* = 14), Australia (*n* = 5), New Zealand (*n* = 3), Chile (*n* = 4), Israel (*n* = 2), Turkey (*n* = 1), and across the EU (*n* = 51), with five participants not reporting. Ethnically, 61% of participants were White/European (*n* = 251), 8% were Hispanic (*n* = 34), 8% were Black/African (*n* = 31), 6% were

South Asian (*n* = 26), 6% were East Asian (*n* = 25), 2% were Middle Eastern (*n* = 7), and 9% reported either multiple ethnicities or other (*n* = 38). And finally, our sample was predominantly Christian (72%; *n* = 295), but also included participants who were Muslim (4%; *n* = 18), Jewish (2%; *n* = 10), Buddhist (1%; *n* = 4), Neo-Pagan or Shamanistic traditions (1%; *n* = 5), along with Atheists (3%; *n* = 13), Agnostics (5%; *n* = 20), Humanists (1%; *n* = 6), Nones (5%; *n* = 19), and those reporting other (5%; *n* = 22). The religiosity of this sample is fairly representative of religiosity in the US, which the Pew Research Council (2015) reports as 71% Christian, 6% other faiths, and 23% as unaffiliated. Similar demographic exists across western Europe and the UK, where 73% of people identify as Christian (although on 18% regularly attend church), 23% are unaffiliated, and 4% report other religious affiliations (Pew Research Council, 2018).

Table 1 reports the bivariate correlations, means, and standard deviations of the various measures.

Table 1. *Bivariate correlations between measures*

	Rel	BM	SD	ER	DD	PGG	PHQ-2
Rel	.11 (2.4)						
BM	.15**	2.36 (.7)					
SD	.16***	-.02	25.7 (11.2)				
ER	.12*	.15**	.24***	35.6 (8.5)			
DD	-.13**	-.08	.02	-.02	-2.15 (.5)		
PGG	-.02	-.01	.13**	.01	-.16**	6.45 (3.1)	
PHQ-2	-.12*	-.13*	-.28***	-.42***	.03	-.03	2.64 (1.5)

Rel– Conventional religiosity; BM– Endorsement of binding moral intuitions; SD– Social density; ER– Emotional Regulation; DD– Delayed discounting rates; PGG– Cooperation within public goods game; PHQ-2– Frequency of depressive symptoms.
Note: Means and standard deviations for the scales are reported on the diagonal.
*p < .05, **p < .01, ***p < .001

5.4.2 Hypothesis testing

I tested each of the hypotheses with mediation models (Baron & Kenny, 1986; MacKinnon, Fairchild, & Fritz, 2007) assessed with hierarchical linear regressions. Since age, education, and socioeconomic status (SES) impact our variables of interest, I controlled for them in the following analyses by adding them as the first step of each hierarchical regression.

5.4.2a H_1

The first hypothesis concerned the direct effects between conventional religiosity, social density, and binding morality. Using a hierarchical regression model, I first tested the relationships that age, education and SES had on the endorsement of binding moral intuitions. As reported in Table 2, both age and

education were significant predictors of the tendency to endorse binding morality. In the second step, I added conventional religiosity to the model, which had a small significant effect over and above the demographic variables.

Table 2. *Hierarchical regression model predicting the endorsement of binding moral intuitions from demographic variables and conventional religiosity.*

Step and variables	R^2	ΔR^2	*B*	95% CI[a]	β	*t*	*p*
Step 1	.08***						
Age			.01**	.00, .01	.15	3.24	.001
Edu			-.00	-.02, .02	-.01	-.17	.866
SES			.11***	.07, .15	.24	5.04	<.001
Step 2	.09***	.01*					
Age.			.01**	.00, .01	.15	3.20	.001
Edu			-.00	-.02, .02	-.01	-.28	.781
SES			.10***	.07, .13	.23	4.73	<.001
Conv. Rel.			.03*	.01, .06	.12	2.47	.014

Note: Significance testing for ΔR^2 was done with an ANOVA between models. In Step 2: $F(1, 407) = 6.07$, $p = .014$.
a. 95% CI = 95% Confidence interval for *B*
*p < .05, **p < .01, ***p < .001

The second part of my initial hypothesis was that conventional religiosity would also predict higher degrees of social density. In order to test that relationship, I used a separate hierarchical regression analysis. The first step of the analysis predicted social density from age, education, and SES; both education and SES were moderately positively associated with the degree of social density (details in Table 3). Adding conventional religiosity to the model in step 2 explained an additional 2% of the variance. Religiosity's relationship to social density was about as strong as that between education and social density.

H_{1b} predicted a positive relationship between social density and binding moral intuitions, a key facet of moral foundations theory. Contrary to this prediction, social density and the endorsement of binding moral intuitions were not significantly related after controlling for age, education, and SES (*B* = -1.24, 95% CI [-2.75, .27], *p* = .11). Despite this lack of significance, when the endorsement of binding moral intuitions was included as step 3 of the overall model predicting social density, it showed a marginally significant negative relationship with social density (Table 3). This negative association between social density and the endorsement of binding morality contradicts H_{1b}, suggesting a more complicated relationship between religiosity, sociality and morality. Our hierarchical analyses did support H_{1a}, suggesting a positive association between religiosity and both social density and the endorsement of binding morality, over and above the impact of our demographic variables. These direct effects lend support for advancing to our second hypothesis.

Table 3. *Hierarchical regression model predicting social density from demographic variables, conventional religiosity, and the endorsement of binding morality.*

Step and variables	R^2	ΔR^2	*B*	95% CI[a]	β	*t*	*p*
Step 1	.06***						
Age			.02	-.06, .10	.02	.46	.647
Edu			.47**	.16, .78	.14	2.90	.004
SES			1.26***	.61, 1.91	.19	3.80	<.001
Step 2	.08***	.02**					
Age.			.02	-.06, .10	.02	.40	.690
Edu			.45**	.14, .76	.14	2.80	.005
SES			1.15***	.50, 1.80	.17	3.47	<.001
Conv. Rel.			.59**	.16, 1.02	.13	2.71	.007
Step 3	.09***	.01*					
Age			.03	-.05, .11	.03	.71	.481
Edu			.44**	.13, .75	.13	2.79	.006
SES			1.30***	.63, 1.97	.19	3.84	<.001
Conv. Rel.			.65**	.22, 1.08	.14	2.94	.003
B. Morality			-1.52*	-3.03, -.01	-.10	-1.98	.049

Note: Significance testing for ΔR^2 was done with an ANOVA between models. In Step 2: $F(1, 407) = 7.35$, $p = .007$. In Step 3: $F(1, 406) = 3.90$, $p = .049$.
a. 95% CI = 95% Confidence interval for *B*
*p < .05, **p < .01, ***p < .001

5.4.2b H_2

My second hypothesis—that social density and morality mediate the relationship between conventional religiosity and emotional regulation—was tested with a three-step hierarchical regression. These analyses are reported in Table 4. Conventional religiosity had a slight, but significant, positive association with emotional regulation above and beyond the influence of demographic variables. In a separate hierarchical regression analysis, entering social density at the second step, after the demographic variables, had a direct effect on emotional

regulation (B = .16, 95% CI [.09, .24], β = .21, p <.001) and explained 4.3% of the variance above that accounted for by the demographic variables (R^2 =.10, ΔR^2 = .043, F(4, 407) = 11.89, p <.001). In a different analysis, entering the endorsement of binding morality at the second step, after the demographic variables, did not have a significant direct effect on emotional regulation (B = 1.01, 95% CI [-.15, 2.17], p = .087). Including social density and the endorsement of binding morality in the third step of the full model (see Table 4) reduced the association between conventional religiosity and emotional regulation to non-significance (from B = .34 to B = ,20; from β = .10 to β = .06). The Sobel test revealed a significant indirect effect through social density (ab = .09, z = 2.36, p = .018). The endorsement of binding morality was not significantly involved in the relationship between conventional religiosity and emotional regulation, as assessed by a Sobel test (ab = .03, z = 1.51, p = .131).

Table 4. *Hierarchical regression model predicting emotional regulation from demographic variables, conventional religiosity, social density, and the endorsement of binding morality*

Step and variables	R^2	ΔR^2	*B*	95% CI[a]	*β*	*t*	*p*
Step 1	.06***						
Age			.06	-.01, .12	.08	1.73	.085
Edu.			-.14	-.38, .10	-.05	-1.14	.254
SES			1.24***	.75, 1.73	.24	4.91	<.001
Step 2	.07***	.01*					
Age			.06	-.01, .12	.08	1.69	.092
Edu.			-.15	-.39, .09	-.06	-1.23	.218
SES			1.17***	.68, 1.66	.23	4.64	<.001
Conv. Rel.			.34*	.03, .65	.10	2.00	.046
Step 3	.12***	.05***					
Age			.04	-.02, .10	.06	1.31	.189
Edu.			-.22	-.46, .02	-.09	-1.83	.068
SES			.87***	.36, 1.38	.17	3.38	<.001
Conv. Rel.			.20	-.11, .51	.06	1.20	.231
Social Density			.16***	.09, .24	.21	4.38	<.001
B. Morality			1.12	-.01, 2.26	.10	1.94	.053

Note: Significance testing for ΔR^2 was done with an ANOVA between models. In Step 2: $F(1, 407) = 4.02$, $p = .046$. In Step 3: $F(2, 405) = 10.77$, $p < .001$.
a. 95% CI = 95% Confidence interval for *B*
*p < .05, **p < .01, ***p < .001

5.4.2c H_3

My third hypothesis extended findings that self-control depends on the prior capacity of emotional regulation (e.g., Lamm et al., 2017) to suggest that the relationship between religiosity and delayed discounting is mediated by emotional regulation. I tested this hypothesis with a three-step hierarchical regression (see Table 5). Corroborating past studies, religiosity was significantly associated with lower discounting rates, over and above the demographic variables. Adding emotional regulation to the model in step 3 did not

significantly change this relationship. Furthermore, emotional regulation had no significant direct effect on discounting rates, when entered at the second step, after the demographic variables in a separate hierarchical regression (*B* = .001, 95% CI [-.01, .01], *p* = .83). While this analysis does not support the mediation effects predicted by H_3, it does support previous findings that religiosity is associated with lower discounting rates.

Table 5. *Hierarchical regression model predicting discounting rates from demographic variables, conventional religiosity, and emotional regulation*

Step and variables	R^2	ΔR^2	*B*	95% CI[a]	β	*t*	*p*
Step 1	.019						
Age			.001	-.003, .005	.02	.50	.621
Edu.			.001	-.013, .015	.01	.19	.851
SES			-.044**	-.077, -.011	-.14	-2.69	.007
Step 2	.032*	.015*					
Age			.001	-.003, .005	.03	.53	.596
Edu.			.002	-.014, .018	.01	.26	.795
SES			-.040*	-.073, -.007	-.12	-2.42	.016
Conv. Rel.			-.026*	-.047, -.006	-.12	-2.36	.019
Step 3	.033*	.001					
Age			.001	-.003, .005	.02	.50	.616
Edu.			.002	-.014, .018	.01	.28	.778
SES			-.042*	-.075, -.009	-.13	-2.46	.014
Conv. Rel.			-.026*	-.048, -.004	-.12	-2.39	.018
Emo. Reg.			.001	-.01, .01	.02	.45	.654

Note: Significance testing for ΔR^2 was done with an ANOVA between models. In Step 2: $F(1, 399) = 5.54$, $p = .019$. In Step 3: $F(1, 399) = .20$, $p = .654$.
a. 95% CI = 95% Confidence interval for *B*
*p < .05, **p < .01, ***p < .001

5.4.2d H_4

Given the positive associations between conventional religiosity and both emotional regulation and delayed discounting, I tested the fourth and fifth hypotheses about self-regulation mediating the relationship between religiosity and outcomes such as cooperation or mental health. To test H_4 I used a series of linear regressions. Conventional religiosity was not significantly associated with levels of cooperation in the public goods game (B = -.04, 95% CI [-.16., .08], p = .573). The lack of a direct effect between religiosity and cooperation rules out the mediation effect predicted by H_{4a}. Likewise, there was no significant association between emotional regulation and levels of giving in the public goods game (B = -.01, 95% CI [-.05, .03], p = .677). There was, however, a significant effect between discounting rates and contributions in the public goods game (B = -.92, 95% CI [-1.51, -.33], β = -.15, p = .002), which explained 2% of the variance in contributions beyond that predicted by demographic variables (R^2=.05, ΔR^2 = .02, F(4, 399) = 4.94, p = .002). My prediction that religiosity would be associated with higher levels of giving and that emotional regulation would fully mediate this relationship above and beyond discounting behaviors was not supported by the evidence.

5.4.2e H_5

Finally, I tested the fifth hypothesis about the associations between religiosity and various modes of self-regulation with the frequency of depressive symptoms, with a series of hierarchical regressions. While conventional religiosity showed a significant negative bivariate correlation with depressive symptoms (see Table 1), after controlling for age, education, and SES, conventional religiosity was not significantly associated with frequency of depressive symptoms (B = -.05, 95% CI [-.11, .01], p = .083). While this undermines the likelihood of any mediating effects, both social density and emotional regulation were significantly associated with fewer depressive symptoms in the full model (see Table 6). Unsurprisingly, emotional regulatory capacity had the strongest protective effect on depressive symptoms with a standardized β = -.33 and notably social density also had an ameliorating impact (β = -.15) that was almost equal to that of SES (β = -.18).

Table 6. *Linear regression model predicting frequency of depressive symptoms from demographic variable, conventional religiosity, social density, binding morality, emotional regulation, and discounting rates*

Variables	R^2	*B*	95% CI[a]	*β*	*t*	*p*
Full model	.27***					
Age		-.02***	-.03, -.01	-.17	-3.87	< .001
Edu		.01	-.03, .04	.01	.25	.806
SES		-.17***	-.24, -.09	-.18	-3.76	< .001
Conv. Rel.		-.016	-.07, .04	-.03	-.57	.571
Social density		-.02**	-.03, -.01	-.15	-3.31	.001
B. Morality		-.026	-.21, .16	-.01	-.28	.783
Emo. Reg.		-.06***	-.08, -.04	-.33	-7.22	< .001
Delay Disc.		.026	-.27, .22	.01	.21	.837

Note: a. 95% CI = 95% Confidence interval for *B*
*p < .05, **p < .01, ***p < .001

5.5 Discussion

These analyses provide mixed support for my hypotheses. Conventional religiosity was positively associated with both social density and the endorsement of binding moral intuitions. The relationship between binding morality and social density, however, was more complicated. Supporting my second hypothesis, conventional religiosity was positively related to emotional regulatory capacity, and this relationship was fully mediated by social density. Binding morality did not influence the association between religiosity and emotional regulation. Conventional religiosity was also negatively associated with impulsivity, as indicated by discounting rates. This relationship was not mediated by emotional regulation. Lower discounting rates were associated with

more giving in the public goods game, though religiosity had no direct effect on levels of giving. Finally, after controlling for demographic variables, the frequency of depressive symptoms was not significantly related to religiosity, but both social density and emotional regulation were significantly associated with fewer depressive symptoms. While not every one of my hypotheses were supported by these analyses, these results lend preliminary evidence to some of the main critiques I brought against the current theoretical accounts of the relationship between religion and self-regulation. There are four main points to take away from these results.

First, Durkheim's hypothesis about the interwoven relationship between religiosity, morality, and sociality appears to have partial support. Conventional religiosity was significantly associated with both higher levels of social density and more endorsement of binding moral intuitions. Given previous studies have demonstrated that the relationship between religiosity and moral intuitions depends on cultural context (Davis et al., 2016) and individual differences in religious ideology (Johnson et al., 2016), we should expect that the later effect—between binding morality and religiosity—depends heavily on how I measured religiosity. In this case, conventional religiosity may be tapping into conservative

dimensions of the religiosity within our sample, which was predominately white Christians from the US or western Europe.

The relationship between conventional religiosity and social density is a novel finding worth further exploration, especially given the various factors subsumed within both variables. For example, social density includes relationships with both family and peers, which could play distinct roles in relation to religious sociality. Contrary to the theoretical predictions of moral foundations theory (Graham & Haidt, 2010), social density and the endorsement of binding moral intuitions were not significantly related. When religiosity was included in the model, this relationship became significant, but was negative. This could be the result of problems within the theoretical construction of binding moral intuitions, which—as noted in 3.4.1—has come under criticism (e.g., Curry, 2016). The lack of significance could also be the result of the different factors within our measure of social density, noted above. Given the complexities of social learning, it is likely that familial and peer social networks would influence moral endorsements in different ways, and these dynamics would also likely depend on the broader social context. Regardless, there is enough theoretical support for an association between binding moral intuitions and

sociality that one insignificant association found here is not sufficient to dismiss the relationship.

Second, emotional regulation and the self-regulatory processes responsible for delayed discounting appear to be distinct. Importantly, conventional religiosity was positively associated with each type of self-regulation. I hypothesized that emotional regulation would be a primary determinant of delayed discounting, H_3, but there was no evidence of mediation. Nevertheless, the fact that these two modes of self-regulation were unrelated poses problems for theoretical accounts that conflate self-regulation with self-control (Laurin & Kay, 2016; Zell & Baumeister, 2013). By generalizing from one particular type of self-regulation, self-control, to all types, these theories risk obscuring the important relationship between religious engagement and emotional regulation. This theoretical omission is especially problematic given the different behavioral outcomes that emerged in H_4 and H_5.

Third, the relationship between conventional religiosity and emotional regulation was fully mediated by social density. This mediation analysis supports my argument in chapter 4 that religious engagement tends to motivate regulatory processes by shaping an individual's emotional responses through dense and obligatory relational contexts. Of course, that broad hypothesis was

too complex to be tested within a single study, but these analyses offer initial evidence that should encourage more research on the dynamics between religiosity, social density, and emotional regulation. Within the mediation analysis I framed this relationship as a unidirectional impact of religious engagement on social density, but it is important to recognize that this is likely a reciprocal relationship. A dense familial environment, for example, may foster religious commitment, which in turn maintains that social network. It is this complex feedback loop that I am suggesting fosters emotional regulation, but with a cross-sectional study I cannot infer causal directions.

Surprisingly, social and moral processes had no impact on the relationship between conventional religiosity and delayed discounting. This suggests that not only are there various types of self-regulation, but that there are also various pathways through which religious engagement impacts these types. Previous research has shown that future time orientation—the tendency to see the future as rapidly approaching (Gjesme, 1979)—partially mediates the association between religiosity and delayed discounting (Carter, et al., 2012). Paglieri and colleagues (2013) suggested that religious doctrines of predestination versus confession and expiation drove cultural differences between Dutch Calvinists and Italian Catholics in the association between religion and delayed

discounting. It is possible, therefore, that the content of particular religious beliefs does impact this type of self-regulation, while social processes—such as obligatory relationships, attachment styles (Kirkpatrick, 2004; Mikulincer & Shaver, 2019) or relational tendencies (e.g., Davis, Granqvist, & Sharp, 2018; Sandage & Harden, 2011)—within religious engagement have a stronger impact on emotional forms of regulation.

Fourth, and finally, these distinct modes of self-regulation have divergent relevance for behavioral outcomes. Lower discounting rates were significantly associated with higher levels of giving in the public goods game. While these tasks are highly idealized versions of self-control and cooperation, the significant relationship nevertheless lends support to past findings associating self-control and prosociality (see Ainsworth & Baumeister, 2013). In this study, emotional regulation was not significantly involved in these dynamics, but previous research has found that the cooperative tendencies fostered by religion are primarily directed toward the in-group (Norenzayan et al., 2016; Purzycki et al., 2016; Sosis & Bressler, 2003). Since emotional regulation was strongly associated with sociality, its potential role in this relationship between religiosity and cooperation remains an important subject for future research.

In contrast, discounting behaviors had no significant associations with depressive symptoms in our sample. Instead, emotional regulatory capacity and social density become more important to consider as they predicted significantly fewer depressive symptoms. Even though the relationship between religiosity and depressive symptoms was insignificant in this study, there is substantial research connecting religiosity and depression, with some showing an ameliorating relationship (Bonelli & Koenig, 2013; Koenig, 2015), while other studies show mixed effects (Wei & Liu, 2013) or positive association between religiosity and depressive symptoms (e.g., Eliassen, Taylor, Lloyd, 2005; Miller et al., 2008; Pargament et al., 2004). Much of this previous research has focused on the role of spiritual and religious coping practices (e.g., Ahles, Mezulis, & Hudson, 2016; Pargament, 2011) or social support (e.g., Chatters, Taylor, Woodward, & Nicklett, 2015) in explaining this variance, though relational dimensions likely play an important role as well (Paine & Sandage, 2017).

My results build on this literature to suggest that both emotional regulation and social density may be playing important and distinct roles in these dynamics. Given the positive relationship between social density and emotional regulation, it is surprising that both variables maintained unique relationships with depressive symptoms in the full model. In regards to the

above associations between religiosity and depression, social density may highlight some of the practical effects of social support, emphasized by Chatter et al. (2015). On the other hand, religious coping strategies (e.g., Pargament, 2011) and relational styles of spirituality (e.g., Paine & Sandage, 2017) may bear more of an impact on emotional regulatory capacity. This suggestion is similar to Aldwin et al.'s (2014) argument that behavioral and emotional forms of self-regulation have different impacts on well-being, but it resists the sharp distinction they draw between spirituality and religiosity. At the very least, these results help nuance prior suggestions to look beyond self-control when considering the connection between religiosity and health (Koole et al., 2010).

There are also important limitations to the current study. As noted above, since this study is cross-sectional, it does not tell us about the causal directionality within any of these relationships. Where possible I have leaned on other evidence to infer such directionality, but a longitudinal design would be necessary to directly test these causal hypotheses. Second, the generalizability of these results is hampered by the narrowness of our sample. Henrich, Heine, and Norenzayan (2010) have shown the various ways that samples from western, education, industrialized, rich, and democratic nations are very peculiar. My sample was predominantly from the north Atlantic and was also

overwhelmingly Christian. As noted at the end of 5.2, however, most of the studies that inform the current theory were drawn from similar samples. Nevertheless, in order to generalize these dynamics, future research will need to extend to more diverse samples (e.g., Chilcott, 2016). Third, my index of conventional religiosity is a very rough indicator of the dynamics I unpacked in chapter 4. In order to test my hypothesis about the consequences of individuals being in a subordinate relationship with a symbolically instantiated authoritative social order, I need a more sophisticated index or method. Similarly, extending beyond self-reports of emotional regulation and social density would enrich future studies on these dynamics.

Despite these limitations, this study still offers an important contribution to research on religious engagement and self-regulation by encouraging a broader scope beyond the sole focus on religion as a set of beliefs and regulation as cognitive restraint. Instead, this is only one part of the broader picture in which religious engagement is interwoven with social, moral, and emotional processes. Understanding the complex dynamics of these associations, along with their consequences for health and prosocial outcomes, will take more research than this single study. At the very least, however, this study offers an initial set of evidence that suggests we must cast our empirical net quite broadly

if we want to understand the relationship between religious engagement and self-regulation.

As I noted in the introduction, moving from this evidence to the theoretical account that I have been building in chapters two, three, and four is a complicated process. Does the evidence from this study do more than simply encourage us to include more processes in the dynamics we consider? Does it also shift the plausibility of one account over the other? In the next chapter, I will take up these questions to reflect on how we might understand the role of theory and evidence within the psychology of religion.

Chapter 6– Reflection and the weight of metaphors

6.1 Introduction

My argument within this dissertation was multifaceted. In chapters 2-4, the argument was primarily a theoretical challenge to the current explanations for why religion impacts self-regulation. This challenge consisted of various interdisciplinary reviews and analyses, which encouraged researchers to broaden the range of evidence considered relevant for understanding this relationship. In chapter 5, however, my argument was a more specific empirical challenge to features of the current explanation. This study brought new evidence to bear on how we understand the concepts of religious engagement, self-regulation, and their relationship. The question now is: where does our inquiry stand? How do we measure the success of a project that blends interdisciplinary analysis and empirical work in order to shift plausibility claims?

In this final chapter, I will use theoretical tools from philosophy of science to reflect on these questions. I will begin with a brief discussion of conceptual vagueness. Along with pragmatic philosophers, I recognize that conceptual vagueness plays a generative role within the process of inquiry. A *vague* concept is one which allows for multiple inconsistent specifications of itself. For example,

the statement, “She has dark hair” is vague, leaving open the possibilities that the person’s hair is dark black, brown, auburn, etc. When a vague concept is unreflectively specified, however, it can also lead to miscommunication and to unperceived restrictions of imagination within interdisciplinary approaches. I suggest that unreflective specification is what created the theoretical issues facing the current explanation for religious engagement and self-regulation. When we say “religious engagement” or “self-regulation” what sort of phenomena are we referring to? Understanding vagueness will help clarify the theoretical work of chapters 2-4 by articulating the problem that this project aims to overcome.

With these philosophical contours in view, I will give a brief review of my proposed solution, which can be viewed as a three part process: first, I stepped back from the dominant specification of the religion and self-regulation relationship; second, from within the vague terrain of religious engagement and self-regulation I considered other relevant evidence that both challenged the current specification and suggested alternatives; third, I constructively offered and tested an alternative explanation for the relationship between religious engagement and self-regulation, which specified the vague categories in a new and plausible direction.

The final step, therefore, is to reflect on the entailments of my alternative specification for both the dominant explanation that I argued against and the vague association between religious engagement and self-regulation. To foster that reflection, I will briefly engage work within the philosophy of science to help us understand the epistemic and social terrain of theory construction. Kuhn (1962) and others who have followed his lead (e.g., Bloor, 1976) will offer a radical objection to the very possibility of building novel explanations on the basis of evidence. While this perspective helps highlight the challenges my project faces, it also is committed to an unnecessarily severe separation between descriptions of the world and the world itself. To preserve the helpful aspects of Kuhn (1962) but permit the possibility of theory construction in relation to the world, I will turn to Lakatos (1978). Lakatos offers a perspective on inquiry that recognizes the way it is constrained by theoretical commitments but also receptive to new empirical challenges. Reviewing this framework will help me articulate the intellectual fault lines between my explanation, the dominant one, and the various interdisciplinary schools that I have engaged. While Lakatos (1978) provides an epistemic framework for situating interdisciplinary inquiry, he leaves the social dimensions of such projects largely unspecified. In order to briefly consider the social character of inquiry, I will briefly engage Longino's

(1990) account of criticism amidst a diverse community of concerned inquirers. These concluding philosophical reflections describe the broader intellectual context for my current project. From this wider vantage point I will conclude by arguing that interdisciplinary approaches are essential to the vitality of inquiry, especially within biocultural terrain such as that between religious engagement and self-regulation.

6.2 The value of vagueness

I follow Neville (2014) and others in the pragmatic tradition by defining vagueness as applying to any "category that is capable of being instantiated or specified by instances that are mutually contradictory" (Neville, 2014, p. 26). This definition follows Peirce's early formulation that something is "vague in so far as the principle of contradiction does not apply to it" (1905, p. 488). For example, the category of "religious behavior" is vague. Scholars regularly develop different and potentially conflicting conceptions of what religious behaviors are: social signals of solidarity and reliability (Soler, 2012), protests against oppressive social conditions (Taussig,1980), enactments of relationships with supernatural beings (Luhrmann, 2012). At a more practical level, most people have a commonsense idea of what religious behavior is and can point to specific

instances, such as Salat, even if borderline cases, such as cheering for a football team, cause confusion. We are left with a category that includes everything from the mass pilgrimage of Kumbh Mela to the quiet devotional prayers of an American Protestant, and that does not even include controversial cases. What a mess for any inquiry about religious behavior.

But also, what promise. As Wildman (2010) and others have argued, vagueness is necessary for meaningful comparison. For example, self-regulation is a vague category because it has been conceptualized as automatic (Bargh, 1997), deliberate (Muraven & Baumeister, 2000), mechanical (Carver & Scheier, 1998), and value-driven (Berkman, Hutcherson, Livingston, Kahn, & Inzlicht, 2017) to name a few theoretical positions. While this ambiguity fosters relentless turf battles in psychology about how to accurately define the regulatory terrain (e.g., Bargh, 1997; Galla & Duckworth, 2015; Muraven & Baumeister, 2000), it also permits the fruitful comparison of these conflicting accounts of self-regulation. Rather than creating distinct categories with sharp boundaries around behavior that is automatic and that which is deliberate, for example, maintaining a vague category that includes as potential specifications these mutually contradictory accounts of self-regulation creates the conceptual space necessary for productive discussion and debate about the merits of alternate accounts of self-regulation.

Within this section I will explore how the vagueness of both "religious engagement" and "self-regulation" permits some of the problems with the current explanation to emerge. But the characteristic of vagueness itself is not the source of the problem. Drawing stricter boundaries around these categories would not lead to a more satisfying account of how religious engagement impacts self-regulation, instead it would make such an account impossible. If we abandoned the vague categories of religion and self-regulation and only deployed concepts with clearly determinate boundaries, we would have a plurality of very specific insights. For example, researchers could ask: does belief in the selective presence of the Holy Spirit held by middle class Ghanaian Pentecostals in the suburbs of Accra during the dry season of 1995 impact their intertemporal discounting behaviors for caloric rewards of medium magnitude; or does Shavuot impact subsequent dietary restraint among male members of three Kibbutzim in 2016; etc. Preserving the vague categories of religion and self-regulation provides a flexible conceptual basis for integrating these specific results into a broader insight about how religious rituals or beliefs impact behaviors.[54]

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[54] There are some scholars who are philosophically opposed to such integrative projects; recall the "incredulity towards metanarratives" of Lyotard (1979/1993, p. xxiii) and other postmodern scholars I reviewed in chapter 2. In the terms of vagueness, these scholars tend to be wary of

There are two reasons that attempting to remove vagueness from inquiry is undesirable. First, it does not seem to be possible, despite the demand for analytically distinct ideas that has persisted since Descartes (1641/1993). In the examples above, the vagueness of "religion" was specified by time, geography, political and social context, and particular beliefs/behaviors etc. for each of the categories. But even these categories are vague in terms of membership (e.g., is Abena part of the group if she only came to church once during that period?) and content (e.g., is a belief about disrespectful business practices relevant if it is considered to impact one's relationship with the Holy Spirit?). The world will never perfectly fit our conception of it—thankfully—so the demand for perfectly distinct categories is vain.

Second, not only is vagueness unavoidable, it is also valuable in its capacity to foster novel insights and fruitful comparisons. By maintaining an openness for conflicting features within a vague category, inquiry remains receptive to new evidence from fields with different interests. In other words,

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vague categories because the imprecision allows for the intrusion of bias and coercion. That is true to a degree, but the problem can be mitigated in ways that do not require abandoning the possibility of the comparative project. Furthermore, psychologists are also concerned about including more diverse representations of phenomena, as indicated by the nearly 5000 citations of Henrich, Heine and Norenzayan's (2010) call for better representation within psychological research.

vague categories are crucial to the success of interdisciplinary inquiry. My defense of the value of vagueness, however, should not be mistaken as an excuse for sloppy categories. Instead it is a call for transparency around how we specify our objects of study and care around how we compare these objects with others. As we will see below, it is in the process of specification and interpretation that problems emerge.

6.2.1 Vague religion

At the outset of this project I discussed the difficulties inherent in defining religion. Now we can see how these problems emerge because of the vagueness of the category. Within that initial chapter, I also discussed the promise of adopting a family resemblance definition, which relies on a loose cluster of similar features, none of which is essential to the whole (Wildman, 2010; Wittgenstein, 1953/2009). One of the virtues of this approach is how it moves our attention away from concerns about whether or not something is "religious" and instead focuses inquiry on the ways in which it is similar and different from other religious phenomena. With regards to vagueness, however, the salient point here is that "religion" is vague because it can be specified in a variety of contradictory ways while still referring to the same object.

When studying any of these phenomena as relevant to the overarching category, researchers necessarily reduce religion or religiosity to particular characteristics through their methods and their sampling. For example, in their study on cultural differences in discounting rates, Paglieri and colleagues (2013) sampled Dutch students and Italian students and grouped them based on whether they had received any sort of religious teaching while growing up (p. 741). Therefore, Paglieri and colleagues (2013) were not studying "religion" per se, they were studying this particular form of socialization among two student populations. By following the norms of psychological science—such as contextualizing this study amidst others, statistically controlling for other potentially influential variables, etc.—they were nevertheless able to generalize from their results to claim that variance in beliefs about asceticism and salvation led Dutch Calvinists to be significantly less impulsive than their Italian Catholic counterparts (Paglieri, et al., 2013). Their interpretation is not posited as unimpeachable, instead it functions as a plausible explanation for the significant differences that emerged within their results.

All of the studies comprising the empirical foundations for the claim that religiosity impacts self-regulation follow this form. Religion is reduced to specific groups and characteristics, and the results are interpreted in light of the more

general category. This is a normal process of inquiry and so long as the interpretations remain open to correction, it is epistemologically sound.[55] Why then am I dwelling on this point? Within this process we can see two places where bias can enter inquiry. The first is in the process of selecting evidence and the second is within the theoretical interpretation of that evidence.

As inquiry proceeds, these two points of potential bias often enter a reinforcing feedback loop. Choosing which features of a vague category to study as potentially salient necessarily requires some subjective judgment. For example, does one analyze religion in terms of affiliation, belief, or practices? This judgment is guided by whatever the existing theoretical framework within our discipline might be. If previous studies have found that religious beliefs are the salient feature of religion's impact on self-regulation, then new studies will likely follow this lead. Even if researchers do not adjust their methods to focus on particular aspects of the vague category, when they move to interpret their findings, this is done in light of existing theories. For example, Paglieri et al. (2013) did not specifically analyze religious belief, but they interpreted the group

[55] I recognize that this statement completely dodges Hume's (1739/2000) problems with induction and the fraught terrain of generalization. Fully treating those issues is well beyond the scope of this project (for a pragmatic defense of induction see Reichenbach, 1949), but I will note that adopting both vague categories and fallibilism significantly deflate Hume's concerns, which were based on the felt need for distinct and certain knowledge.

differences as resulting from belief because that is the explanation that existing theories could support. Over time, this process can become mutually reinforcing in a way that lends false assurance to the sense that the most salient feature of the vague category has been found.

The accumulation of evidence that religious belief fosters particular forms of self-regulation does increase the plausibility that this is a salient feature of religion. But, we need to be careful to discern what is confirming evidence and what is interpretative– for example Paglieri et al.'s (2013) account is not strictly supportive of the claim about religious belief because they did not measure religious belief versus practice versus affiliation.[56] This is not to say that their explanation is not very plausible, just that it does not rule out the potential influence of these other aspects of the vague category, "religiosity." This is significant in the long run because their interpretation then acts as existing theory, which guides how future researchers choose and interpret their evidence. The ruts on the road to Rome were deep.

When researchers such as Zell and Baumeister (2013) or Laurin and Kay (2016) write their reviews of the relationship between religion and self-

[56] I do not mean to imply the work of Paglieri et al. (2013) is particularly egregious. I find their research quite compelling and rigorous. The dynamics I am describing apply to all of this research, including my own.

regulation, a singular focus in the literature on one part of the vague category "religion" can be easily mistaken as evidence that that part is the most salient feature. This repetition further increases the perceived importance of that feature without ever directly testing it in light of the other possible features within the overarching category. Calling for researchers to consider the full range of possibly salient features within the vague category of religion is too strenuous a demand, but we should at least remain attentive to their existence.

The preceding analysis hopefully highlights my motivation and method within chapters 2-4. Rather than drawing from the currently prevailing theory, I sought other disciplines and research programs with perspectives and evidence pertinent to the relationship between religious engagement and self-regulation. Religious studies in the tradition of Durkheim (1912/2008) highlighted the potential importance of ritual practice, sociality, and morality as salient facets of religious engagement. Reviewing psychological work on social identity and moralization processes highlighted the potential significance of affiliation and the way people relate to their religious community's norms (e.g., Atran & Ginges, 2012; Molden, Lee & Higgins, 2013). Analyzing these processes through the perspective of moral emotions further enhanced the plausible influence that relational dynamics within religiosity would have on self-regulation.

Throughout chapters 2-4, I brought theoretical perspectives and evidence from across disciplines to construct an alternative specification of the vague category, religious engagement, and argue that it offered a more plausible influence on self-regulation. In short, my claim was not simply that the focus had grown too narrow, but that it had grown too narrow in the wrong direction.

A deeper intellectual history of this discipline would likely reveal other theoretical commitments and philosophical assumptions that led researchers to posit the importance of belief in the first place (see Smith, 1979). My point, however, is that we do not need to speculate about these deeper origins of bias in order to recognize that the vague category was not necessarily specified on the basis of decisive evidence. Even so, the vagueness of this category is not the problem; if anything, the vagueness of "religiosity" is what permits and encourages the interdisciplinary consideration of other relevant processes. The issues within this process emerge from the way inquiry is socially established and theory-laden, which we will take up below. Before we turn to that, however, we must first deal with the vagueness of self-regulation as well.

6.2.2 Vague regulation

As noted above, self-regulation is also a vague category because it can be specified in various and conflicting ways. Just as inquiry about religion in

relation to self-regulation became focused on belief, so too the vague concept of self-regulation became solidified as effortful restraint. When Carver and Scheier (1998) wrote the definitive text on self-regulation, there was no mention of willpower or effortful restraint as the paradigmatic form of regulation. By 2016, in the Handbook of Self-Regulation,[57] Carver and Scheier devote a section of their chapter to dual-process theories of regulation, but remain clear that regulation encompasses both automatic and effortful forms of goal-pursuit. Given their persistent maintenance of regulation as a vague category, where does the emphasis on effortful restraint enter this research program?

Within the space of this chapter I cannot offer a definitive account of this trajectory, but a brief sketch of the emergence and predominance of work on ego-depletion suggests that the attachment of this metaphor to self-regulation was a fairly routine occurrence. Baumeister and colleagues' (1998) first major article on ego-depletion has been cited over 4,744 times, with the paired experiment (Muraven et al., 1998) cited 2248 times (both assessed by Google scholar on September 1st, 2018). One of the first meta-analyses of ego-depletion by Hagger et

[57] It is worth noting that Vohs and Baumeister, both strong proponents of self-control as ego-depletion (see Baumeister & Vohs, 2016), are the editors of this third edition of the handbook of self-regulation.

al. (2010) reported 198 unique tests of ego-depletion. These are all signs of a thriving research program.

Given the way this research program flourished, it is no surprise that the key piece of this theory, that regulation depends on a limited resource, became interpreted as an essential part of the explanatory model connecting religion and self-regulation. In 1999, Baumeister and Exline were already suggesting that religion fosters morality by increasing one's regulatory strength[58] (see also, Baumeister & Exline, 2000). McCullough and Willoughby's (2009) review, which highlights the fact that self-regulation is both deliberate and automatic, nevertheless draws from Schmeichel and Baumeister (2004) to suggest that enacting self-regulation depends on "self-regulatory strength" which "can be likened to a muscle that can be weakened through acute exertion but that can also be strengthened through repeated use" (2009, p. 82). The metaphor of effort has snuck into the theory. McCullough and Willoughby (2009) go on to argue that the evidence for religion being a way to build self-regulatory strength is thin, but despite this measured appraisal it is apparent that the vague category of self-regulation has begun to be implicitly specified by the characteristic of effort.

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[58] The ego-depletion model and the strength-based model of self-control are one and the same. The strength-based model is meant to highlight that willpower (the limited resource) can be enhanced through practice (Baumeister, Vohs, & Tice, 2007).

In the Handbook for the Psychology of Religion and Spirituality (Paloutzian & Park, 2013), Zell and Baumeister's chapter uses self-control and self-regulation interchangeably. When outlining the essential features of self-control/regulation, willpower as conceptualized by the limited resource model, i.e., ego-depletion, is one of four crucial features of regulation. Laurin and Kay (2016) similarly suggest "recent controversy notwithstanding (e.g., Job et al., 2010; Molden et al., 2012), it is undeniable that exerting self-control relies on some forms of limited resources" (p. 313). If we were just discussing self-control, then this might be true, but Laurin and Kay (2016) also use self-control and self-regulation synonymously, which is an issue because it is quite deniable that other forms of regulation depend on willpower.

My point is that over the past two decades, the vague conception of self-regulation that accommodates various conflicting accounts of self-regulation, has gradually condensed into a more specific focus on regulation as restraint (at least within the literature on religion and self-regulation). Alongside this conception of restraint, the tacit view that motivation is based on self-centered cost-benefit analyses became similarly entrenched. Just as the focus on religion as belief obscured other facets of religiosity, this focus on self-regulation as self-interested restraint overshadows processes that are goal-directed but not necessarily

effortful or purely self-centered. If this specification of self-regulation as dependent on restraint were based on evidence, then it would not pose a problem, but instead it seems primarily based on theoretical proclivities.

There are many reasons this is a problem. Most pressingly, the recent "replication crisis," which has been gradually toppling some of psychology's key findings and reconfiguring the norms of the field (Pashler & Wagenmakers, 2012),[59] has come for the concept of ego-depletion. Carter and McCullough's (2014) meta-analysis suggested that the apparent abundance of evidence for ego-depletion may actually be the result of publication bias and overestimation. This was one of the first signs that all was not well with the theory. Dealing another crucial blow, the pre-registered replication efforts of Hagger and sixty-three colleagues (2016) failed to show any evidence of ego-depletion. Baumeister and Vohs (2016) responded with the promise of a multi-lab replication of their own, but so far there is no sign of their results.

I reviewed this debate in more detail in chapter 1 (1.2.1), but I mention it here because the proliferation of research on ego-depletion likely supported the

[59] Reviewing the full extent of this "crisis" is well beyond the scope of this chapter, which is unfortunate, because it is a living example, and test, of theories within the philosophy of science. Epistemological (Ioannidis, 2005) and social (Dominus, 2017) concerns are on full display as researchers adjust to new norms. While the popular media tends to see this as a challenge to the very foundations of psychology, it is more likely a sign of health (OSC, 2015).

tacit assumption of its integral role within self-regulation. The repetition of this interpretation developed like any other habit, with each occurrence increasing the likelihood of the next. This is the same dynamic as above– the vague concept of self-regulation was gradually equated with a specific concept of self-regulation, and this occurred primarily due to repetition, rather than direct evidence of that feature's salience within the broader category.

To be clear, there was evidence that ego-depletion existed– lots of it. But, if Carter and McCullough's (2014) analysis is right, then significantly more studies were done that returned null results– they just never saw the light of day. Publication bias—the tendency of journals to only publish significant results (Franco, Malhorta, & Simonovits, 2014)—and the resulting file drawer problem—discarding or never reporting studies that return null results (Rosenthal, 1979)—add an extra layer of false assurance to the process of conceptual condensation. Imagine you are running a lab and a research assistant wants to examine whether religious primes counteract the ego-depletion effect, which you regularly teach in your introduction to psychology class. She designs the experiment and does a few test runs of the depletion task, but they do not show any evidence of depletion. So, you work together, tweak the task a little, and try again. Finally, the task shows significant ego-depletion effects, but it turns out

that the religious primes do not influence these effects. What do you do with this data? Publishing it will be a monumental task since few journals are interested in null results, so it is probably best to just take it as a lesson and move on a different project.[60] The wider impact of these understandable practices is the dramatic increase in Type I errors being published. The point of this example is that publication bias can exaggerate the process of conceptual specification that I described above– the inflated prevalence of significant effects within the published literature will magnify the perception that the effect is real, thereby leading researchers to doubt their methods or design when they find null results.

All of these dynamics likely amplified the perceived importance of ego-depletion, which then supported the assumption that it must play a crucial role in self-regulation. The vague category of regulatory behaviors became restricted in the process. But the vagueness of the concept also permitted a sustained body of research arguing against the identification of self-regulation with effortful control (Bargh, 1997; Inzlicht, Schmeichel, Macrae, 2014; Koole et al., 2010; Kuhl, 2000). As fissures in the concept of ego-depletion developed, this vagueness allowed the concepts of self-control and self-regulation to be reimagined, a

[60] In this example I am not mentioning other questionable research practices, such as excluding data for post-hoc reasons or p-hacking, which only exacerbate these problems (see John, Loewenstein, & Prelec, 2012).

process still underway (e.g., Berkman et al., 2017). This is the ambiguity of vagueness– it allows for unjustified reductions of the category, but it also permits the critique and correction of those reductions.

In order to challenge the univocality of ego-depletion within research on religion and self-regulation, I adopted the same interdisciplinary method used to dispute the sole importance of belief. From the work on social identity and social norms, we saw how socially endorsed standards, such as conventions, act as unreflective but deeply persuasive guides for behavior (e.g., Kashima, 2008). Research on sacralization and moral emotions helped to highlight the cases in which regulation may be motivated by goals that are socially-centered rather than purely self-interested (e.g., Tangney, Stuewig, & Mashek, 2007). As above, these theoretical arguments are not aimed at the evidence for the relationship between religiosity and restraint, they are targeted at the implicit claim that these are the most salient forms of regulation within the broader relationship.

To humanities scholars this approach may not seem interdisciplinary. After all, I simply reviewed other psychological studies. From within psychology, however, it is evident that I drew from social psychology (e.g., Tajfel et al., 1971), cognitive anthropologists (Atran & Ginges, 2012), developmental psychologists (Rakoczy, Warneken, & Tomasello, 2008) primatologists (Yamada,

et al., 2013), and counseling psychologists (Skowron, Holmes, & Sabatelli, 2003) to name a few. By maintaining the vague category of self-regulation unconditioned by restraint and self-interest, the evidence and perspectives of these other research programs and sub-disciplines helpfully illuminated the broader range of behaviors that religious engagement might influence.

6.2.3. The value of vagueness

In the case of both religion and self-regulation, their vagueness permitted the process by which specific characteristics became emphasized at the expense of other features. The complex web of potential associations between the two phenomena was reduced to a single strand. While the vagueness of the concepts allowed this process to happen, the process itself was driven by background assumptions and the gradual entrenchment of theory. Within this dissertation, my method of correction was deeply interdisciplinary. The virtue of interdisciplinary inquiry lies within its capacity to bring novel perspectives and evidence to bear on phenomena that may currently be studied only through a narrow lens. This cross-pollination, however, depends on the vagueness of categories. Without that vagueness, researchers could retort that normative behavior is not controlled behavior or affiliative social processes are tangential to the essence of religion. By holding our concepts lightly and permitting their

vagueness to remain, we can consider a richer breadth of potentially relevant processes. The question, however, is whether these interdisciplinary analyses or the empirical evidence from chapter 5 can decisively confirm the plausibility of my theoretical account over and against the current explanation. In order to answer that question, below I will consider the challenges that the sociality and theory-ladenness of inquiry pose for choosing between competing theories. First, however, it is worth reviewing the details of my alternative explanation and its entailments.

6.3 Reflective review

My approach throughout this dissertation, following religious studies scholars such as McCutcheon (2012), has been to assume that:

> Religion—like all other aspects of human social life—may well turn out to be all too ordinary… It is only when we start out with the presumption that religious behaviors are ordinary social behaviors—and not extraordinary private experiences—that we will come to understand them in all their subtle yet impressive complexity." (p. 14-15)

Taking religious engagement to function in the same way as any other social behavior was the first step towards challenging the specification of religious

engagement as primarily a matter of propositional beliefs. Within chapter 2, I engaged the work of Durkheim (1912/2008) to offer a socially oriented account of religious engagement and self-regulation. First I argued that most of the standards relevant for self-regulation have social origins as part of a tacit moral order underwriting the norms of a group. By regulating in relation to these social standards, we signal our particular affiliations within these groups. This social perspective on self-regulatory behavior highlighted the ways that self-monitoring and motivation will be highly attuned to situational cues and the quality of one's attachment to the group. Adding to this perspective, I engaged potential critiques from post-modern theorists, which highlighted that this social context is not necessarily monolithic– instead it is mosaic of overlapping and contested entities. This insight motivated the hypothesis that individuals are likely to have internalized a diversity of social identities which may be integrated or conflicted to varying degrees. Since each of these social identities will carry a set of standards and motivations, the degree of integration or conflict will likely have direct consequences for the individual's capacity to self-regulate.

Even though the arguments in chapter 2 were focused predominately on the social aspects of regulatory behavior, they were nevertheless motivated by theoretical trends within religious studies. Over the past two decades, lived

religion has emerged as a flourishing field (see Hall, 1997; McGuire, 2008) of research which turns the analytical gaze away from official religious institutions and instead looks for the more mundane practices that people consider religious or spiritual. This shift in focus is critical for understanding how religious engagement impacts people's lives and behavior. For example, Ammerman's (1997) research highlights the way that many US Christians see an ethical lifestyle as a more crucial component of their religiosity than any strict belief in doctrine. A central part of the lived religion approach is a skepticism about the central role of belief within what is pertinent about religiosity (Bender, Cadge, Levitt, & Smilde, 2012). While our inquiry should remain attuned to both the institutional and everyday aspects of religiosity (Ammerman, 2016), this research field argues that the latter have been largely ignored. This theoretical imperative is part of my motivation within this project for suggesting that religious beliefs may not be the most salient feature of religious engagement's impact on self-regulation.

While the perspectives from Durkheim (1912/2008) and the lived religion scholars helped to challenge the dominant explanation for religious engagement and self-regulation, they also carried tacit assumptions about social psychology. In order to examine those assumptions and construct a more explicit alternative

to the dominant explanation, in chapter 3, I turned directly to the relevant psychological research. Our attention was first drawn to social identity theory (Brewer, 1991; Hogg, 2016; Tajfel & Turner, 1986) and the way that people's identity can become interwoven with their religious group. While this does not occur for everyone who is religious, when it does, these individuals likely internalize the norms of that group (Whitehouse & Lanman, 2014). Furthermore, some forms of religious engagement can lead these norms to become moralized and sacralized interpretations of expected behaviors (e.g., Atran & Ginges, 2012). Once moralized, norms extend well beyond injunctive dictates about 'what I need to do in order to avoid punishment and get a reward.' Instead they are engaged deontologically as 'just the way the world is.' Recognizing this psychological process of moralization—and the evidence that religious engagement tends to foster this relationship to social norms—I put forward the alternative explanation that moralization is a likely mediator within religious engagement's impact on self-regulation.

Attending to the social dimensions of this relationship between religion and self-regulation also surfaced the importance of emotions for understanding the motivational dynamics within this relationship. This was the primary topic of chapter 4. Following Tangney et al. (2007) and Tomasello (2016) I argued that the

motivational landscape that elicits moral behaviors is shaped by emotions in such a way that it often runs counter to the pull of self-interest. Instead, at the proximate level, moral emotions are socially-centered– abiding by and maintaining the group's norms is an end unto itself, not a means towards selfish ends. This social-emotional perspective helped to explain the consistent evidence suggesting that it is intrinsic religiosity, not extrinsic forms, that positively impacts self-regulation. Future work should also consider how this association may shift depending on religious tradition; as Cohen and Hill (2007) have shown, the extrinsic/intrinsic distinction varies depending on how individualistic/collectivistic the tradition. Considering the emotional processes that motivate regulation therefore helped to challenge the account that focuses on self-interested restraint and further solidify my alternative explanation grounded in social processes.

Within this section of my argument, I also suggested that if there were anything "extraordinary" about religious systems that would lead them to impact self-regulation over and above other forms of social engagement, then it would be the way that they include conceptions of supernatural beings within their relational networks. While this would distinguish religious engagement from belonging to a book-club, I nevertheless argued that these symbolic

relationships with supernatural others would still be formed through the same social processes that guide relationships with family, friends, and anyone else. Importantly, it is these very ordinary processes that determine who carries respect and authority. From this vantage point, I argued that it is therefore the way an individual relates to their religious group, inclusive of both actual and symbolic relationships, which will determine the extent to which their religious engagement influences their self-regulation.

The theoretical analyses of chapters 2-4 do not definitively prove my alternative hypothesis. Instead, they challenge the current explanation's specific focus on propositional beliefs and self-interested restraint by engaging neglected lines of interdisciplinary evidence that are relevant to the vague categories of religious engagement and self-regulation. And while these analyses do not prove my alternative specification, they do lend an empirical plausibility to my explanation. In order to test this explanation, in chapter 5 I presented new evidence that is pertinent to understanding the relationship between religion and self-regulation.

A number of key findings emerged from those analyses. One of the more significant results was that conventional religiosity was associated with both emotional regulation and delayed discounting, a proxy for impulsivity, but

delayed discounting and emotional regulation were not associated with each other. This result challenges the monolithic portrayals of self-regulation as primarily a matter of exercising restraint (Baumeister, 2014). Though it also challenges accounts that suggest emotional regulation is a foundational determinant of discounting behaviors (e.g. Luerssen & Ayudek, 2014). Instead, self-regulation is likely a multifaceted capacity that varies by the type of goal pursued and the way in which it is pursued. For example, an individual may be very capable of avoiding the temptations of substance use, but struggle to regulate the emotional intensity of encountering conflicting worldviews. In my sample, conventional religiosity was associated with both types of regulation, but given the complexity of regulatory capacities, this is not necessarily the case. Returning to the example just given, fundamentalist forms of religiosity may offer a normative strictness that faithfully abides by authoritative rules (Ludeke, Johnson, & Bouchard, 2013) but cannot grapple with social differences (Hunsberger, Pratt, & Pancer, 1994; Sandage & Jankowski, 2013). In other words, different forms of religious engagement will likely impact different regulatory capacities, therefore it is critical to not restrict our analyses of either concept.

Supporting this point, our study also showed that the relationship between conventional religiosity and emotional regulation was fully mediated by

social density. Social density was a rough index of how often participants saw their friends and family and how much support was given and received within these encounters (Figueredo et al., 2007). The relationship between social density and conventional religiosity suggests that religious institutions may play an important role in maintaining social networks. Given the complexity of our variable for social density, however, it is unclear whether this relationship varies depending on whether the network is one of friends or family. Regardless, the fact that social density mediated the connection between conventional religiosity and emotional regulation supports my claim that relational dynamics, not propositional beliefs, are salient features of the relationship between religious engagement and self-regulation.

Given the complexity of self-regulation noted above, however, these relational dynamics may not be relevant across the board. Within my study, the connection between conventional religiosity and delayed discounting was not impacted by the other variables. Therefore, in order to understand that relationship, we are left in a similar place as Paglieri et al. (2013)– beliefs, the endorsement of which is likely embedded within my variable for conventional religiosity, may indeed be driving this relationship. But, given other studies that have found the opposite association between religiosity and delayed discounting

(e.g., Morgan et al., 2016; Shenhav et al., 2017), this relationship needs further differentiation.

Contrary to my predictions, moralization processes did not influence these relationships between religiosity and emotional regulation or delayed discounting. While conventional religiosity was positively associated with the endorsement of binding moral intuitions, this association did not factor into the other relationships. Null results do not definitively show that there is not a relationship, but this does tentatively challenge the role of moralization within my proposed hypothesis. Granted the complex associations between religiosity and morality that depend on social context (Davis et al., 2016) and particularities of religiosity (Johnson et al., 2016), it is possible that my study did not deploy nuanced enough measures of these variables. Along the same lines, the endorsement of these binding moral intuitions may not accurately capture the sacralization or objectification processes (e.g., Sheikh et al., 2013) that I suggested would be crucial for the relationship between religious engagement and self-regulation (Piazza, 2012). Therefore, this remains an area for future research.

The importance of considering the various associations between religious engagement and self-regulation is reinforced by considering the behavioral outcomes of these self-regulatory capacities. For example, we found that

emotional regulation, but not delayed discounting, was significantly associated with fewer depressive symptoms. Conversely, delayed discounting, but not emotional regulation, predicted more cooperative behavior. This associations support previous work suggesting that self-regulation plays an essential mediating role in the relationship between religious engagement and well-being (e.g., McCullough & Willoughby, 2009) and that between religiosity and cooperation (Ainsworth & Baumeister, 2013). But, my results nuance these claims by showing that different regulatory capacities play different roles in these behavioral outcomes. This added detail is especially important for cultural evolutionary accounts of religious systems, which often depend on these proximate explanations for the capacity of religious engagement to foster either cooperation or health (Norenzayan et al., 2016).

Beyond their specific entailments, these findings also broadly challenge the narrow specification of religious engagement and self-regulation within the dominant account of Zell and Baumeister (2013) and Laurin and Kay (2016). As I will argue below, these results are not a decisive blow against the dominant account, nor are they an unequivocal foundation for my own explanation– the theoretical terrain surrounding these explanations is too complex. But, these results do add to the accumulating body of evidence that can help us gradually

refine our understanding of the vague relationship between religious engagement and self-regulation. Furthermore, my analyses, at both the theoretical and empirical level, help to generate new hypotheses and questions, which, as I will argue below, is a crucial feature of progressive research. Before zooming out to the broader theoretical terrain of this project, it is worth briefly considering some of the fruitful directions for future research in this area.

6.3.1 Future directions

Throughout this dissertation I have emphasized the ways that religion functions as a normative force– reinforcing the social order and drawing individuals into abidance with this order. This emphasis helped to shift the current perspective away from its focus on propositional beliefs, but it also neglects forms of religious engagement that reimagine or directly challenge the social order. Whether made by the leaders of the civil rights movement in the US or within propaganda materials from the Islamic state, religious appeals and actions are regularly made to *not* uphold the prevailing social order. These are not isolated examples either, the Hebrew bible is full of prophets lamenting and questioning the common norms (Heschel, 1962/2001) and beyond the Abrahamic religions, Buddhist monks played a crucial role in the Saffron Revolution in Burma/Myanmar (Steinberg, 2008). If we are to understand the full breadth of

ways that religious engagement may impact regulatory behaviors, then we should also attend to those modes of engagement that explicitly rebel against the common order.

Similarly, I have argued for a broader conceptualization of self-regulation, but it is likely that my own social account is not broad enough. Nearly fifty years ago, Kohlberg (1971) drew a distinction between conventional and post-conventional forms of morality. While researchers have, rightly, moved away from stage-based theories of development and despite the fact that I argued that emotions play a more central role than rationality within morality, there is not strong evidence to contradict Kohlberg's (1971) conceptual distinction between individuals who accept social norms and individuals who weigh those norms against their own conscience. While I would still posit a deeply social origin for the individual's conscience, I nevertheless maintain that Kohlberg's (1971) distinction helpfully illuminates the difference between the regulatory capacity to abide by a standard and the regulatory capacity to reflectively choose between standards. For example, Endicott and colleagues (2003) found that having deeper multicultural experiences tended to facilitate cognitive flexibility and more post-conventional thinking about moral issues. The concept of differentiation of self (Skowron et al., 2003) comes close to capturing the regulatory capacity necessary

for post-conventional moral reasoning, and evidence already suggests that it is associated with various forms of religiosity (Jankowski & Vaughn, 2009; Sandage, Jensen, & Jass, 2008). But, just as recognizing subversive forms of religious engagement is crucial to maintaining the complexity of this concept, recognizing the broad range of behaviors involved in self-regulation will be necessary for articulating the complex dynamics of its relationship to religious engagement.

In order to argue against the role of propositional beliefs within this relationship I have predominately emphasized religious behaviors and the dynamics of belonging. But, we cannot rule out the influence or importance of belief. Maintaining my skepticism of propositional beliefs, however, I would suggest that religious narratives likely play a significant role in the way individuals construct their religious identities and internalize the standards of their religious communities. For example, Blackburn (1999) analyzes the way monastic discipline was taught to Sri Lankan monks. Within Theravāda Buddhism, the *Vinaya Pitaka* is the set of formal rules and regulations that codify monastic discipline, but as Blackburn (1999) argues, few monks ever encountered the *Vinaya.* Instead monks primarily learned proper discipline as it was presented in narrative form through other texts within the *Pāli* canon

(specifically the *Anumāna, Dasadhamma,* and the *(Karanīya)metta Suttas*). One instance does not make the case, but various fruitful lines of research have suggested the inherently narrative form of our identities (McAdams, 1993) and the crucial role that religiosity can play within this narrative construction of ourselves (Alisat & Pratt 2012). Therefore, narratives emerge as a highly plausible avenue by through which religious engagement impact self-regulatory behaviors.

A final promising and necessary route for future research is understanding the character of religious identities as they relate to other social identities. Ebstyne King (2003) suggested that religious identities may transcend other social identities. If this is true, then it would bear significant consequences for how we understand religious engagement and self-regulation. At the very least, understanding if and how religious identities differ from other social identities, and what factors contribute to integration or conflict between these intersecting aspects of identity (Kuhl, Quirin, & Koole, 2015) is a promising route for future work. Such research could provide a social background for related theories that are reinterpreting ego-depletion in terms of value-based choices (Berkman et al., 2017). If self-control and self-regulation are essentially the result of competing conceptual values, then understanding the various social identities

that might hold these conflicting values would be crucial to understanding regulation.

These are not the only promising routes for future research on religious engagement and self-regulation. Instead, they emerge as either conceptual lacuna within my analyses so far, in the case of narrative, or hypotheses that I surfaced but did not test, in the case of religious identity dynamics. As an interdisciplinary project, this dissertation could also motivate research in other fields. But, in order to understand the difficulties and promise of such interdisciplinary engagement, we need to zoom out to the broader theoretical context within which this project has been situated. That is the aim of this final section.

6.4 Interdisciplinary reflections

While I have freely moved between disciplines, collecting evidence and bringing it to bear on the relationship between religious engagement and self-regulation, this is not a straightforward method of inquiry. There are two interwoven obstacles to the method of inquiry that I have deployed in this dissertation. First, is the problem noted in the first section above– all inquiry is loaded with background assumptions, theoretical commitments, and methodological

expectations. This problem was first diagnosed by Duhem (1906/1954) and later elaborated by Kuhn (1962) as the "theory-ladenness" of inquiry. The second challenge to my interdisciplinary method is the fact that inquiry is a social process. While the social construction of knowledge may seem distinct from the way observation is theory-laden, the two are interconnected because the theoretical presuppositions and methodological norms that "load" observations are carried by a community of inquirers. Taken together, these two points can lead to the radical position that all theories are seriously underdetermined– they are not supported by or changed on the basis of evidence or rational thought (Bloor, 1976; 1999).

If scientific theories are underdetermined by data in such a radical way, then that poses various problems for my project. For one, it challenges the possibility of translating perspectives and evidence across disciplinary lines– doing so depends on the assumption of a common referential base. The presumed difficulties of translation would undermine both my method, which looked to other disciplines for relevant evidence, and my conclusions, which seek to speak to both psychologists of religion and religious studies scholars. The radical underdetermination of theory by data would also subvert the possibility of deciding between the current explanation and my alternative hypothesis. No

accumulation of evidence or conceptual argument could shift the plausibility of either account– instead theory change depends on rhetoric and social persuasion.

Resolving these issues has been a persistent concern within the philosophy of science,[61] so I will not posit a novel solution here. Besides, given the very nature of my project, my opinion of this radical position on the underdetermination of theory is probably apparent. There are two reasons I nevertheless find it a valuable position to understand. First, it helpfully pinpoints the challenges facing my project. Translating evidence and theory between disciplines is not a straightforward endeavor and deciding between theories often cannot occur on the basis of single experiments or arguments. Second, there are many religious studies scholars who are committed to similar views of scientific research. If I want them as part of my audience, which I do, then I must understand the contours of their likely critique. Attempting to overcome their doubts may be quixotic, but at the very least, by appreciating their position we can uncover the root of disagreement and not be lost in peripheral arguments.

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[61] These issues extend well beyond the modern discipline of philosophy of science. Kant's (1781/1999) framing of the problem still echoes throughout these debates: we can never truly know objects of the world, noumena, because all experience necessarily occurs through the transcendental structures of the mind. In other words, the only evidence we can gather is that which conforms to our categories of understanding– so the possibility of correcting those categories on the basis of new evidence vanishes. For a freeing discussion of how pragmatic philosophy offers an alternative account see Neville (1992).

In contrast to this radical position, Lakatos (1978) offers a framework that acknowledges the way inquiry depends on a network of theoretical assumptions, yet also describes how evidence can meaningfully correct existing theories. For our purposes, the key insight from Lakatos' (1978) theory is that within any research program different hypotheses are afforded different standing. There is a hard core that is, justifiably, resistant to change, but there is also a belt of auxiliary hypotheses surrounding this hard core. From this perspective, evidence is capable of refuting these auxiliary hypotheses, but in order to falsify the hard core, the accumulation of evidence must first penetrate through this auxiliary belt. Lakatos' (1978) description of science, therefore, maintains the capacity of arguments and evidence to correct theory while also explaining why theories can be so resistant to change. This perspective helps to contextualize my empirical project within my efforts to shift inquiry away from the restricted sense of religion and self-regulation. By recognizing the different levels of theoretical commitments, this framework also helpfully describes why interdisciplinary work is easier in some spaces than others.

Lakatos' (1978) theory of research programs primarily addresses the epistemic issues of theory-ladenness. In order to recognize the social embeddedness of inquiry, without undermining the possibility of this project, we

will turn to Longino's (1990) work. Her primary project is to articulate how objectivity is possible given the pervasive role that contextual values have in shaping inquiry. As she is concerned with these values as background assumptions, Longino's (1990) work is also relevant for understanding the theory-ladenness of observation; for our purposes, however, the value of her research comes from her account of the social practices within science. While proponents of the radical underdetermination of theory by data see these social practices as miring the possibility of objectivity, Longino (1990) argues that these practices are the fundamental ground of objectivity. The important question is not whether science is social—clearly it is—but how the social practices of science are organized. Criticism and diversity of perspectives emerge as the essential components of objective inquiry. Longino's (1990) account of objectivity, therefore, helpfully demonstrates the value of interdisciplinary work while also highlighting the features of social organization that are necessary to make such diverse work fruitful. Taken together, Lakatos (1978) and Longino (1990) provide a way around the radical underdetermination of theory by data, while also offering a compelling appeal for the necessity of interdisciplinary work.

6.4.1 Kuhn and the heavy load

Above, when discussing the way theoretical assumptions guide research with the effect of restricting vague categories in the absence of evidence, I presented these processes as isolated incidents. In the *Structure of Scientific Revolutions* (*SSR*), Kuhn (1962) takes a historical perspective to argue that the impact of theoretical assumptions on inquiry is actually the norm. *SSR* is a foundational text for philosophers of science and it advances many more arguments then I will be able to engage in this section. For our purposes, the essential part of *SSR* is Kuhn's (1962) description of science as a thoroughly social process, in which certain theories or experiments become elevated as "model problems and solutions to a community of practitioners" (p. x). These theories and experiments are part of what Kuhn describes as a scientific paradigm, which is simultaneously one of the most significant and sketchy contributions from his work. While the technical definition of paradigm was criticized for its imprecision (see Masterman, 1970; Shapere, 1964), it nevertheless serves as a valuable heuristic for understanding the way that tacit expectations, knowledge, and values inescapably shape the direction of inquiry.

In the examples above, the assumptions that propositional beliefs are the salient feature of religiosity or that self-regulation depends on a limited resource,

function in the same way as paradigms. They pattern expectations about what sort of evidence researchers are likely to observe and then shape how that evidence is interpreted. Typically, paradigms are taken to be more pervasive and overarching than specific assumptions– in a postscript to *SSR*, Kuhn (1962/1996) described paradigms as "disciplinary matrices" which include symbolic definitions, metaphysical and epistemological commitments, values, and key experiments. Clearly, singular assumptions, such as those highlighted above, do not carry the same weight. While not as pervasive or influential throughout the discipline, these assumptions nevertheless function in the same manner as paradigms, a fact made apparent by Kuhn's (1962) presentation of Bruner and Postman's (1949) anomalous card experiment.

This experiment consisted of showing participants cards from a deck very quickly and having them identify what card they saw (Bruner & Postman, 1949). This would be a mundane test of perceptual thresholds, but the deck also included trick cards, such as a red six of spades or a black four of hearts. By having participants work through the deck multiple times, Bruner and Postman (1949) were able to assess the thresholds at which people recognized the trick cards. It took people significantly longer to recognize these cards for what they were, and some people never did (Bruner & Postman, 1949, p. 218). The reason

Kuhn (1962) is interested in this experiment is because of Bruner and Postman's (1949) interpretation: "[F]or as long as possible and by whatever means available, the organism will ward off the perception of the unexpected, those things which do not fit his prevailing set" (p. 208). Setting aside the irony of using psychological evidence to support a point about researchers' resistance to evidence, Kuhn (1962) interprets these findings as illustrative of the pernicious effects of paradigms:

> Either as a metaphor or because it reflects the nature of the mind, that psychological experiment provides a wonderfully simple and cogent schema for the process of scientific discovery. In science as in the playing card experiment, novelty emerges only with difficulty, manifested by resistance, against a background provided by expectation. (p. 64)

In other words, theoretical assumptions—such as that religious belief is the salient feature or self-regulation is self-interested restraint—are part of a researcher's background expectations, which not only guide the selection and interpretation of evidence, but can also lead researchers to resist conflicting evidence.

This suggestion about the pervasive ways in which theoretical assumptions influence the reception, selection, and interpretation of evidence

poses a radical challenge to theories that scientific change occurs in response to new evidence or rational argumentation. This challenge to traditional, progressive, views of scientific change, was the revolutionary contribution of *SSR*. As Kuhn (1962) puts it: "the competition between paradigms is not the sort of battle that can be resolved by proofs" (p. 148). Instead of being decided by evidence, theory change occurs through "techniques of persuasion" (1962, p. 152) or through the death of older generations who are committed to the prior theory.

This perspective on the underdetermination of theories by data cuts both ways within the current project. On one hand it provides support for my earlier analysis about the way the vague categories of religious engagement and self-regulation became specified without direct evidence. From Kuhn's (1962) perspective, this is the natural solidification of a theoretical assumption. But at the same time, this perspective suggests that my alternative specification of the relationship between religious engagement and self-regulation is in no better position empirically. Instead, from this perspective, I have simply offered an alternative description grounded in a different set of background expectations. More troublingly, this account would suggest that the differences between my account and the current explanation cannot be decided on the basis of new evidence.

In later essays, Kuhn (e.g., 1977) backs away from the stronger forms of his thesis, resisting charges that his account is anti-rational or anti-realist. By this point, however, his argument had taken on a life of its own. Joined by critical theory, Kuhn's (1962) work became the foundation for more radical portrayals of scientific theories as social artifacts created by committee without meaningful input from the outside world. The most thorough proponent of this view is Bloor (1976) and what has become known as the Strong Program within the sociology of scientific knowledge (see also, Barnes, Bloor, & Henry, 1996; MacKenzie, 1981; Shapin, 1982). This program is committed to making the social practice of science and the beliefs produced by this practice, objects of study. In order to make this field of inquiry rigorous, Bloor (1976) presented four tenets that should guide the sociological study of science. While a full review of these methods is beyond the scope of this chapter, it is worth noting two of them:

> 2. [The sociology of scientific knowledge] would be impartial with respect to truth and falsity, rationality or irrationality, success or failure. Both sides of these dichotomies will require explanation.
>
> 3. It would be symmetrical in its style of explanation. The same types of cause would explain, say true and false beliefs. (Bloor, 1976, p. 7)

In other words, if one is seeking to explain why scientists hold one theory rather than another, the Strong Program precludes any appeal to evidence and reasoning as a cause. Bloor's (1976) reason for setting these boundaries is to continue Kuhn's (1962) efforts countering historical accounts of science as the progressive march of reason and discovery. To be clear, this is a laudable and necessary correction to enlightenment narratives that oversell the possibility and progress of rational inquiry, but if one removes any distinction between true and false beliefs and instead sees both as fully explainable through social causes, then one has completely severed the connection between theory and evidence. As Bloor (1999) puts it elsewhere: "The important point is to separate the world from the actor's description of the world" (1999, p. 93).

If theories about the world are severed from the world then there is no common ground for translating between the self-referential paradigms governing each discipline. Kuhn (1962) referred to this lack of a common ground or measure as the "incommensurability" of paradigms (p. 148-150). If this account of theories as so radically underdetermined is true, then my attempts to bring evidence from anthropological studies to bear on psychological theory or to surface psychological evidence as relevant for religious studies scholars are

intrinsically flawed. Each discipline and theoretical perspective becomes divorced from the rest.

My purpose in briefly reviewing these perspectives from Kuhn (1962) and the Strong Program is two-fold. First, as just noted, their perspective clarifies the challenge posed by the social embeddedness and theory-ladenness of scientific inquiry. Bringing evidence across disciplines is not a simple process of direct translation, it also involves sensitivity to the background theoretical commitments that have shaped that evidence within its original social context. From this perspective, even the evidence presented in chapter 5 is faced with the challenge of being interpreted in light of any recipient's prevailing theoretical commitments. In short, the problems of specification on the basis of non-empirically warranted theoretical expectations not only trouble the current explanation for the relationship between religion and self-regulation, they also plague my specification and radically undermine the possibility of deciding between the two on the basis of anything other than social persuasion.

My second reason for engaging these perspectives is that there are scholars within religious studies who hold similar positions on scientific inquiry as those proposed by the Strong Program of Bloor (1976) and colleagues. For example, recall McGuire's (2008) work in chapter 2. I would wager that the lack of

biological and psychological citations was not simply carelessness as much as it was a result of the assumption that scientific descriptions of emotion, memory, and perception are just one set of descriptions among many equally valid descriptions. That being the case, citing Bourdieu (1977) as an authority on these processes is just as legitimate as citing a statistical meta-analysis on the neurology of perception. As I noted in chapter 2, my intention is not to deride McGuire (2008)– I believe her work is very important within religious studies. Nor am I suggesting that Bourdieu (1977) does not have helpful insights on perception, memory, and emotion. Instead I am acknowledging a large epistemological fault line that could preclude intellectual exchange between scholars in the psychology of religion and those that are committed to this perspective on science.

I lament this divide because I share many ethical and epistemological commitments with these scholars. As I noted above, these scholars within the discipline of lived religion (e.g., Bender, 2003; Hall, 1997; Orsi, 1985) are part of my motivation for arguing that the regular and seemingly inconsequential acts of religious engagement are likely a stronger determinant of self-regulation than officially professed beliefs . As Ammerman (2016) puts it "lived religion provides a way to make sense of religious life and spiritual practice without measuring

participants against a Protestant definition that begins with belief" (p. 8). In short, scholars of everyday religion have insights about the lived texture of religiosity than can help psychologists of religion provide thick and diverse contexts for their research.

I also lament this divide, because scholars of lived religion could enrich their inquiry with insights from the psychology of religion. For example, within chapter 3 I described the way that social norms come to have varying degrees of influence within people's everyday actions– some norms are simply descriptive conventions about what people tend to do while others are moralized into injunctive oughts about the way the world should be. These dynamics provide a highly relevant psychological backdrop for understanding an individual's everyday practices and whether those practices reinforce or rebel against particular norms. Similarly, throughout this dissertation I have described how being embedded in a group that shares normative practices and standards can have a strong impact on one's regulatory strength. These groups are not necessarily the large institutional congregations of religion. The more persuasive group will be the small, but tight, group of peers. Recognizing the psychological impact that such social embeddedness can have on an individual's self-regulation can provide a helpful lens for understanding how small groups

perform tactical interventions amidst broader and seemingly more powerful regimes. While these interdisciplinary exchanges are not particularly easy, they are potentially very fruitful. The problem, however, is that philosophical commitments that severe descriptions of the world from the world itself tend to preclude such interdisciplinary dialogue by removing any common referent.

Fortunately, however, this philosophical perspective is not necessary. Nor is it particularly well-founded. Let us return briefly to the Bruner and Postman (1949) study. Their experiment and thesis, that people actively resist anomalies in their experience, was part of a broader school of thought within the psychology of perception– the New Look movement (see Bruner, 1957). These psychologists argued that values (Bruner & Goodman, 1947), desire (Lazarus, Yousem, & Arenberg, 1953), expectations (Bruner, Postman, & Rodrigues, 1951), and other cognitive processes all influence what we perceive. Theory-ladenness appeared to be written within our perception. The only problem is that this movement was evidently wrong. Further experiments failed to replicate these effects (see Carter & Schooler, 1949; Klein, Schlesinger, & Meister, 1951; Landis, Jones, & Reiter, 1966), and the New Look movement faded.[62] The loss of this metaphor does not

[62] There is currently a new resurgence within perceptual psychology of studies that claim to show similar top-down effects to those posited within the New Look movement (e.g., Balcetis, 2016;

disprove Kuhn's (1962) example of paradigms any more than it proved his argument in the first place, but it does cast doubt on this core tenet. At a meta-level, the decline of this movement in the face of contradicting evidence also poses a puzzle for any theorist committed to the perspective that scientific theories are no more than social facts.

Suggesting that there is a common frame of reference is not to say that the theory-ladenness of data is not an issue for interdisciplinary inquiry. It also does not imply that deciding between competing theories can be done on the basis of a single experiment (notice that the failed replications of the New Look movement span more than fifteen years). But, preserving the common ground of evidence does leave the door open for fruitful exchanges across disciplinary lines. In the next two sections, I will argue that Lakatos (1978) and Longino (1990) preserve the best parts of Kuhn's (1962) theory, while also offering a framework for understanding how to go about such fruitful interdisciplinary dialogue.

6.4.2 Lakatos' shifting load

Lakatos' (1978) work in the philosophy of science was most directly in dialogue with Popper (1962) and the demarcation problem: i.e., how to

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Goldstone, de Leeuw, & Landy, 2015). But, once again, these experiments appear to be built on a shallow foundation (see Firestone & Scholl, 2016, for a meticulous critique).

distinguish science and pseudoscience. Popper's (1962) famous resolution to this problem was to recognize that genuine scientific inquiry is characterized by falsification rather than the accumulation of confirming evidence. This was one of the rationalist theories of scientific change that Kuhn (1962) was arguing against:

> No process yet disclosed by the historical study of scientific development at all resembles the methodological stereotype of falsification by direct comparison with nature… the act of judgment that leads scientists to reject a previously accepted theory is always based upon more than a comparison of that theory with the world. (p. 77)

Lakatos' (1978) framework bridges these two accounts– bringing Duhem's (1906/1954) and Kuhn's (1962) recognition of the complex network of theories surrounding any observation to bear on Popper's (1962) insight about the logical necessity of falsification within inquiry. Within this section, I cannot fully engage this synthesis and its significance for the demarcation problem. But the theoretical structure that Lakatos (1978) develops to resolve these two perspectives will also help us more specifically articulate the challenges and possibilities available to interdisciplinary inquiry.

The key piece of Lakatos' (1978) framework, for our purposes, is the difference between theories that constitute the hard core of a research program and those theories that form a protective, auxiliary belt around this hard core:

> All scientific research programs may be characterized by their '*hard core*'. The negative heuristic of the programme forbids us to direct the *modus tollens* at this 'hard core'. Instead, we must use our ingenuity to articulate or even invent 'auxiliary hypotheses', which form a *protective belt* around this core, and we must redirect the *modus tollens* to *these*. It is this protective belt of auxiliary hypotheses which has to bear the brunt of tests and get adjusted and re-adjusted, or even completely replaced, to defend the thus-hardened core. (p. 48)

The difference between the hard core and the auxiliary hypotheses is therefore defined in terms of what scientists do. In other words, it is a methodological distinction– the "negative heuristic" is a rule that "tell[s] us what paths of research to avoid" (p. 47). As such, the hard core is the set of theories that is practically protected from falsifying evidence (i.e., the "not-q" of the modus tollens). While previous theorists cast auxiliary hypotheses as a sign of science's resistance to theory change, Lakatos (1978) recasts them as a vital feature of progressive research programs.

The function of auxiliary hypotheses is two-fold. Their first function is that described in the quote above– buffer the hard core of a research program from falsification. For example, consider the hypotheses 'ego-depletion does not work for certain computerized tasks, such as Sripada et al.'s (2014) e-crossing procedure' or 'frustrating tasks do not deplete willpower, only fatiguing tasks do', which were both given by Baumeister and Vohs (2016) in response to the failed replication (Hagger et al., 2016). These auxiliary hypotheses both serve to deflect the failed replication away from the core theory: self-control relies on a limited resource.

The second function of auxiliary hypotheses is to generate empirically testable predictions from the core theories. In this sense, the hypotheses I tested in chapter five are auxiliary hypotheses to make my core claim, about the relational dynamics of religion and self-regulation, empirically testable.[63] Similarly, hypotheses such as 'belief in divine punishment promotes self-control' (Johnson & Bering, 2006) or 'belief in supernatural surveillance fosters socially desirable behaviors' (Gervais & Norenzayan, 2012) are auxiliary to the more central claim that the content of religious belief fosters self-regulation. Lakatos'

[63] Notice within my discussion (5.4), that I also offered a variety of auxiliary hypotheses to explain away those results that did not fit my core claim.

(1978) point is that, if taken alone, the theories that comprise the hard core often do not make direct predictions about the world.[64] Instead they are surrounded by a set of more specific sub-hypotheses that can be tested.

By articulating the functions performed by the belt of auxiliary hypotheses in relation to the hard core, Lakatos (1978) is able to argue that there is a logical and practical structure to the network of theories within any research program. This framework is meant to synthesize Kuhn's (1962) claims about science's resistance to change with Popper's (1962) insight about the logical importance of falsification. The result is an account of theory-change which is often conservative—because the hard core is resistant to change—but still rational and attuned to evidence, because the auxiliary hypotheses regularly change. In other words, it provides a way around Kuhn's (1962) claims about the change between paradigms being an irrational, social process. Instead scientists adopt new theories for a variety of reasons: the new theory's predictive capacity, its explanatory power, and/or the generative access to new empirical content.

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[64] This rough sketch is further complicated by the fact that each of these auxiliary hypotheses are dependent on a much wider set of other theories, such as those about the way beliefs "foster" behavior, or what constitutes a statistically significant effect. The existence of this wider set of theories, and the problem it poses for direct falsification was made famous by Duhem (1906/1954). Lakatos' (1978) framework is developed partially in response to this problem.

I appreciate the realism preserved by Lakatos' (1978) account, but this framework also helpfully contextualizes my project amidst my interlocutors. The image that emerges from Lakatos' (1978) distinction between the hard core and the protective belt is of a research program as a dynamic cluster of auxiliary hypotheses surrounding a set of core hypotheses. In the examples above, I described my project as a nested cluster of theories and the dominant account as a different cluster. That is locally true, but if we zoom out then it becomes clear that both of our hard cores are auxiliary hypotheses to a more central theory about religion and self-regulation. Zoom out again, and that theory is part of a more encompassing research program within the psychology of religion, which is committed to core theories about religion as a bio-cultural phenomenon.[65] This picture describes research programs as internally complex networks of hypotheses, with local clusters of auxiliary hypotheses protecting core theories, and these theories themselves acting as a protective belt surrounding even more central theories.[66] My point in reviewing this model of research programs is that

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[65] How far can we zoom out? Lakatos (1978) said: "What I have primarily in mind is not science as a whole, but rather particular research programmes, such as the one known as 'Cartesian metaphysics'" (p. 47). So, we cannot include all inquiry as one big research program, but Cartesian metaphysics is a pretty big project.

[66] As another point in favor of Lakatos, this presents a more accurate picture of any scientific discipline as fairly contentious and heterogenous. Kuhn's (1962) account of paradigms is a rather homogenous and happy affair of solving puzzles.

it provides a framework for understanding the various tensions within interdisciplinary projects like this one.

For example, my account of the relationship between religion and self-regulation and the current explanation share a large amount of theoretical content. We are both committed to the core theory that religion impacts self-regulation. We also share commitments to empirical methods that are central to psychology as a research program. Also at the deeper level, both accounts of religious engagement and self-regulation have shared commitments to the theory that social phenomena have psychological dimensions. In short, my explanation and the dominant theory are different branches of the same research program. The process of unjustified conceptual specification that I articulated above does not change this fact– instead, it is more fruitfully framed as a pair of auxiliary hypotheses on which we disagree–'religious belief is the salient aspect of religion that impacts self-regulation' and 'self-regulation relies on some strength of will.' Therefore, my competing explanation is primarily directed at those auxiliary hypothesis, not the relationship between belief and restraint, which may persist.

Beyond providing a framework for organizing these hypotheses, Lakatos' (1978) account also helps to articulate where interdisciplinary exchanges are likely to be fruitful or not. For example, because both the current explanation and

my account are part of the same research program, there is enough common ground for disagreement that can still generate new empirical content, new predictions, and better explanations. Considering the interdisciplinary evidence that I surfaced in chapters 2-4, this framework helpfully explains why some of it will be more readily received than others. For example, work on social norms from cross-cultural psychologists (e.g., Gelfand et al., 2011; Kashima, 2015) or developmental psychologists (e.g., Rakoczy et al., 2008) will be more readily received by psychologists of religion than work from social theorists such as Berger (1967), Douglas (1970), Bourdieu (1977), or Collins (2004). Returning to the example above, about the possibility of exchange with scholars of lived religion, we can now see how far the distance is to be covered. If part of their hard core is a commitment to the view that scientific descriptions of the world are separate from the world itself, then it will be a long way from there to the hypotheses I generated, which aim to describe actual psychological processes. While this point, that disciplines have different theoretical commitments, is so common as to barely be worth mentioning, it is nevertheless puzzling given many of the shared interests in how cultural processes shape behavior. Shared interest may be sufficient to begin an interdisciplinary dialogue, but in order for that

conversation to generate novel insights, differences in core commitments must be navigated.

This is the part of Kuhn (1962) that Lakatos (1978) preserves– inquiry or evidence that threatens the hard core will be redirected towards auxiliary hypotheses. Lakatos' (1978) addendum, however, is that this process is not necessarily a detrimental process for the research program. Sometimes this process of deflection generates new predictions and insights, in which case, Lakatos' (1978) describes them as progressive problem-shifts. Other times though, the process of deflection becomes increasingly ad-hoc, no longer generating new predictions or surfacing novel empirical content. At this point the research program is degenerating and inquirers will rationally defect. Until that point, however, researchers are justified in their commitment to their hard core and their resistance to conflicting accounts.

Finally, Lakatos' (1978) framework also provides a way to more clearly articulate the impact of my empirical results from chapter 5. These results target two auxiliary hypotheses: 'belief is the primary driver of religion's impact on self-regulation' and 'self-regulation is primarily about restraint.' The fact that emotional regulation and delayed discounting were not related poses a challenge, though not a direct falsification, to the second hypotheses. If

emotional regulation and delayed discounting are distinct capacities, as this evidence suggests, then it lends support to a new auxiliary hypothesis that self-regulation is a mix of different processes that vary depending on the type of standard involved and the amount of effort exercised. Deciding between these views will take more time and evidence, but the study from chapter 5 is now part of the larger body of evidence tilting the scales. Within our evidence, the finding that conventional religiosity was associated with both types of regulation and that these relationships depended on different variables, social density in the case of emotional regulation, also challenges the auxiliary hypothesis about belief as the salient feature of religious engagement. This empirical challenge could be deflected, because it is possible that my measure of conventional religiosity was conflated with belief. But, explaining the connection between particular beliefs, social density, and emotional regulation, begins to appear more ad hoc than generative. In short, other explanations—i.e., auxiliary hypotheses—can account for these results without too much cost to the research program, so it is unlikely that my project will foster a decisive change of theory. But, these new hypotheses are fruitful; they open new aspects of the relationship between religious engagement and self-regulation for inquiry. So, from Lakatos' (1978) perspective, this project is a crucial component of theory change.

From the perspective of Lakatos' (1978) framework, it is unreasonable to expect theory-change to happen on the basis of single experiments. The scientist's responsibility is conservative– to protect the central theories of her research program until a more fecund alternative is available. While I have been critiquing Baumeister et al. (2001; 2010; etc.), their reluctance to abandon the strength-based model of self-regulation is not only understandable from this perspective, it is rational. Until there is an alternative theory that is generating novel predictions, incorporating more empirical content, and providing more robust explanations, they have no reason to change their position, even in the face of contradicting evidence. These theories are emerging (e.g., Berkman et al., 2017), but are still too young to be fully viable alternative research programs. From outside of Baumeister's research program, however, the contradicting evidence from Carter and McCullough (2013) and Hagger et al. (2016) is sufficient to abandon the auxiliary hypothesis that self-regulation is primarily self-interested restraint. In its place, my alternative hypotheses, that religion impacts conventional behaviors, moralized norms, and emotional regulation provide the seeds for new auxiliary hypotheses to surround the core theory that religious engagement impacts self-regulation.

While Lakatos' (1978) framework provides a helpful epistemological correction to Kuhn's (1962) theory, it mostly neglects the social processes that are clearly involved in the dynamics of theory choice. In order to briefly unpack those processes, we will now turn to the work of Longino (1990), who argues that the social character of inquiry is actually the grounds of its objectivity, not a reason to reject its empirical content. Longino's (1990) argument articulates the features of dialogue that are necessary for healthy inquiry to proceed.

6.4.3 Social inquiry

Just as Lakatos (1978) was concerned with the demarcation problem, and Kuhn (1962) with the historical question of science as progressive, Longino's (1990) project was not primarily about the social character of inquiry. Her deeply social perspective served as a way to ground objectivity in something other than the logical positivists' formal view. For the positivists, objectivity depends on a logically (both syntactically and deductively) secured relationship between hypotheses and stable sets of data. The importance of this re-evaluation of objectivity should not be understated– those theorists like Kuhn (1962) or Feyerabend (1975) who reject the possibility of scientific objectivity, are rejecting the positivists' model. Longino (1990) also rejects their model, but she does not

also reject objectivity as a possible result of inquiry. Instead she grounds objectivity in the social processes of inquiry.

Longino's (1990) account of the social character of inquiry builds upon that given by Grene (1985). Grene (1985) highlights three primary ways in which science is not the endeavor of any sole individual: scientists, organized within disciplines, are dependent on each other for the ideas, instruments, methods, etc. with which they carry out the practice of science; becoming a 'scientist' requires initiation via educational institutions; and finally, any community of scientists is also embedded within and beholden to the larger society within which it exists. Longino (1990) elaborates on each of these facets, but the central point is that scientific knowledge is not an aggregation of individual contributions– it is produced by a community through processes of revision and elaboration.

The social character of inquiry is ambiguous. Consider the issue of publication bias mentioned above. I discussed this solely as the tendency of journals to preferentially publish statistically significant results. But Longino (1990) highlights other ways in which the process of bringing research to publication is influenced by factors other than the empirical importance of the findings: "The production of knowledge is crucially determined by the gatekeeping of peer review. Peer review determines what research gets funded

and what research gets published in the journals, that is, what gets to count as knowledge" (p. 68). By itself this is not necessarily a problem, in fact, peer review can provide a crucial role of quality control. But, she continues, "the most startling study of peer review suggested that scientific papers in at least one discipline were accepted on the basis of the institutional affiliation of the authors rather than the intrinsic worth of the paper" (p. 68).[67] These are the sorts of concerns that undergird critics' arguments about the way in which all scientific knowledge is fatally underdetermined– if prestige is the sole determinant of what counts as knowledge, then scientific facts may be nothing more than social facts.

The primary point of Longino (1990) and others, however, is that these social factors can also act as a way to facilitate and arrive at more accurate and objective knowledge. Longino (1990) makes this argument by pointing out that scientific knowledge is a public resource– it is available to anyone with the appropriate training, background, and interest.[68] While this first sense of public may be idealistic, Longino (1990) continues by noting that science is also public

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[67] The study Longino references is Peters and Ceci (1982) and the discipline, sadly, is psychology.
[68] This may be an overly optimistic picture of access since many barriers, such as structural inequalities built around race, income, or nationality, impede the wide availability of scientific knowledge.

because it depends on evidence that is intersubjectively ascertainable. In other words, if you wanted to replicate my study, the evidence I surfaced in chapter 5 is also available for you to examine and analyze, both as the database itself and as the possibility of re-running the same surveys on a similar group. Clearly there are also structural barriers to the intersubjective availability of some types of evidence–research requires funding and time—but in principle there is no impediment to scientific evidence being available to anyone else who cares to look into the same corner of the universe.

The publicity of knowledge and evidence is what makes criticism possible and this criticism is the foundation for any claim to objectivity. Importantly, Longino (1990) is not arguing that all scientific disciplines or programs *are* perfectly objective. Instead she suggests that they *can be* objective to the degree that they facilitate and incorporate criticism. Within her argument, there are four criteria for achieving the sort of critical discourse that helps to ensure objectivity. First, there must be recognized avenues through which criticism occurs– this not only refers to the need for debates to occur in refereed journals or conferences, but also to the rhetorical avenues of criticizing method, evidence, assumptions, or reasoning. Second, fruitful criticism relies on some shared standards within the community. These standards, such as empirical adequacy, truth, consistency,

reliability (Longino, 1990, p. 77), have been discussed by previous theorists as the social values of inquiry (e.g., Kuhn, 1977). Longino (1990) acknowledges that they are utterly social, but nevertheless notes that this does not make them wholly arbitrary: "Standards do not provide a deterministic theory of theory choice. Nevertheless, it is the existence of standards that makes the individual members of a scientific community responsible to something besides themselves" (p. 77). This is a more tempered view than Lakatos' (1978) perspective of theory change, but it nevertheless avoids sliding into a view of theory change as completely underdetermined.

Third, even though the scientific community can be justifiably conservative in its reception to new evidence and theories, in order for criticism to work it must ultimately be responsive. In short, valid criticism must produce change. Longino's final criterion for achieving transformative criticism within inquiry is that authority must be shared by qualified practitioners. This democratic point draws from Habermas (1971), and helpfully points our attention to the way that a scientific program, or inquiry being driven by a single group, can produce a narrowly hegemonic form of knowledge. In other words, diversity among inquirers can be a fruitful value for ensuring this shared authority is not unduly narrow-minded.

This final point helps illuminate the social dimensions of the conceptual condensation I mentioned above– for example, various studies had found significant relationships between religiosity and emotional regulation (e.g., Jankowski & Vaugh, 2009; Sandage & Jankowski, 2010; 2013) but these studies were not included in the theoretical reviews of Zell and Baumeister (2013) or Laurin and Kay (2016). This is likely due to disciplinary boundaries—which exist socially in the form of separate conferences, journals, and training programs—that separate counseling psychological research, such as those mentioned above, from cognitive psychological research, which comprised most of the reviews. My interdisciplinary methods are an attempt at creating the more representative group of qualified and interested researchers that Longino (1990) suggests is crucial for objectivity.

Longino's (1990) account of objectivity being grounded in the social processes of criticism helpfully balances Kuhn (1962) and the Strong Program's (Bloor, 1976) perspective that the social dimensions of inquiry pose a radical challenge to the possibility of accurate knowledge about the world. Her account also helps to contextualize the contours of this project within the broader discipline and field of inquiry. For example, my alternative explanation is roughly organized around her four features of objectivity: my criticism, which

will ultimately occur through peer-reviewed venues, is based on methodological, theoretical, and evidential concerns; the shared standards I am appealing to are the values of comprehensiveness, consistency, and explanatory power; whether or not the community is responsive is yet to be seen; but, within my interdisciplinary approach I sought to bring the voices of various stakeholders to the inquiry, granting authoritative weight to each. My point is not to suggest that I am faithfully adhering to the norms of criticism, but to use Longino's (1990) framework to add social richness to the epistemological account given by Lakatos. The combination of Lakatos (1978) and Longino (1990) provide a perspective that moves beyond concerns that the social embeddedness of inquiry implies its bias and subjectivity. Instead, the image emerges of a thoroughly social process that over time, through normative structures, and despite the rigidity of authority, nevertheless is capable of understanding reality.

Beyond the theoretical importance of Lakatos (1978) and Longino's (1990) work for maintaining the possibility of social inquiry as a process that provides knowledge of the world, their framework also provides a means for theoretical self-reflection among scientists. One of the consistent charges made by the sociological study of science, is that science should be receptive towards being an object of inquiry. As Bloor (1976) puts it:

> There was a most striking oddity and irony at the very heart of our culture… Whilst the knowledge of other cultures, and the non-scientific elements of our own culture can be known via science, science itself, of all things, cannot be afforded the same treatment. This would make it a special case, a standing exception to the generality of its own procedures (p. 46).

I agree that science should be studied, but to insist *a priori* that there is no distinction between true and false claims is to contradict one of the shared core theories of all scientific research programs and violate the norms or standards by which scientists judge inquiry. In other words, at an epistemic and social level the critical perspectives of the Strong Program are unacceptable as a tool for self-reflection among scientific practitioners.

In contrast, Lakatos (1978) and Longino (1990) provide a framework for reflection that scientists would recognize as an accurate representation of their practice. This framework provides a way to organize hypotheses such that researchers are aware of how their claims fit within their disciplines and across other fields of inquiry. By bringing attention to the social dynamics that facilitate this process, Longino's (1990) work can also help to organize norms within a group of inquirers to effectively foster fruitful criticism and dialogue. My

idealistic hope is that such self-reflection could foster humility among inquirers, nurturing fruitful collaborations and critiques, while also breaking new empirical ground. At the very least such self-reflection has helped to contextualize the methods and potential consequences of my work.

6.5 Final reflections

The preceding section has been a highly abstract way to summarize a project. Part of my purpose in adopting such an approach is to highlight some of the impediments to interdisciplinary inquiry. As I noted above, one of the primary problems I identified within research on religion and self-regulation is the unjustified specification of the vague categories, such that the theory became primarily about the ways in which the content of religious belief fosters self-interested restraint. A significant component of my argument in response to this reduction has been to incorporate evidence from other disciplines that is relevant to the establishment, maintenance, and efficacy of moralized norms. What the immediately preceding review helps to show is that bringing evidence and theory across disciplines is not a straightforward process. These forms of knowledge are created within groups, through particular norms and values, and in conversation with the concerns and interests of the group.

Even if we follow Lakatos (1978)—affirming the capacity of this process to produce accurate representations of the world—and Longino (1990)—supporting the way these communal norms can foster the process of criticism that, in the long run, helps align theory with evidence—we are still left with the difficult task of translating knowledge across disciplinary bounds. Given the publicity of knowledge and the intersubjective accessibility of evidence, this translation process is not mired by incommensurability, but, this is not to say the process is easy or straightforward. But, when we are seeking to answer questions that are inherently interdisciplinary, such as how religious engagement impacts self-regulation, learning to translate between disciplines is necessary.

I began chapter 1 with a question: how does culture change our behavior? This question was deliberately broad so that it could be recognized by scholars across social scientific disciplines. I am not the only one to frame up this question– Strauss (1992) places it as an essential problem of anthropology:

> Knowing the dominant ideologies, discourses, and symbols of a society is only the beginning — there remains the hard work of understanding why some of those ideologies, discourses, and symbols become compelling to social actors, while others are only the hollow shell of a morality that may be repeated in official pronouncements but ignored in private lives. Our

> key question thus becomes: How do cultural messages get under people's skin. (D'Andrade & Strauss, 1992, p. 1)

Anthropologists are not the only ones interested in this question. Throughout this project I have reviewed the way that developmental, cognitive, cross-cultural, and counseling psychologists each deploy their unique methods and perspectives to address relevant variants of the same question. I have also included theories and evidence from sociologists and religious studies scholars who have their own , tacit or explicit, perspectives on the way culture "gets under people's skin." Each of these researchers is addressing a similar question, but they are doing so from within research programs that have established norms and methods for how such an answer might look. Comparing their answers requires being sensitive to the ways those answers are shaped by their social and theoretical embeddedness. This is the difficulty of interdisciplinary inquiry.

But, if we do not require that such exchanges across disciplines produce definitive answers, then this problem diminishes significantly. Translation is never perfect, but even with a rudimentary shared vocabulary people working together can develop a set of shared meanings that foster new insights for each of them about the world. This is why I have not argued for any definitive proof that

the current theory is wrong. Instead, such exchanges must be approached with a humble and open disposition.

The dynamic interplay between the social and the personal is deeply complex and wild. Articulating the ways that culture "gets under our skin" and that our psychological tendencies shape the social construction of reality is difficult enough. Add to this complexity the fact that moments of creativity continually spring forth and begin to carve new valleys in the psychological and social landscape. The only possibility for gaining a coherent picture of this landscape is to incorporate the perspectives of whoever has something to say about the bio-cultural topography. The exchange and comparison of such perspectives is a difficult task, but it is unavoidable if we hope to have anything to say about what we are and what we might be.

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Curriculum vitae

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