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Religious Zeal after Goal Frustration

Ian McGregor, Kyle A. Nash, & Mike Prentice

York University

4700 Keele Street

Toronto, Ontario, Canada

M3J 1P3

Like other vertebrates, humans respond to goal frustrations and goal conflicts with anxiety (Gray & McNaughton, 2000). We may hope for love but sense separation, crave success but see signs of failure, or feel torn between commitments and realize something will have to give. In each case, wholehearted goal pursuit is impeded and anxious uncertainty is aroused. Even when goals are going well, reminders of personal transience and mortality can put all goals in question—why bother?! This chapter explains how basic goal-regulation processes that we share with our vertebrate relatives, like pigeons, mice, and dogs can propel extreme religious reactions to such uncertain predicaments. After a general overview of the proposed process underlying religious zeal, we summarize experimental research on compensatory conviction and reactive approach motivation (RAM; McGregor, Nash, Mann, & Phillips, 2010; McGregor, Nash, & Prentice, 2010; McGregor, Prentice, & Nash, 2009). In doing so we explain why and for whom the anxious uncertainty arising from goal frustration causes religious zeal. We conclude that religious zeal is the motivational equivalent of other animals' more concrete displacement reactions, such as compulsive wheel running or tail chasing, and suggest intervention opportunities derived from our goal regulation view.

### **Abstract Ideals and the Power of Religion**

Radical willingness to derogate and even kill others in the name of religion is puzzling given that religions universally promote compassion (Armstrong, 2006). What drives such antisocial zeal? One contemporary answer is that although universal aspects of religious morality (fairness and care) evolved to encourage general benevolence, other, more conservative aspects of morality (ingroup loyalty, purity, deference to authority) evolved to confer the adaptive advantage of ingroup cohesion (Haidt, 2007). According

to this view, hostility toward outgroups is only partially inconsistent with religious morality. Although such group-based explanations may account for some of religion's tendency toward partisan zeal, we propose another, more personal motivation rooted in the psychological power of ideals.

Our more personal view is grounded in the observation that fervent thoughts about cherished ideals like Truth and Justice activate the same approach-motivation-related neural activity as approach of concrete incentives like sugar (i.e., relative left frontal electroencephalographic activity; Amodio, Shah, Sigelman, Brazy, & Harmon-Jones, 2004; Shrira & Martin, 2005; Urry et al., 2003). This observation is consistent with theories of goal regulation that position ideals as abstract goals that guide subordinate concrete goals (e.g., Carver & Scheier, 1998; Higgins, 1996). Research on goal regulation demonstrates that goal seeking organisms feel anxious to the extent that the goals (or ideals) they are approaching are frustrated or uncertain (Nash, McGregor, & Prentice, 2010), and feel good to the extent that they are going well (Sheldon & Kasser, 1998). Absorption in clear, unimpeded approach of a focal goal is a sanguine state of honed attention—approach-irrelevant thoughts and feelings are automatically inhibited. This kind of approach-motivational tunnel vision is usually adaptive because it facilitates goal completion (Shah, Friedman, & Kruglanski, 2002). Our point of departure from the instrumental interpretation of ideals (and religions), however, hinges on the pursuit of abstract goals for merely palliative benefit (McGregor, 2007). As explained below, people sometimes promote their ideals to activate approach-motivated states for relief from the anxiety arising from their frustrated or uncertain goals (see also McGregor, 2006a, 2007; McGregor, Nash, Mann, et al., in press).

Temporal goals for love and success are conducive to anxious uncertainty because they are vulnerable to frustration, conflict, habituation, and disillusionment. In contrast, abstract ideals can be rehearsed with certainty in the privacy of one's own imagination, free from impedance in the social world. Perfect ideals can also never be attained, which preserves their motivational value as transcendent incentives to approach. Unlike a lover or a BMW, one rarely if ever actually attains an ideal, and so one can not become blasé about it. Absorption in ideals can therefore be an efficient way to reliably maintain the sanguine benefits of approach motivation.

We view idealistic RAM as similar to the displacement behaviors other animals turn to for relief from anxious uncertainty, such as compulsive running, vocalizing, biting, and grooming (Luescher, 2004; Maestriperi, Schino, Aureli, & Troisi, 1992). Such autistic displacement behaviors are relatively reliable levers for RAM in non-abstract-thinking animals. They can be engaged with low risk of uncertainty or goal impedance. Displacement *ideals* are even more reliable for humans, however. Polishing ideals in the privacy of one's own mind requires fewer physical resources than compulsive tail chasing, grooming, running (or shopping or working out). One need only fix hope on a vision of personal perfection or moral paradise.

This palliative interpretation of idealism is consistent with a core theme in Eastern wisdom traditions relating to the capacity of transcendent ideals to buoy well-being. Hinduism and Buddhism depict anxious frustration (*dukkha*) as arising from the human tendency to identify with temporal goals (i.e., for pleasure, success, and propriety) that are ultimately uncertain and beyond one's control. Enlightened liberation (*mukti*) comes from the realization that the temporal world and its path of desire is a bewildering illusion

(maya) that can not support peace of mind. Enlightenment is found along the path of renunciation by yoking one's being to transcendent ideals (i.e., of love, knowledge, meditation, and action; the four yogas, Brodd, 2003).

This theme of sanguine-transcendence animates Greek philosophy and Western religion as well. Pythagoras, and then Socrates/Plato and Aristotle asserted in various ways that highest happiness is found in devotion to abstract ideals beyond the shadowy uncertainty of worldly pursuits, as famously depicted in Plato's Allegory of the Cave and Aristotle's emphasis on actualizing the ideal (perfectly rational) human essence (Cohen, Curd, & Reeve, 2000). The monotheistic traditions that characterize Western religion, Judaism, Christianity, and Islam, all formatively absorbed idealistic Greek philosophical assumptions over the course of their evolution (Armstrong, 1993).

From a goal regulation perspective, this core idealistic feature of Eastern and Western wisdom traditions pivots on transcendent goal pursuit for enlightenment and release from the anxious uncertainties of frustrating temporal life. We accordingly propose that religious ideals have a basic palliative value. To the extent that worldly goals are frustrating, religious ideals provide personal redemption and buoy individuals above petty insecurities and frustrations.

This anxiolytic property of religion is what gives it such power and capacity for callous zeal. Transcendent salvation from temporal anxiety can be such a vivifying relief that it invokes metaphors of light, vision, conversion and new birth. Converts feel energized and powerful in the very circumstances in which they used to feel hopeless and broken (James, 1958/1902; McGregor, 2007). It feels so right that it must be true. An intuitive next step for some is that if one really loves others as all religious traditions

instruct then one should bring others to the saving grace of religion—*at all costs if necessary*. As we will see below, the motivational tunnel-vision that sustains such empowered conviction for an ideal has side effects that can drift toward callous extremes.

### **Reactive Conviction: Certainty and Consensus**

A first wave of evidence for idealistic zeal after goal frustration came from research on reactive conviction. Participants in several studies were randomly assigned to conditions that either reminded them of frustrating goal conflicts in their own lives (e.g., romantic or academic dilemmas) or not. Participants in the goal conflict conditions reacted by exaggerating their idealistic certainty for opinions far removed from their frustrations (e.g., about capital punishment, abortion, terrorism, and war), even after just having been exposed to a long list of common alternative opinions for each issue. After goal frustration, participants' average conviction ratings surged to almost complete certainty (McGregor & Marigold, 2003; McGregor, Zanna, Holmes, & Spencer, 2001). The certainty was not simply a reflection of aggressive belligerence. Rather, reactively certain participants were so focused on their idealistic view that they simply could not even imagine how others might hold dissenting views. After goal frustration social consensus estimates ballooned to an incredible average of almost eighty percent (McGregor & Jordan, 2007; McGregor, Nail, Marigold, & Kang, 2005; McGregor et al., 2001). Threats seemed to cause a fervent kind of tunnel vision that confined people to their own perspective

### **Anxious Conflicts Seem Less Urgent and Bothersome**

These initial studies also found direct and indirect evidence that the frustrating goal-conflict manipulations specifically caused self-reported anxious uncertainty and

defensive reactions, and evidence that expressions of conviction for unrelated ideals and values completely eliminated these effects (McGregor et al., 2001, Studies 1 & 2; McGregor, Haji, & Kang, 2008). Related research found that anxious uncertainty specifically moderated extreme reactions to experimentally manipulated goal frustrations, and catalyzed extreme opinions and lifestyle initiatives among affected students in the context of a frustrating university strike (McGregor, 2010). Other studies show that idealistic convictions make conflicts feel less salient. Specifically, after expressing either certainty or consensus for idealistic opinions, participants report that their goal conflicts feel easier to ignore, and less important, urgent, significant, and big, even though still in awareness (McGregor, 2006b; McGregor & Marigold, 2003, Study 4; McGregor et al., 2005, Study 4).

Recall that approach motivation is a state characterized by vigorous and tenacious pursuit of an incentive. This state involves motivational narrowing whereby goal-relevant information automatically mutes goal-irrelevant information. RAM should therefore be rewarding in the face of anxious uncertainty and could be the basic motivational process that drives idealistic conviction reactions.

### **Reactive Approach Motivation (RAM) as the Basic Process**

Compelling evidence converges on the conclusion that reactive conviction operates by way of RAM processes. Goal conflict manipulations that cause reactive conviction also cause RAM as assessed by tenacious determination to accomplish central life-goals (eagerly tenacious determination is a cardinal feature of approach motivation). Importantly, this surge in tenacious determination was accounted for by participants' idealistic identification with their goals, i.e., goal conflict caused participants to think

about their personal goals in more idealistic, value-consistent, and identity-relevant ways, which in turn significantly predicted the tenacious determination of eager approach motivation (McGregor, Nash, Mann et al., 2010; cf., Lydon & Zanna, 1990).

More direct evidence for RAM comes from behavioral neuroscience, neural, and implicit evidence. In one study threat caused participants to make errors to the right when estimating the middle of horizontal lines (McGregor, Nash, Mann, et al., 2010; Study 1). Such rightward errors indicate over-activity of the right visual field which is associated with the pattern of left cerebral hemisphericity as assessed by electroencephalography (Nash, McGregor, & Inzlicht, 2010) that has been repeatedly associated with approach-motivation (cf., Elliot, 2008). In another study experimentally manipulated goal frustration caused a reactive increase in that same pattern of approach-related EEG activity (McGregor, Nash, & Inzlicht, 2009). Importantly, approach motivated patterns of neural activity are negatively correlated with conflict-induced activity in the anterior cingulate cortex, a part of the brain that registers anxious uncertainty reactions to conflict and uncertainty ( $r = -.51$ ; Nash, McGregor, & Inzlicht, 2010).

Implicit evidence for a palliative surge toward approach motivation is consistent with this behavioral neuroscience and neural evidence. Threatening participants' confidence in their important school and relationship goals caused them to react by implicitly associating themselves with words related to approach-motivation. After the threats, participants were faster at making judgments that involved juxtaposition of words related to self with words related to approach (e.g., me or I with advance or pursue) and slower at making judgments that involved juxtaposition of words related to self with words related to avoidance (e.g., me or I with flee or hide). Moreover, this implicit

reaction was significantly heightened when participants had been reminded of their ideals before the threat (McGregor, Nash, Mann, et al., 2010). Given the links between meaningful ideals and approach motivation that have been demonstrated by other researchers (e.g., Urry et al., 2004; Higgins, 1996; Amodio et al., 2004) these results indicate that people approach ideals for relief from the anxious uncertainty aroused by goal frustration.

### **Religious Zeal**

Religious ideals are particularly well equipped to deliver RAM relief. Palliative absorption in any ideal may be more efficient than absorption in concrete compulsions. Whereas other animals must burn energy compulsively vocalizing, running, chasing, licking, or biting for anxiety relief, humans can activate equivalent processes by quietly refining ideals in the privacy of their own imaginations. Ideals like perfect love and justice are also resistant to habituation and disillusionment because they are beyond temporal reach on a tantalizing horizon of hope.

Religious ideals may be even more reliable because their transcendent and sacred stature shelters them from the kind of frustrating social conflict that can mire secular conversations about values (anyone who has tried to forge consensus about a mission statement will know how fractious such conversations can become). Religious authority is usually rooted in claims that are resistant to proof or disproof, such as faith in the authoritative word of a transcendent God as miraculously communicated to prophets hundreds of years ago.

Although the inclination of devotees may be to see religious (or atheistic) convictions as stable and personally realized commitments, recent research indicates that

religious zeal is a predictably volatile phenomenon. Even relatively trivial goal frustrations can cause people to swerve toward religious zeal to the point of dismissing others and becoming willing to kill and die for their idealistic cause. In one study, just exposing undergraduates to an incomprehensible statistics passage for two minutes increased their tendency to see their own religious views as objectively more correct than others'. It also significantly increased their willingness to support religious warfare (McGregor, Haji, Nash, & Teper, 2008). In another experiment the same frustrating experience increased participants' belief in idealistic supernatural forces (e.g., of good and evil) but not of more mundane supernatural or superstitious beliefs (e.g., mind-reading, moving objects with one's mind, lucky numbers, or strange life-forms like bigfoot; McGregor, Nash, et al., 2010, Study 1). In study 3 of McGregor et al., regardless of particular religious affiliation, the same threat boosted participants' scores on Religious Zeal subscales of Integrity (e.g., "My religious beliefs are grounded in objective truth" and "I aspire to live and act according to my religious beliefs"), Jingoism (e.g., "In my heart I believe that my religious beliefs are more correct than others" and "If everyone followed my religious beliefs the world would be a much better place"), and Extremism (e.g., "I would support a war that defended my religious beliefs," "If I really had to I would give my life for my religious beliefs," and "I will do whatever is necessary to help my religious beliefs prosper in society").

The power of religious zeal may arise not only from its capacity to make people feel better in the face of anxious uncertainty, but also to perform better. On a concentration task in the laboratory (a Stroop task) religious zeal was negatively correlated with error-related ACC reactivity which is closely linked to anxiety,

suggesting that religious zeal may serve as a kind of anxiolytic (Inzlicht, McGregor, Hirsch, & Nash, 2009). Consistent with the RAM interpretation, religious zeal was as negatively correlated with ACC reactivity as was approach motivated brain activity in another study (Nash et al., 2010; both correlations above  $-.50$ ). Further, the most zealous individuals were most able to make accurate discriminations on the Stroop task (Inzlicht et al., 2009). Religious zeal and its attendant peace of mind are thus difficult to dismiss as merely indicative of a dispositional tendency toward blissfully clouded ignorance.

### **Personality Predispositions**

Rather, dispositional evidence supports the RAM interpretation. In two studies the most intense reactive religious zeal after an academic frustration manipulation was among people most sensitive to anxiety (i.e., high in neuroticism and aversion to uncertainty), and most dispositionally oriented toward eager approach motivation (i.e., high scores on scales related to behavioral activation, promotion of ideals, and self-esteem; McGregor, Nash, et al., 2010). These dispositional proclivities support the RAM account, which specifically identifies a desire to quell anxiety as the motive, and activation of an approach-motivated state as the means. People with anxious and approach motivated personality traits have the motive and the means for zeal.

These joint dispositional moderators of reactive religious zeal are similar to those that moderate reactive conviction, in general. Confronting participants with the frustrating threats to their academic or close-relationship goals, or even just reminding them about their own mortality (which presumably undermines all goals) causes most reactive conviction among participants who are low in implicit self-esteem and high in explicit self-esteem (McGregor & Marigold, 2003; McGregor et al., 2005; Schmeichel et

al., 2009; McGregor & Jordan, 2008; McGregor, Gailliot, Vasquez, & Nash, 2007). Low implicit self-esteem is a measure of experiential self-dissatisfaction related to various forms of vulnerable insecurity (reviewed in McGregor & Jordan, 2007; cf., Jordan, Spencer, Zanna, Hoshino Browne, & Correll, 2003). People with low implicit self-esteem more quickly associate self-words like ‘I’ and ‘me’ with negative words like ‘unpleasant’ and ‘garbage,’ and more slowly associate self-words with positive words like ‘pleasant’ and ‘sunshine’ than do people with high implicit self-esteem.

High explicit self-esteem on the other hand refers to people’s explicit claims about how much they like themselves. Explicit self-esteem is not correlated with implicit self-esteem, and has no relation to esteem worthiness (Baumeister, Campbell, Krueger, & Vohs, 2003.). Explicit self-esteem is also highly skewed, with most people scoring far above the scale midpoint. We interpret high self-esteem, therefore, as a reflection of the tendency to promote self-ideals (see Heimpel, Elliot, & Wood, 2006; Heine, 2004; Leonardelli, Lakin, & Arkin, 2007; McGregor et al., 2007, Study 2, for links between high self-esteem and idealism). In sum, it seems that experientially vulnerable yet approach motivated (bold, confident, idealistic) dispositions are most attracted to reactive conviction and religious zeal after goal frustration.

### **Goal Frustration**

As described in a previous section, explicit instructions to write about frustrating goal conflicts caused participants to respond with reactive conviction. The anxious uncertainty manipulations that have caused RAM and religious zeal in the more recent work however—grappling with a difficult statistics task, thinking about a flagging relationship, and being reminded of death—are less obviously goal conflicts. One might

argue that these disparate threats undermine various needs for self-esteem, belongingness, or the desire for actual or symbolic immortality. If so, rather than being simply palliative, one might then view idealistic and approach-motivated reactions as efforts to shore up domain-specific needs or some global sense of self-integrity (cf., Sherman & Cohen, 2006; Leary, Tambor, Terdal, & Downs, 1995; Aronson, 1992; Kay, Gaucher, Napier, Callan, & Laurin, 2008; Heine, Proulx, & Vohs, 2006).

We tested our goal-frustration interpretation in seven studies that randomly assigned participants to receive achievement or belongingness goal primes (Nash et al., 2010). The primes were crossed with the randomly assigned achievement or belongingness threats that have caused idealistic and religious zeal reactions in past research. Consistent with the goal-frustration hypothesis, threats caused anxious uncertainty (Study 1), RAM (Studies 2-6), and reactive religious zeal (Study 7) only when threat-relevant goals had been primed. Further, in Study 6 RAM resulted when a mortality salience threat was preceded by either the belongingness or achievement goal prime but not a neutral prime. Thus, all of the threats in the literature that have caused idealistic and religious zeal reactions caused anxious uncertainty and idealistic approach reactions only when relevant goals were disrupted by the threats. Mortality disrupts all temporal goals, which explains why both goal primes, but not a neutral prime, aroused RAM in Study 6 (Nash, et al., 2010).

The measure of approach motivation in Study 4 was the behavioral neuroscience line-bisection measure which is associated with approach-related brain activity (Nash et al., in press). The approach motivation dependent variable assessed in studies 2, 3, 5, and 6 was a measure of the extent to which participants self-generated personal projects

(Little, 1983) were more focused on tenaciously approaching desirable and ideal outcomes than on avoiding unwanted outcomes. The goal primes in studies 2-6 were either simple crossword puzzles with goal-related words embedded, or scrambled sentences with solutions that included words relating to either achievement goals (win, succeed, achieve) or belongingness (hug, love, accepted) goals (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001 for evidence that such simple manipulations can prime tenacious and determined implicit goals). If these brief frustrations and goal primes could make people idealistic and zealous, it is sobering to imagine how much zeal might result from conditions of war, disaster, or political instability that undermine all daily goals.

### **Intervention**

Religious zeal refers to ideological fervor with disregard for others' perspectives or practical consequences. In the 1<sup>st</sup> century CE a group of religious fanatics carried daggers under their cloaks and killed anyone who did not support their campaign against Roman oppression. Their extremes brought reprisals that crushed their 'Zealot' sect, but the example of their monomania persists as the origin of the word 'zeal.'

In her book, *Battle for God*, Karen Armstrong (2000) observes that radical zeal in Judaism, Christianity, and Islam has historically surged during periods of cultural uncertainty and frustration. Her observation is consistent with contemporary observations from interviews with extremists in cults and terrorist groups that religious zeal results from uncertainty and frustrated aspirations in the temporal world (Stern, 2003). These conclusions are also consistent with our laboratory demonstrations that manipulated uncertainties and goal frustrations cause idealistic zeal. Moreover, people who are most

frustrated in their everyday goals tend to be most inclined to react to experimentally induced goal frustrations with idealistic religious zeal (McGregor et al., in press b, Study 3).

These insights into the uncertain, goal-frustration roots of religious zeal illuminate intervention possibilities. The most obvious implication of the goal frustration account is that religious zeal may be relieved by improving social conditions to make them less frustrating of basic human needs, which is a core tenet of humanism. Other suggestions entail special support and education for vulnerable but bold personalities, supplanting antisocial with prosocial religious zeal, and promoting comparative religious, scientific, and social scientific education. We are aware that extrapolating from laboratory results to the real world can be a precarious enterprise. The suggestions elaborated below are therefore offered in hopes that they will be balanced with other multidisciplinary and practical considerations.

**Humanism.** At least since Voltaire and the enlightenment, humanists have proposed that if people could be empowered in the here and now, the appeal of religious zeal would be relieved. Over two-dozen published studies in our lab indirectly support this humanistic premise by showing that goal frustrations and uncertainties cause idealistic and religious zeal. These results suggest that provision of infrastructure and support for basic goal strivings of at-risk people could relieve their motivation for radical extremes.

A caution, however, is that well-meaning humanistic interventions should take care not to caricature religion as ignorant stupidity. Secular humanists often focus on the irrational and antisocial beliefs and actions of fundamentalist zealots as evidence that the

world would be better if religion were eradicated (Dawkins, 2006; Harris, 2005; Hitchens, 2007). Atheistic polemics are not only impractical insofar as they arouse more zeal in response, but, as will be described below, they are also specious. The extreme caricature of religion is as distorted as the extreme caricature of dissipated secular humanism that conservative religious groups attack. Humanistic interventions should be designed to relieve the antisocial manifestations of religious zeal, not religion. They need not be secular in order to be humanistic.

Even if implemented respectfully, however, humanistic interventions might be expected to take a long time to have the desired effect. Once entrenched, a zealot's habitual reliance on the power of idealistic RAM could persist even in the absence of frustrating circumstances and despite provision of secular opportunities. Like addicts, zealots may find ways to use aid to fund the habit it was designed to relieve (e.g., see the Timmerman, 2003, argument that well-meaning Clinton-administration aid was used to fund ideological hate).

Moreover, if the aid is seen as a condescending gesture that highlights frustrated or humiliated goals or status, the aid could backfire. It could backfire all the more if the transparent humanist agenda made the aid seem like an insulting bribe to abandon religious integrity from the same frustrating and sullied world that was rejected in favor of transcendent salvation. When temporal goals feel mired to the core people may be defensive and wary of new hope promised in the temporal domain.

**Personality.** Humiliating self-associations predict reactive zeal after experimentally induced goal frustrations (reviewed in the Personality Predispositions section above). Depression, neuroticism, and intolerance of uncertainty are related

vulnerabilities. Although not conclusive, classic theoretical and contemporary empirical work converge to suggest that relationship attachment security may be a protective factor against all such vulnerabilities and the zeal reactions they can fuel. Insecure attachment from invasive or callous parenting is at the root of neoanalytic theories of narcissistic and authoritarian personalities and the callous extremes they are inclined toward (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Fromm, 1941; Kernberg, 1975).

Recent research supports this basic idea by showing invasive and callous parenting to be associated with low implicit self-esteem (Dehart, Pelham, & Tennen, 2006). Low implicit self-esteem is theoretically and empirically related to narcissism, and to reactive idealism in the face of goal threats (Rogers, 1939; Horney, 1950; McGregor & Marigold, 2003, Study 3; McGregor et al., 2005, Study 1; Schmeichel et al., 2009, Study 3). Indeed, low implicit self-esteem acts in the same way as attachment insecurity and narcissism as a moderator of reactive conviction. Twin studies reveal that the effect of parenting on children's avoidant attachment (the most caustic form of insecure attachment) persists into adulthood (Fearon, Van Ijzendoorn, Fonagy, Bakermans-Kranenburg, Schuengel, & Bokhorst, 2006). These same studies reveal that adult avoidant attachment is almost exclusively a function of nurture rather than nature (heritability estimates border on zero). Other relationships beyond one's parents also continue to shape attachment style throughout life. Accordingly, a long-term goal could be to promote norms to make callous and authoritarian parenting (and relating) styles warmer and more receptive, which might help relieve dispositional inclinations toward religious zeal. The various interventions described in this section could also be specifically targeted to reach the most dispositionally vulnerable individuals.

A second cluster of personality traits that predicts reactive zeal is related to approach motivation. Consistent with work on aggression as a dark-side of self-esteem (Baumeister, Smart, & Boden, 1996) we repeatedly find people with high explicit self-esteem to be most attracted to RAM and reactive zeal when faced with goal frustrations. As reviewed above, people with high explicit self-esteem tend to be eager, approach-motivated, and oriented toward ideals about themselves and about their worldviews and religions, especially in the face of threat. Thus, together with personal vulnerability, another dispositional root of reactive zeal is approach motivation. Various dispositions related to approach-motivation predict idealistic and religious RAM reactions (e.g., Self-Esteem, Narcissism, Promotion-Focus, Behavioral Activation System Drive, Action Control). The approach-motivated theme across these traits is consistent with evidence that RAM powers religious zeal. It is also consistent with classic psychodynamic predictors of idealistic and ideological zeal (e.g., Horney, 1956; Murray, 1943). Approach-motivation-related dispositions are heritable and stable across time (Elliot, 2008). Interventions to ameliorate religious zeal could therefore be targeted early to such spirited personalities.

**Religious Transformation.** We have proposed that exaggerated devotion to eager ideals after goal frustration is an anxiety reduction response. This basic process should be malleable. Aggressive idealism may be intuitive due to neural and Western cultural links between approach motivation and both aggression and idealism. But idealistic prosocial zeal could confer the same basic benefits if given a compelling frame. If so, strategic interventions could aim to channel zealous inclinations toward prosocial outcomes as in the cases of Ghandi's or Martin Luther King's idealistic campaigns of radical non-

violence for civil rights, or Karen Armstrong's recent Charter for Compassion (cf. Armstrong, 2010). Such campaigns are often derived from the universal aspects of morality—justice and harm reduction—that all religious traditions endorse (e.g., Armstrong, 2005). The jingoistic and authoritarian elements of religious morality would need to be demoted as anachronistic and even heretically out of step with the fundamentals of faith (Armstrong, 2009).

In tandem with transformational support for compassionate religion, the historical and contemporary effects of antisocial ideological and religious zeal on real human lives could be highlighted. Idealistically and religiously inspired war and terror have a long and gruesome history. Accounts of the pervasive human cost to families of victims and perpetrators should be memorialized in evocative ways. Increased awareness of victim impacts and shared humanity would hopefully throw at least some cold water on initial inclinations toward radical extremes of antisocial zeal. Zeal is a closed minded state that is shielded from others' perspectives. The zealot may scarcely notice the human cost of his idealistically entitled actions. Even if they are noticed, they can be easily discounted as regrettable but necessary collateral damage in service of the eager cause. Salient memorials and victim impact statements could help make it more difficult for young would-be radicals to turn toward zealous extremes.

**Religious Education.** Comparative religious education could also be promoted to highlight the universally compassionate aspects of religious morality in contrast to the jingoistic incompatibilities. The universals would likely emerge with more authority. Indeed, well supported arguments identify the essential rudiments of religious devotion across wisdom traditions as openness to uncertainty and compassionate orientation

(Armstrong, 2009). Antisocial religious zeal is, in contrast, an arrogant distortion that ignores the injunctions for apophatic (i.e., one can not ever know the true nature of God) humility and universal compassion consistently emphasized in the less dogmatic versions of most religious faiths (Armstrong, 2009; Vosper, 2008).

Comparative religious education could also expose psychological roots of religious devotion, which could allow religion to be appreciated as a natural human phenomenon (Dennett, 2006; Vosper, 2008; McGregor et al., in press). Seeing religious faiths as natural phenomena that can change and evolve would facilitate interfaith dialogue and help dissolve jingoistic extremes. It might also relieve fractious arguments about what the ‘true’ or ‘original’ versions of religious traditions are. The meandering evolution of various religious traditions from egoistic, through jingoistic, toward the universally compassionate could be highlighted to focus on the universally compassionate trajectory of religious traditions. Such a common-humanity view of religious evolution across traditions would support inter-religious dialogue in which each could affirm the other’s tradition as a valuable contributor to religious ecological diversity.

From a RAM perspective, affirmation of people’s diverse religious traditions would also relieve idealistic frustration and motivation for conservative religious zeal (McGregor et al., 2008). A policy of pluralistic religious affirmation could be promoted as the compassionate alternative to both angry religious or anti-religious diatribes (Hitchens, 2007; Harris, 2005; Dawkins, 2006) that fan the flames of zeal (Armstrong, 2000). Such a policy would need to go deeper than surface ‘tolerance,’ however, which can be conducive to reciprocal ignorance and enclave subcultures with little mutual

exposure, dialogue, or respect. Policies should encourage omniculturalism as opposed to enclave multiculturalism or assimilation (Moghaddam, 2008). That said, respect should not extend to the hateful and exclusive distortions of religion (Harris, 2005). Such extremes would need to be clearly parsed and stigmatized as unacceptable distortions in order to clearly maintain compassionate norms.

If religious education could succeed in making a case for the compassionate agenda of religion, religious technologies for developing compassion would also become readily accessible to more people. All religions advocate practices designed to groom compassionate character over a lifetime of dedicated observance. Obvious examples are versions of Buddhist loving-kindness meditations and commitment to charitable giving which anchor all religious traditions. Rather than being seen as revolving around intellectual assent to belief, it has been argued that the value of religion lies in its capacity to form and hone compassionate habits. One learns to become interpersonally graceful with the same deliberate practice as is required to learn how to play the piano gracefully. Meaningful living is a fruit of this patiently groomed, compassionate labor.

Rather than focusing on problems with religion or caricaturing religion as merely ignorant superstition, more people could be brought into the dialogue with a proactive approach to religious pluralism that championed the legitimately prosocial elements present in all religious traditions. (Recall we found the power of zeal to lie in its idealistic rather than its superstitious aspects; McGregor et al., in press b, Study 1). If religious education could affirm rather than debase religion while firmly rejecting antisocial manifestations as essentially non-religious mutations, the urge toward religious zeal

zeal resulting from loss of religious face.

**Science and Psychological Science Education.** In addition to religious education, science education is also necessary. Life-science education could instill an appreciation for basic biological processes we share with other animals, the scientific method, and an evidential approach to understanding reality (Dennett, 2006). Science education could also showcase the power of uncertainty-tolerance and how uncertainty and falsifiability have been adaptive and powerful allies in science. This might provide at least a partial corrective to the uncertainty aversion at the core of authoritarian and conservative truth claims—an uncertainty aversion conducive to religious zeal.

Psychological science, specifically, could contribute modules to elementary education, reviewing discoveries from the past 50 years of social psychology on powers and perils of intuition, self-serving and group-serving biases, with emphasis on motivated reasoning, enhancement, conviction, consensus, worldview defense, and the role that self-serving biases play in propagating social conflict. Rigid, antisocial zeal could come to be seen more as a self-centered defense mechanism than a badge of heroic integrity. With a blitz of education and media exposure, attitudes toward intemperate religious extremes could shift from belligerent entitlement to stigmatized unacceptability (much as belligerent attitudes toward smoking have finally shifted in North America)

Scientific and social scientific education might be particularly effective if promoted in conjunction with affirming and transformational messages designed to channel the religious urge toward compassion rather than to eradicate it. For the past 1300 years up until the last 100 or so, religions were the main purveyors of scientific

education (with some high profile exceptions). Muslim scholars transmitted Greek science to the enlightenment, and most enlightenment scholars and scientists were religious (Armstrong, 2009). If not presented as antagonistic to religion, and if balanced with comparative religious education, science and psychological science knowledge in elementary education could help inoculate youth against the intuitive appeal of radical religious zeal.

## **Conclusion**

Religion is a ubiquitous and powerful social force that is not going away. Despite a trend toward secularization in Europe, religious faith is not declining in the rest of the world. Eighty-eight percent of the world's people self-identify as religious (Association of Religion Data Archives, 2005). Most academics are atheists or agnostics who may have a difficult time recognizing the seemingly irrational yet experientially sensible and prosocial benefits that healthy-minded versions of religious faith can promote. It is reflexive for scientists and academics to dismiss religion as a primitive superstition that “spoils everything” (Hitchens, 2007) even with little knowledge of the experiential ways religion can help people lead graceful lives of compassion and meaning.

In this chapter we have explicated basic, uncertainty-related processes that inflame antisocial religious zeal. At the same time, we hope non-religious readers will resist the temptation to dismiss all religious devotion as antisocial ignorance. We hope that the illuminated goal regulation mechanics of religious zeal will make it clear how necessary it is for humans to have idealistic vistas. In our opinion, interventions should focus not on eliminating this idealistic impulse, but on constraining and transforming the basic impulse toward prosocial ends. Intervention efforts should also focus on relieving

frustrating and uncertain social conditions and supporting temporal goals of vulnerable people with bold personalities.

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