
CHAPTER 3

Self-Affirmation Interventions

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A theory-based intervention known as “self-affirmation” provides people with the opportunity to affirm a sense of self-integrity, a global image of moral and adaptive adequacy, at moments of psychological threat. By assuaging threat, affirmations can allay stress and defensive responding. The positive impact of self-affirmations has been shown in many domains where persistent threats to self-integrity can impede adaptive outcomes. Affirmations, by broadening the perceived bases of self-integrity, render these threats less dire. The focus of the present chapter is on affirmations in educational institutions. On the whole, affirmation interventions have been shown to be powerful yet conditional in their effects. They have large and lasting benefits when people are under persistent psychological threat that impedes adaptive outcomes, when the affirmation is well-timed to this threat and activates the self-affirmation process, and where other resources for positive change are available and thus likely to be activated once psychological threat has been assuaged. To illuminate theoretical and practical considerations, a case study is presented from researchers working in a German school system with a large immigrant population; the successful application of affirmation depended on being attentive to the underlying mechanisms and theoretical moderators. In a final section, lingering theoretical and applied questions are discussed.

BACKGROUND

The motive to maintain a positive sense of self pervades social life. Dismissing evidence that one is engaging in risky behavior, reacting defensively to good advice, feeling vigilant and stressed in situations where one feels judged, and avoiding domains where one perceives oneself to be failing seem like discrete phenomena. But they are similar at a psychological level. They all represent the mind’s attempt to deal with threats to the self. While the different responses to threats in different arenas protect feelings of personal worth in the short term, they can prove counterproductive in the long run. The attempts people

make to protect themselves from threats to self-integrity are understandable and in some cases even adaptive. Given the pervasiveness of threats to self in the various arenas of life, people would lose confidence and grit if their sense of self were constantly under assault. But over time self-protection can have costly effects in many domains, including health, education, relationships, dispute resolution, and career success.

For over three decades, researchers and practitioners have applied self-affirmation theory to understand and change behavior in a wide range of domains. The theory begins with the premise that people are motivated to maintain an image of themselves as “morally and adaptively adequate,” as good people who are able to control important outcomes in their lives (Steele, 1988). Claude Steele, the creator of self-affirmation theory, referred to this need as a drive for “self-integrity.” Applied to social problems, self-affirmation theory provides a lens for understanding why so many attempts at social and personal change fail. It is because they can inadvertently threaten self-integrity, evoking psychological mechanisms that can shield self-integrity and also impede growth.

Self-affirmation interventions are situational opportunities, sometimes brief, for people to affirm their global self-integrity. Most often they take the form of an opportunity for people to show their fidelity to a cherished value they hold. Because values are central to people’s sense of self-integrity, expressing one’s fidelity to them is a simple and effective way to affirm self-integrity. Self-affirmation interventions have received the most attention in the domain of education. Indeed, affirmations have been applied in schools around the world. The United States, Germany, and England are three countries where thousands of students and dozens of public schools have participated—or are currently participating—in large field studies evaluating the impact of self-affirmation.

As Kurt Lewin (1951), the father of social psychology, stated, “There is nothing so practical as a good theory.” Following his lead, we believe that the most useful intervention of all is the theoretical wisdom that follows from self-affirmation theory. Armed with this theory, educators and other practitioners can craft situations that meet the core needs of the people they serve. For this reason, we first review self-affirmation theory. Then we describe the successes and limitations of one of the most popular interventions derived from this theory—brief writing activities that encourage people to identify and reflect on their cherished values.

PSYCHOLOGICAL PROCESSES

Self-Integrity Maintenance

The theoretical basis of self-affirmation rests on the insight that people are motivated to maintain a global sense of personal adequacy. They strive to be morally and adaptively adequate (Steele, 1988; Cohen & Sherman, 2014). How do people maintain self-integrity in a world where it is continually under threat (Steele, 1988)?¹ When Steele first proposed self-affirmation theory, the prevailing notion in social psychology was that people were motivated to *directly* neutralize threats to the self. A smoker might defensively dismiss the dangers of smoking. An employee might attribute a bad job outcome to an unfair boss. A

¹Although we briefly highlight the key theoretical and conceptual points related to self-affirmation theory, we recommend that any practitioner seeking to implement an affirmation intervention read a trio of review papers to understand the intellectual history and empirical development of self-affirmation theory (Steele, 1988; Sherman & Cohen, 2006; Cohen & Sherman, 2014).

teacher might attribute the underperformance of students to their laziness or lack of ability. Of course, people might also protect their self-integrity not only through cognitive distortions but through behavioral change. The smoker quits. The employee or teacher accepts a measure of personal responsibility and takes a more proactive role in improving the situation. Yet people routinely engage in defensive distortions and biased judgments in response to threats to the self. The “psychological immune system” gets activated and shields people (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). Motivated reasoning (Kunda, 1987) can lead people to feel good about themselves but to deny important information and feedback that could lead to better outcomes in their lives. Yet, self-affirmation theory suggests that denial and defense are not inevitable outcomes of threat.

People have flexibility in how they respond to threats to the self. They can do so indirectly, and, when they do, this can provide them with the self-protection they need to accept and act on threatening experiences. The cardinal motive of the self-system, according to self-affirmation theory, is global self-integrity. If people feel reassured that, on the whole, they are good, moral people, then they are better able to cope with threatening situations without resorting to defensive justifications and other cognitive distortions that protect self-integrity at the expense of learning. This process likely starts early in life; infants can be consoled by touching and cuddling even when these do little to remedy the source of the distress. Later in life, people are consoled by prayer, religion, and social support—everyday “interventions” that reassure people they are “okay” even while failing to resolve the provoking threat (Steele & Liu, 1983; Steele, 1988).

According to self-affirmation theory, people have a range of creative solutions to the problem of sustaining self-integrity in any situation. A student who feels insecure about her ability might act out in class in an effort to win approval from peers and thus reaffirm self-integrity. The employee who feels alienated at work might decorate his desk with pictures of family and friends. People can create cognitive worlds, tailor-made definitions of success, that put their own qualities in a positive light. As research on the above-average effect shows, most people on average see themselves as “above average” on a range of desirable traits (Dunning, Meyerowitz, & Holzberg, 1989). They are able to do so, in large measure, because they define what it means to be a good “leader,” “student,” or “scientist” in a way that emphasizes their own idiosyncratic strengths and downplays their weakness (Dunning, 2003; Dunning & Cohen, 1992), a tendency that is amplified when their self-integrity comes under threat (Dunning, Leuenberger, & Sherman, 1995).

The major insight of self-affirmation theory is that people do not simply accept negative identities and stereotypes imposed on them in a situation but instead creatively find ways to convey, in effect, “Even though it may not seem so in this situation, I am a person of integrity.” The key practical insight of self-affirmation theory is this: Practitioners should think about the raw materials they can introduce into everyday situations at every level—face-to-face encounters, relationships, and institutions—that help people to maintain a sense of self-integrity in constructive ways. To the extent that people have a range of possibilities for protecting the self in a situation, they will have less need to defensively distort or deny threatening experiences from which they could otherwise learn.

Threat is not intrinsically a bad thing. It is the mind’s alert signal that there is a threat in the situation. Indeed, sometimes, as noted earlier, threat can motivate positive behavioral change (see Cohen & Sherman, 2014; Ehret, LaBrie, Santerre, & Sherman, 2015; Walton & Wilson, 2018). For example, when people are made to feel badly for failing to live up to their own professed values, such as practicing healthy behavior, they may subsequently seize an opportunity to redeem themselves—for instance, by making

healthful choices (Stone & Focella, 2011). How people respond to threat, and whether their response is adaptive or nonadaptive, depends on many factors but perhaps most of all on the opportunities for course correction and self-affirmation available in the social environment.

Self-affirmation theory offered a challenge to cognitive dissonance theory (Festinger, 1957) and its theoretical elaborations that posited self-consistency as a primary motive (Aronson, 1969). The earliest research in self-affirmation theory showed that people could absorb a psychological inconsistency, even when it implicated a valued self-concept, when their self-integrity was bolstered in unrelated domains. For example, when people affirmed their self-integrity by reflecting on values that were important to them, they no longer rationalized their actions—for instance, by changing their attitudes to bring them in line with regrettable behavior that they had subtly been pressured to engage in (Steele, 1988). This occurred even when the values were unrelated to the threatening action. A person who asserts a love for art, for instance, might no longer need to rationalize smoking behavior.

Research in self-affirmation theory went on to assimilate many of the findings that had previously been ascribed to basic motives for self-consistency (Aronson, Cohen, & Nail, 1999). One of the most heavily researched phenomena in cognitive dissonance was the tendency to resist persuasive information contrary to long-held beliefs. In the health domain, people often dismiss or rationalize away evidence that they are engaging in behavior that puts their health at risk. For example, women who drank coffee were much more critical of an article linking caffeine use with negative health outcomes than women who did not drink coffee (Lieberman & Chaiken, 1992). Such defensive processing or “motivated reasoning” has long been a topic of study in psychology (Ditto & Lopez, 1992; Kunda, 1987) but the underlying motivation for it was unclear. Self-affirmation theory suggested it arose from the threat such information poses to global self-integrity. Thus, in one study, people were more open to threatening health information about their unsafe sex practices when they had the opportunity to reflect on important values they held in a different domain (Sherman, Nelson, & Steele, 2000). The opportunity to reflect on the value of kindness or personal relationships, for example, led sexually active students to acknowledge the risks of unsafe sex after viewing an acquired immunodeficiency syndrome (AIDS) educational video, coffee drinkers to be more open to information linking excessive caffeine intake to health risks (Sherman et al., 2000), and female alcohol consumers to be more open to evidence linking alcohol consumption to breast cancer (Harris & Napper, 2005). In the years since these original studies, there have been several meta-analyses (e.g., Epton, Harris, Kane, van Koningsbruggen, & Sheeran, 2015; Ferrer & Cohen, 2019) and narrative reviews of self-affirmation in the health domain (Ehret & Sherman, 2014; Cohen & Sherman, 2014), as well as extensions into other domains, such as intergroup conflict (Sherman, Brookfield, & Ortosky, 2017). Together the research illustrates the impact of self-affirmation on increasing openness to threatening information and promoting positive behavioral change in a wide range of life arenas.

Stress Reduction

The experience of self-threat is like a psychological alarm. It can be triggered by any number of events. This includes exposure to counterattitudinal evidence, negotiations with a political adversary, a mistake, an insult, and so on. There is, in other words, something vital at stake in many seemingly mundane social situations: one’s self (Goffman,

1978). Among the most important emotional symptoms of self-threat is stress. The stress response is an adaptive mechanism designed to mobilize the body's resources for an environmental challenge (Sapolsky, 2004). However, when too severe or too chronic, stress can impair performance and well-being. Research on self-affirmation demonstrates that debilitating levels of stress can be forestalled by timely activities that reaffirm self-integrity. For example, when college undergraduates were given self-affirmation activities to complete during winter break of the stressful first year of college, they reported fewer visits to the health center (Keough & Markus, 1999). When people had the chance to reflect on important values before having to give a stressful talk in front of a judgmental audience, they showed less of a spike in the stress hormone cortisol (Creswell et al., 2005), and for those suffering from high levels of chronic stress, performed better under the pressure (Creswell, Dutcher, Klein, Harris, & Levine, 2013). In a field study, college undergraduates who engaged in a self-affirmation exercise the week before their most stress-inducing midterm examination exhibited a less steep rise in urinary catecholamines, another biological marker of the stress response (Sherman, Bunyan, Creswell, & Jaremka, 2009).

Defense of Social Identities

The research described so far shows the ubiquity of self-threat and the self-affirmation process in social life. Another extension of self-affirmation research is to show how the motive to protect the integrity of the self is directly tied to the motive to protect our social or group identities. Affirming or threatening the self affects the way people judge and treat groups, including their own. After completing a self-affirmation activity, people were less likely to recoup lost self-esteem by stereotyping outgroups as inferior (Fein & Spencer, 1997; Badea, Binning, Verhac, & Sherman, 2017). They were more charitable when explaining why their sports team won or lost (Sherman & Kim, 2005). They were more willing to acknowledge “hard truths” about the injustices perpetrated by their country against minorities and competing nations (Adams, Tormala, & O'Brien, 2006; Čehajić-Clancy, Effron, Halperin, Liberman, & Ross, 2011; see Badea & Sherman, 2019, for review). They were less likely to denigrate the “other side” in political debates as biased (Binning, Sherman, Cohen, & Heitland, 2010; Cohen, Aronson, & Steele, 2000; see also Binning, Brick, Cohen, & Sherman, 2015; Cohen et al., 2007).

EMPIRICAL EVIDENCE FOR SELF-AFFIRMATION INTERVENTIONS

Self-affirmation works not by giving people something that they lack but by allowing people to manifest what they already have—what they stand for, the psychological commitments that ground their sense of self-integrity. An opportunity to assert one's important values, and to explain why they are important, is an opportunity to express commitments that have been a lifetime in the making. A self-affirmation, in this sense, is a situational channel that facilitates the link between inner assets and their outward expression. (We describe implementation of the intervention in a section below and provide annotated materials in Appendixes 3.1 and 3.2, respectively.) A critical point is that people cannot always go it alone in the self-affirmation process. They are constrained or supported by the situation they are in. Thus, in virtually all of the studies described so far, the self-affirmation takes the form of a question, introduced by the experimenters,

that prompts people to reflect on their values and why they are important to them at a moment of threat. Without the question, people may be more constrained in how they can affirm the self, though people can be taught to self-affirm (Brady et al., 2016; Walton, Logel, Peach, Spencer, & Zanna, 2015). Naturally, there are individual differences in how much a person can spontaneously self-affirm (Harris et al., 2019).

Laboratory Outcomes

The range of outcomes along which self-affirmation effects have been documented include (1) acceptance of threatening information in health and politics (Sherman & Cohen, 2002); (2) behavioral compliance with threatening information, such as increases in healthful eating and exercise frequency, and reductions in alcohol consumption among at-risk adults (Harris & Napper, 2005; Ehret & Sherman, 2018; Falk et al., 2015; see Epton et al., 2015; Ferrer & Cohen, 2019, for reviews); (3) reductions in stress, such as stress arising from social evaluation or performance situations (Creswell et al., 2005, 2013); (4) reductions in self-destructive coping behaviors, such as excessive eating (Logel & Cohen, 2012; Logel, Kathmandu, & Cohen, 2019); (5) increases in intergroup understanding, as evidenced by less outgroup denigration (Badea et al., 2017), more compromise in political conflict, and greater willingness to acknowledge wrongdoing on the part of one's group (Čehajić-Clancy et al., 2011); (6) reductions in biased assimilation of new evidence, as evidenced by evenhandedness in political partisans' evaluation of presidential candidates' performance in a debate (Binning et al., 2010); (7) acceptance of threatening changes at the workplace (Jiang, 2018; Wiesenfeld, Brockner, & Martin, 1999); (8) reduction of ingroup favoritism in negotiation contexts (Sivanathan, Molden, Galinsky, & Ku, 2008; Ward, Atkins, Lepper, & Ross, 2011); (9) reduction in self-handicapping in athletic and academic domains (Finez & Sherman, 2012; Siegel, Scillitoe, & Parks-Yancy, 2005); and (10) better performance under stress and social identity threat (Creswell et al., 2013; Martens, Johns, Greenberg, & Schimel, 2006; Shapiro, Williams, & Hambarchyan, 2013). The scope of domains where affirmations have been shown to have ameliorative effects suggests that a similar psychological process, to some extent, underlies them all.

Outcomes from Longitudinal Field Experiments

Although self-affirmation theory has been tested in many contexts, we focus here on the widespread application in schools. Schools are in many ways the ideal field setting to test self-affirmation theory. Many of the outcomes that self-affirmation has been shown to affect in laboratory studies—performance, stress, health, openness to threatening information, prejudice, and social conflict—are priorities for schools throughout the world.

The initial self-affirmation intervention studies in educational contexts were conducted in middle schools, and in particular, with a racially diverse group of children making the transition to seventh grade in a middle class school district. Adolescence is a turbulent period of development (Eccles, Lord, & Midgley, 1991). Children go through dramatic physical and psychological changes, and cope with multiple stressors, including the challenge of forming their identity. The stressors can be especially acute for racial/ethnic-minority students, because they must contend with negative stereotypes about their ability and belonging in school (Steele, 1997). Cohen, Garcia, Apfel, and Master (2006) applied a self-affirmation intervention in this context. They had middle school

teachers administer affirmation writing exercises (or control exercises) using a randomized experimental procedure in which teachers were kept unaware of both students' condition assignment and the hypotheses motivating the study. The writing exercises were tailored to be intelligible and engaging for this age group and for the students at this school. Samples of student responses to the values affirmation prompts in various studies are provided in Table 3.1 (Sherman et al., 2013; Ehret & Sherman, 2018). In the original studies, roughly half of the students at the school were of African American descent and the remainder of European American descent. Academic performance was assessed as grade point average (GPA) in core courses (English, math, science, and social studies), obtained through students' transcripts.

TABLE 3.1. Examples of Affirmations That Students Have Written in Experimental Studies

Middle school students (from Sherman et al., 2013, Study 2)

“Creativity is important to me because it allows variety and some fun in my everyday life. This would be important to me when I am trying to think outside the box and when choosing my outfits. Independence is very important to me because I am fairly self-conscious and get very nervous. This would be important when making a speech or doing independent activities. Finally, my relationship with friends and family is important because my friends and family make my day better and better, and when I need some help or confidence they will be there for me.”

“Athletic ability is my most important value. I love this value so much because sports are my passion. I love football, baseball, and basketball. For all of these sports you need athletic ability and be able to stay in shape. My second value is I have a sense of humor. Humor is a great thing, it makes people laugh everyone has fun and there is nothing wrong with humor. I love all different kinds of humor and that is why it is one of my values.”

“Creativity is important because I have to draw, sing, and, well, be creative! It’s fun to be creative because you can see things in other ways as other people wouldn’t. I mean, it’s so fun to be creative. My relationships with family and friends are EXTREMELY important. Without them, who would I turn to? Who would make me smile and laugh and act how I am today? My last value is a sense of humor because I love to laugh or make people laugh and it just makes everything seem so much more fun.”

College students (from Ehret & Sherman, 2018)

“Family and friends I value the most because they are all I got at the end. My family has been there for me every step of the way motivating me to do my best and pushing me to my limits and brining me up when I’m down. Friends will come and go but for the ones that stay are irreplaceable.”

“For me it is very important to live in the moment and not take life so serious. Often times when I try to plan something out things do not go the way I wanted and I am just let down and bummed out. By living in the moment and enjoying each day as it comes I have become a much happier person I feel overall. Also I feel that life has a lot of ups and downs and a lot of what happens can not be controlled, by accepting that I have less worries and find myself less stress. I feel that this is a very important value to have in order to make you a more stress free person, which allows you to focus on the more important things in life.”

“Athletics are the reason I go to such an amazing school like (school). Without them, I do not know how much life would of turned out. They have kept my head on straight and also caused me to excel in school. They have also helped me grow as a young man because they have taught me life lessons that would of been hard to learn without sports.”

Note. See Appendix 3.1 for annotated version of standard prompt for middle school students. Material from Ehret and Sherman (2018). Reprinted with permission from Oxford University Press.

In three sequential studies, the self-affirmation intervention significantly improved the first-term grades of African American students, closing the racial achievement gap by 40% (Cohen et al., 2006; Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009). The effect was not that evident on performance on the exams immediately after the intervention (see Cohen et al., 2006) but rather emerged on *cumulative* performance as measured by GPA. The affirmation's effects took time to unfold. Small incremental improvements in performance compounded into higher GPAs by the end of the term. Consistent with this mechanism of compounding benefits, follow-up observations found that the effects of affirmation on GPA persisted for the remaining 2 years of middle school. Later research replicated the same positive effects of affirmation among Latino American students over middle school, with effects persisting into high school (Sherman et al., 2013).

Research by independent teams of investigators have documented similar benefits of affirmation among stereotyped groups. Borman, Grigg, Rozek, Hanselman, and Dewey (2018) tested the effects of self-affirmation in a large population of middle school students across an entire school district, finding persistent benefits on minority students' grades that extended years later into high school. Affirmation interventions applied by other research teams have found benefits among economically disadvantaged students—in particular, students who are the first in their family to attend college (Harackiewicz et al., 2014; Tibbetts et al., 2016), “further education” students in the United Kingdom (akin to community college students in the United States) in a preregistered study (Schwalbe et al., 2018, 2019), and female graduate students in business schools (Kinias & Sim, 2016). It is important to recognize that affirmations are not panaceas—they do not work everywhere and all the time. Null replications have been reported (Bratter, Rowley, & Chukhray, 2016; Dee, 2015; de Jong, Jellesma, Koomen, & de Jong, 2016; Hanselman, Rozek, Grigg, & Borman, 2017; Harackiewicz, Canning, Tibbetts, Priniski, & Hyde, 2016; Protzko & Aronson, 2016), a point we return to in a section below on heterogeneity of affirmation effects. Still, there are enough positive results that the ultimate verdict on this intervention, like even the most effective interventions and policies, is that it is powerful but conditional: It has large and lasting benefits under certain conditions.

Also, when affirmation effects occur, they can last for a long time and have ripple effects into other domains of functioning. In a follow-up study to the original cohorts of students in Cohen et al. (2006, 2009), African American students who were originally assigned to the affirmation condition in seventh grade were more likely to attend college years later, and more likely to attend the selective colleges that are key drivers of economic mobility among the disadvantaged (Goyer et al., 2017). Highlighting the breadth of self-affirmation effects in school, a recent study demonstrated that the same intervention lessened disciplinary infractions over students' 3 years of middle school (Binning et al., 2019). Acting out is sometimes, it seems, motivated by a desire to affirm the self. When that motive is fulfilled through alternative routes, students are more likely to trust their teachers and behave (Goyer et al., 2019).

MECHANISMS

Self-affirmation interventions have far-reaching and long-lasting effects through two sets of mechanisms: first, psychological processes that lead to enduring changes in how

people perceive social experience and, second, positive feedback loops between the self-system and the social system.² Several psychological responses occur as a consequence of a self-affirmation intervention (Cohen & Sherman, 2014; Sherman & Hartson, 2011). First, affirmations evoke a more expansive self-conception (Critcher & Dunning, 2015). Thinking about the value of religion, or the importance of relationships, for example, helps people to realize that they have many sources of self-regard. From this perspective, a threatening event seems more surmountable. People can persist in the face of challenge and resist temptations to which they would otherwise cave because they have a greater confidence in their ability to cope (Burson, Crocker, & Mischkowski, 2012; Logel & Cohen, 2012; Schmeichel & Vohs, 2009).

Beyond increasing the psychological salience of self-resources, self-affirmation interventions also give people a more expansive frame for viewing a specific threat, helping them to “put it in perspective” (Critcher & Dunning, 2015; Sherman et al., 2013; Wakslak & Trope, 2009). When people experience a threatening situation, they tend to fixate on it, a state of vigilance in which the threat commands their attention (Cohen & Garcia, 2008; Kaiser & Major, 2006; Murphy, Steele, & Gross, 2007). In the short term, this kind of vigilance can be adaptive. However, in the long term, it can consume mental resources that could otherwise be expended on learning. It can also undermine psychological and physical health by focusing attention on adversity rather than the “bigger picture.” Evidence that self-affirmation facilitates a more expansive view of situational threats is provided by research on the process of “psychological untethering.” Under normal circumstances, people who face continual threat due to negative stereotypes, such as African Americans in school, display a tethering between daily adversity on the one hand and their sense of well-being and belonging on the other. They appear, on average, to experience a bad grade or negative feedback not as an isolated incident but as a confirmation of the stereotype, and their well-being and belonging falter as a consequence. However, when affirmed, this tethering is reduced and sometimes eliminated, such that adversity no longer correlates with well-being and belonging (Cook, Purdie-Vaughns, Garcia, & Cohen, 2012; see also Walton & Cohen, 2011). Against the backdrop of a broadened self-view, daily assaults to self-worth loom less large.

This untethering mechanism helps to explain how the self-affirmation process propagates through time, and for that matter how other psychological interventions do so as well (Walton & Cohen, 2011). Although the intervention is objectively brief, its psychological effects are lived and relived in the encoding of social experience (Sherman et al., 2013; Cook et al., 2012).

Longitudinal studies have assessed the untethering process as it plays out over time. Cook and colleagues (2012) found that for African American students in the control condition, feelings of belonging in school were tightly linked with academic performance. They felt less belonging in school when they did poorly rather than well, whereas European Americans’ sense of belonging was relatively less conditional on their performance. But for African American students who completed the affirmation, belonging was more stable and relatively less tethered to their performance (Cook et al., 2012).

²This section on mechanisms is not exhaustive, of course, and mechanistic questions can be addressed at many other levels of analysis beyond what is discussed in this chapter. For example, research has examined a neural reward-related mechanism underlying self-affirmation effects as evidenced by activation of the ventral striatum (Dutcher et al., 2016).

In another longitudinal study, on days when nonaffirmed Latino American students experienced greater daily stress and adversity, they reported feeling more judged in light of their race. And on days when they felt more identity threat—that they were judged as a member of their group—Latino American students in the control condition reported feeling reduced belonging and academic self-efficacy (Sherman et al., 2013).³ However, among Latino American students who were affirmed, these links between daily adversity and identity threat, and identity threat and academic fit (belonging and efficacy, respectively) were eliminated (Sherman et al., 2013).

On the whole, these studies illustrate the experience of self-threat in institutional settings and how affirmation affects this experience. An individual who contends with a threat based on his or her group identity, in effect, lives in a more symbolically threatening world, where daily adversities can confirm a perception that “people like me” do not belong. This perception can prime people to see their social world as even more threatening, making them more vigilant to threat, in a repeating cycle (Rheinschmidt & Mendoza-Denton, 2014; Yeager et al., 2014). However, an interruption in this cycle, one that expands people’s psychological perceptions beyond the threat at a key transition, can have benefits that compound with time.

Effects over Time

The field research shows that the self-affirmation process can perpetuate itself over time. Brief self-affirmations can have effects that persist for days, weeks, months, and years. How? One way is through recursive processes—that is, processes that recur, because they feed off their own consequences (Cohen et al., 2009; Cohen & Sherman, 2014; Wilson & Linville, 1985; Walton & Wilson, 2018). Feeling affirmed, a person performs better. Performing better, the person feels more affirmed, in a repeating cycle (Cohen & Sherman, 2014; Cohen et al., 2009). The opportunity to initiate such a recursive cycle might be especially great at key transitions, such as entry to middle school or college, when early outcomes can have disproportionate effects on trajectories (Elder, 1998).

Another way that self-affirmation processes propagate through time is through its interaction with the social system, which may also be recursive. Self-affirmed, a student may perform better, and performing better, he or she may be recognized and rewarded by teachers. The well-documented effects of teacher expectancies (Rosenthal, 1994) may then carry forward the effects of the affirmation. The student may be given more attention and the benefit of the doubt, held to a higher standard, and deflected into higher-expectation academic tracks, all of which may feed back to further affirm the student.

A formal model of this recursive and interactive change processes is presented in Cohen and Sherman (2014; see also Cohen, Garcia, & Goyer, 2017; Ferrer & Cohen, 2019; Goyer et al., 2017). Figure 3.1 offers a diagrammatic model of a “cycle of adaptive potential.” This model was developed to understand the process by which an intervention, such as self-affirmation, or any formative experience, can lead to long-term change.

³Such studies, of course, are correlational, so there is uncertainty in the direction of the causal arrow. Perhaps adversity causes a decrement in psychological well-being, perhaps the reverse path applies, or perhaps some third variable explains the link. We suspect the relationships are bidirectional and multiply determined. On the whole, however, the tethering effect shows that there is an intercorrelation among variables for those under threat that does not occur for those not under threat and that can be severed through timely affirmation.

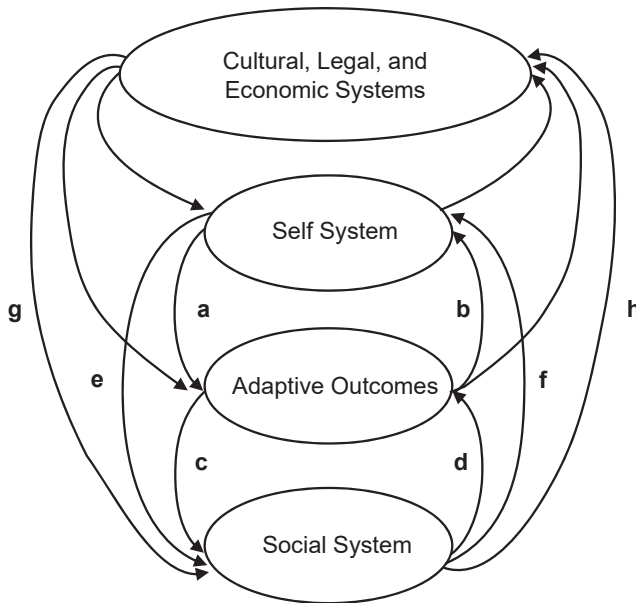


FIGURE 3.1. Cycle of adaptive potential embedded within cultural, legal, and economic contexts. Affirmation effects can propagate themselves over time by leading to changes in the environment that cycle back and augment changes in the self. A student who is affirmed (path A) may perform better initially, and that initial performance may then feed back to the self (path B) such that the student has two sources of affirmation: the original affirming event and the improved performance at school (and the sense of personal accomplishment and efficacy that would create). Doing better at school may lead the teacher to notice, give positive feedback or more challenging material (path C), which then may feed back to the student by leading to further improved performance (path D). The student, performing better and feeling more supported by the teacher or school as a result of this positive social feedback, may then challenge him- or herself further, opting for more difficult courses—for example, leading to a change in his or her social system (path E), which could, in turn, serve as further affirmation that the student belongs within the system (path F). Finally, the entire cycle of adaptive potential between the student, adaptive outcomes, and the social system is embedded in a set of cultural, legal, and economic systems that interact with the other systems (paths G and H, and the four other paths not yet specified).

It is the interaction between psychological processes and social processes, many of which can be recursive in nature, that drives outcomes through time.

From this perspective, an intervention like self-affirmation is a “trigger,” the effects of which are “channeled” by the social environment (Goyer et al., 2017; Pawson & Tilly, 1997; Ferrer & Cohen, 2019). Latino American middle school students who completed a self-affirmation earned higher grades, the short-term effects, but then they were also placed into more challenging courses over the long term (Goyer et al., 2017). They were also more likely to be enrolled by their school in an advanced college preparation program. Another study found that some of the lasting effect of affirmation on middle school African Americans’ later outcomes was driven by the fact that it deflected them from the remedial track in high school (Cohen et al., 2009; Goyer et al., 2017). Without the institutional channeling process, long-term effects of self-affirmation may not have been found.

Heterogeneity

The evidence of positive affirmation effects seems to suggest the value of “scaling up” the intervention to reach more students. One commentary urged “advancing values affirmation as a scalable strategy for mitigating identity threats and narrowing national achievement gaps” (Borman, 2017). Indeed, this goal is the objective of the affirmation studies in Germany, the United Kingdom, and the United States, as mentioned earlier. However, we think that “scaling up” is not so much a matter of disseminating the same intervention to as many students as possible. Rather it is a matter of targeting the intervention to those contexts where it is most likely to be effective. As noted, several replication efforts have turned up null results. As in medical science, interventions should ideally be targeted to contexts where they are most likely to be effective. Indeed, in medical science, it is increasingly clear that many interventions may have null results overall but still have benefits for a small subgroup of superresponders (Mukherjee, 2015). How do we achieve precise targeting? In short, through the identification of moderators, addressed in the next section. Researchers and practitioners need to identify *when, where, and for whom* wise interventions work best—an endeavor where much progress has been made and still more, we suspect, awaits. The following section structures the review of moderators around three factors: psychological threat, the presence of resources, and timeliness.

Psychological Threat

Most obviously, the effect of affirmation hinges on whether the target group in question is under sufficient psychological threat to impede adaptive outcomes (Cohen & Sherman, 2014). The first affirmation studies were conducted with African American students as the focal group. Virtually all their teachers were European American, creating an awareness in these students that the stereotype could be used against them (Inzlicht & Ben-Zeev, 2000; Sekaquaptewa & Thompson, 2003). African Americans in such an environment were expected to be under consistent psychological threat due to the negative stereotypes they contend with (i.e., stereotype threat; Steele, Spencer, & Aronson, 2002). Thus, it was this group that was expected to benefit from the affirmation. Consistent with theorizing, African Americans who were affirmed not only earned higher grades but also exhibited significantly lower racial stereotype activation on a cognitive accessibility task. Similar effects of affirmation on a negatively stereotyped ethnic group, with no effects on European American students, were observed in field interventions conducted with Latino Americans (Sherman et al., 2013). A study by Miyake et al. (2010) found that for female students in an introductory physics course, self-affirmation improved exam scores for those who subscribed relatively more to the stereotype that “men are better at science than women.” In short, one key moderator of affirmation effects is whether students are under consistent psychological threat. These consistent psychological threats often arise from the groups to which people belong and the stereotypes that are targeted at them.

Threat may vary not only with students’ characteristics but with features of the institution. Researchers conducted an affirmation intervention across 11 middle schools in Madison, Wisconsin (Borman et al., 2018; Borman, Grigg, & Hanselman, 2016). Using the procedures from the original studies, they found that the African American and Latino American students showed an improvement in GPA, with no effect on the European American and Asian participants. Although the overall effect size was smaller

than that observed in the previous studies, it varied by school. The researchers found that the improvement in eighth-grade GPA among affirmed minority students was strongest in schools that had more threatening contexts, with threat defined as the degree to which minority students were underrepresented and the degree to which they underperformed relative to their European American peers (see also Hanselman, Bruch, Gamoran, & Borman, 2014).

Of course, there are limits to the level of threat an affirmation can mitigate. If the environment is one of severe threat, where at every turn, racism or sexism is confronted, it seems highly unlikely that affirmation will do much, if anything. Other steps will be necessary. It is mainly where there is a low-level but consistent threat that is impeding adaptive outcomes that affirmation is apt to be most effective. One potential benefit of larger multisite studies is that they enable researchers to identify the ways institutional settings vary in the degree of psychological threat present in them.

One strategy that practitioners and researchers can use to identify which individuals are under consistent psychological threat in a given environment is to assess the degree to which they underperform given their prior levels of achievement and preparation. Is there an underperformance effect? A telltale sign of underperformance is the extent to which a group of people performs worse than others even after prior indicators of success are controlled (Steele, 1997). This suggests that “something else,” presumably something in the environment of the school, may be suppressing students’ potential. Which group underperforms may vary by context. In the United Kingdom, for example, low-income students display a particularly large underperformance effect. Moreover, a recent study found that low-income students who were in schools where they were mixed with high-income students showed dramatic benefits in academic performance as a result of self-affirmation (Hadden, Easterbrook, Nieuwenhuis, Fox, & Dolan, 2019). Another strategy is to measure psychological threat using validated scales. For example, in Layous et al. (2017), White men were found to have a relatively low level of belonging in school and exhibited the greatest benefit of the affirmation.

Resources

Wise interventions can often be seen as the kick-start to a process that unfolds over time and in a social context (Cohen & Sherman, 2014; Cohen et al., 2017; Goyer et al., 2017). But for that process to unfold, there must be institutional supports to carry it forward. For example, a self-affirmed student might perform better and be more willing to seek out opportunities for learning. She might have the confidence to approach a teacher for help, or to sign up for a more difficult course. What is critical here is the *availability* of the social channels for the psychological currents, triggered by the affirmation, to keep moving forward. One study (Dee, 2015) found null effects of the affirmation intervention overall, but when examining classrooms that were more conducive to cognitive growth (i.e., the ones that displayed large gains in test scores), affirmation led to improved performance among minority students. What kinds of social resources are needed to propagate the effects of self-affirmation and other wise interventions? More research is needed on this question—we would categorize them into two types. First, cognitive resources, in terms of objective opportunities for learning and continued progress; and second, social resources, in the form of social reinforcement and validation (Cohen et al., 2017).

Timeliness

A final key moderator of the benefits of affirmation is its timeliness. For maximal benefit it must be timed to the emergence of threat and the availability of environmental resources for change. In the health domain, Ferrer and Cohen (2019) demonstrate that the timeliness of affirmation along these two dimensions predicts the degree of its benefit. In school, affirmations should be timed to the emergence of threat, which, if unaddressed, might lead to deteriorating outcomes over time. Thus, in the original studies, affirmations were timed to occur at the beginning of the school year and before exams and at a key developmental milestone, the transition to middle school. One study found that even a difference of 2 weeks in the timing of the affirmation—the first week of middle school versus the third week—had a large impact, with earlier timing yielding greater benefit on student grades (Cook et al., 2012). Indeed, the effect of timing in this study equaled the effect of providing the affirmation intervention at all obtained in previous studies. For practitioners and researchers, what matters is not just “what” intervention is used, but also and importantly, “where” and “when.”

In summary, the key moderators of any psychological intervention can be distilled into what we refer to as the “three T’s” (Cohen et al., 2017; Ferrer & Cohen, 2019). It is *targeted* at the right person (one experiencing threat). It is *tailored* to the need (an affirmation might be effective at addressing threats to self-integrity, but not a lack of skill). And finally, the intervention is *timely* (given at a time and place where threat may hinder access or use of institutional resources). It is the confluence of these three conditions that predicts the positive impact of affirmation, as well, we suspect, of many interventions (Ferrer & Cohen, 2019).

THEORETICAL COUSINS OF SELF-AFFIRMATION INTERVENTIONS

The self-affirmation intervention is related to several other interventions in the social psychological literature. First, it is related to expressive writing interventions, as pioneered in the work of Jamie Pennebaker (Pennebaker & Evans, 2014). These interventions illustrated the power of expressive writing: In particular, people who were encouraged to write about traumatic events, expressing their deepest thoughts and feelings, were found to exhibit better outcomes, including along objective health indices (Pennebaker & Chung, 2011). The affirmation intervention similarly leverages the power of expressive writing but avoids confronting people with negative events. The benefit is that self-affirmation interventions do not cause the short-term decrements in mood sometimes found in the standard expressive writing exercise. Interestingly, one study (Creswell et al., 2007) found that much of the power of conventional expressive writing interventions among breast cancer survivors derived from their ability to focus people on self-affirming thoughts and feelings (e.g., the importance of relationships in their lives). Still, there are presumably contexts where expressive writing about traumatic events is a more effective intervention than self-affirmation. Every intervention has its time and place.

Another cousin (or perhaps aunt or uncle) of the self-affirmation intervention comes out of the seminal research by Rokeach (1973) on values confrontation—research that illustrated the power of *values* in people’s psychology. Rokeach found that when people were led to confront a conflict between their values and their actions, it sometimes led to large and lasting self-change. People felt “self-dissatisfied” and as a consequence

changed their actions to bring them in line with their values. The intellectual debt that self-affirmation research owes to Rokeach is the notion that values are a powerful source of self-integrity, and perhaps the basic unit of identity. Even in the harshest of circumstances, people can choose what they stand for.

Finally, self-affirmation interventions have an intellectual connection to other interventions that tap into identity and self-perception. “Foot-in-the-door” interventions encourage people to take a small initial step on behalf of a cause, and, under some circumstances, this has been found to increase their willingness to make later larger sacrifices (Freedman & Fraser, 1966; see Burger, 1999, for review). These interventions paved the path for our understanding of how change can persist through time. An initial action causes deep changes in identity and self-perception, with the resulting changes carrying the influence forward through time. A similar intellectual debt is owed to Wilson and Linville’s (1985) classic research on attributional training, and their resurrection of the notion of “exacerbation cycles” by Storms and McCaul (1976). The notion was that a small initial change in psychology or behavior could propagate itself by interrupting a negative feedback loop. The self-affirmation field studies complement and go beyond these classic studies by extending the temporal window of observation. Rather than simply stopping the study with the first dependent measure (e.g., the first behavior after an intervention, or grades in the first term after the intervention), several of the field studies featured in self-affirmation research assess a chain of events that unfolds over a significant portion of the life course (Borman et al., 2018; Cohen & Sherman, 2014; Goyer et al., 2017; Tibbetts et al., 2016).

INTERVENTION CONTENT AND IMPLEMENTATION

The implementation of any intervention should occur after careful pilot testing to determine the nature of the psychological threat, constraints in the context in which it is to be administered (such as literacy level), and whether the materials are clear and impactful for the target population. In our experience, this pilot testing period is also a time to build trust with the teachers of the classrooms where the intervention is to be administered and with other key personnel within the school (principal, school psychologist). The self-affirmation intervention that was used in the middle school context in Cohen et al. (2006, 2009) and Sherman et al. (2013) was deployed after such pilot testing. It can be found in Appendix 3.1—the materials are annotated to call out important details and their intent. While there are many inductions of self-affirmation (see McQueen & Klein, 2006, for review; see Napper, Harris, & Epton, 2009, for an alternative method), the values writing exercise is the most commonly used manipulation of self-affirmation. In this activity, participants first read over a list of values and choose the value or values that are personally most important to them (in the affirmation condition) or values that are unimportant to them (in the control condition; several different control conditions have been used). When several affirmations are given over a school year, the content of the activities is varied in order for them to stay fresh for the students. But each one asks participants questions that tap into self-defining values. The writing activities typically take about 10 minutes for students to complete.

There are several aspects to the implementation of the affirmation that, though sometimes subtle, can make a difference. Here, we draw on the long tradition in social psychology that emphasizes the importance of experimental manipulations that are

immersive and impactful (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990; Ross, Lepper, & Ward, 2010). One of the distinctive qualities of social psychology is the attention to detail that goes into the creation and implementation of any manipulation, including an intervention. What is critical—and what we are trying to create and duplicate—is not a physical experience of writing about a value but a *psychological* experience of feeling affirmed.

For one, the affirmation activities are described as regular classroom activities and are never presented as an intervention to help students (see Yeager & Walton, 2011). No student is made to feel that he or she is in need of help, a message that may increase psychological threat. Indeed, research suggests that when people are made aware that the affirmation is designed to help them, its impact is attenuated (Sherman, Cohen, et al., 2009). This is not to say that people cannot use affirmation as a personal coping strategy if they are aware of its benefits. As long as they feel they have choice in the decision to use it, they still benefit even when aware of its salutary effects (Silverman, Logel, & Cohen, 2013). Indeed, the lessons of self-affirmation theory can be imparted to students with positive results (Walton et al., 2015).

There are other implementation factors that are important. For example, we suspect that some of the efficacy of the intervention comes from the fact that it appears to be an activity that is from *teachers* or other institutional authorities. Students are thus led to feel that teachers, or other institutional authorities, care about their values and how they are important to them (cf. Bowen, Wegmann, & Webber, 2013). From the students' point of view, their values, and who they are and what they stand for, are welcome (see Walton, Paunesku, & Dweck, 2012). This may help to explain why values affirmations bolster students' sense of belonging in school (Cook et al., 2012). Although speculative, one reason replications may sometimes fail is that they are presented by outsiders rather than by insiders or institutional representatives whose respect students care about (see Protzko & Aronson, 2016). The key condition here is not at the literal or procedural level. It is at the *psychological* level. Sometimes, it may not be possible to present the research activity as a regular classroom activity (we describe one such instance below). What is important is that students *perceive* that their values are respected by people who matter.

Another key detail related to an intervention's implementation is the degree to which it promotes student engagement. In the study in Wisconsin middle schools that featured over 1,000 students, researchers coded the affirmation essays for student engagement, which they operationalized as whether students selected an important value and then discussed its personal importance (Borman et al., 2018). The vast majority (76%) of the potentially threatened students in the affirmation condition were coded as having engaged with the activity, and this group of students showed relatively larger gains. These findings suggest that whether the implementation encourages student engagement, such as by having the teachers convey its importance or by providing a quiet time for students to complete it, is critical.

Implementation details may explain sometimes paradoxical results, as when the affirmation works once but not a second time. When Borman and colleagues (Hanselman et al., 2017) sought to replicate their affirmation effects in the same 11 schools, they found null effects. The authors consider a number of sources for this change, many of them relevant to implementation. The teachers may have been less excited about participating in the study the second time around; the fact that they were on strike may have played a role (see Borman, 2017, for discussion).

NUANCES AND MISCONCEPTIONS

We see self-affirmation interventions as an example of a psychologically wise intervention (Walton, 2014). They target the underlying processes that shape the way people think and feel about their social situation, including themselves, and specifically, their sense of personal adequacy (Cohen & Sherman, 2014; Cohen et al., 2017, Lewin, 1951; Steele, 1997; Walton & Wilson, 2018). Unlike many interventions, wise interventions tend to work not by adding new forces but by activating or unleashing forces that are already present in the situation but dormant. Students' abilities may be inhibited by psychological threat. Lessening that threat, the intervention allows abilities to more fully express themselves.

One common misconception about affirmation interventions is that because they are relatively brief and low cost, the causes of the social problems they ameliorate are small and simple. Health epidemics and illnesses, while caused by the smallest of entities—germs and viruses—are heavily influenced by sanitation, nutrition, biological vulnerability, stress, and so on. Likewise, almost all social problems arise from multiple forces. Achievement gaps based on race, class, or gender are the product of a complex web of systemic, historical, institutional, cultural, and economic factors (see, e.g., Gandara & Contreras, 2009; Mitchell, Ream, Ryan, & Espinoza, 2008; Neal, 2006; Rothstein, 2005). Researchers, practitioners, and policymakers must never lose sight of the important structural factors leading to achievement, such as poverty and unequal distribution of economic and educational resources (Reardon, 2011), immigration policies (Gandara & Contreras, 2009), parenting practices and limitations in English literacy (Lopez, 2009), class size, school demographics, educational policies (Jencks & Phillips, 1998), individual discrimination (Ready & Wright, 2011), and institutional racism (e.g., Voigt et al., 2017). All of these are causes of achievement gaps that must be addressed.

Showing that a psychological intervention lessens the achievement gap does not imply that it has exclusively psychological sources (see Ikizer & Blanton, 2016). It implies that, under some circumstances, psychology can be a key valve through which the influence of cultural, systemic, historical, and institutional forces flow. As we suggested earlier, structural and psychological inequalities can reinforce each other, as when social inequality causes psychological threat in the classroom, which causes underperformance, which in turn propagates social inequality (see also Claro, Paunesku, & Dweck, 2016). Likewise, any psychological intervention, in the absence of structural supports for success, would have little if any effect. Cognitive, social, material, and emotional supports available to students in a social environment will determine whether the spark introduced by a self-affirmation kindles into a lasting change.

IMPLICATIONS FOR PRACTICE: ADAPTING AFFIRMATION INTERVENTIONS FOR AN INTERNATIONAL CONTEXT

We now review a case study that illuminates how many of the considerations laid out above make a practical difference in the field. Whenever researchers and practitioners apply a psychological theory to a novel context, they need to be aware of how the process they seek to intervene on plays out in the specific setting they hope to change. The paragraphs that follow address how two researchers, Mohini Lokhande and Tim Müller, took on this challenge in the German educational system.

Various steps were taken in order to (1) simplify the intervention materials so that they would be understood by students with lower literacy skills; (2) make the affirmation task more engaging so that students would put sufficient effort into thinking about important values in their lives, such as embedding the value activity in an interactive comic strip; (3) make the activity more concrete with specific references not to abstract values but to specific activities (e.g., “spending time with family and friends” instead of “valuing family and friends”); (4) include values that resonate in Germany; (5) break down the essay-writing task into simple steps to make the writing process easier; (6) encourage students to focus on intrinsic values like feelings of belonging rather than extrinsic ones like prestige; and (7) trigger a positive recursive cycle, while accommodating to data protection regulations, by having the researchers provide growth-oriented feedback to students after they completed the initial intervention.

It was necessary to consider who, in this context, was vulnerable to psychological threat. Previous interventions featuring affirmation had been conducted in the United States and were designed to alleviate the stereotype threat that racial minorities feel in school (Cook et al., 2012; Walton & Cohen, 2007). By contrast, in contemporary Europe, the primary stigma centers on immigration. Immigrant students may feel as though they do not even belong in their country, let alone in the classroom, a state of “belonging uncertainty” that has befallen immigrants worldwide (see Walton & Cohen, 2007). Moreover, there exists a fairly pronounced achievement gap between immigrant students and their native peers in Germany (Gebhardt, Rauch, Mang, Sälzer, & Stanat, 2012). The Expert Council of German Foundations on Integration and Migration, a nonpartisan advisory council on whose behalf the study was conducted, sought to address this gap. The purpose of the study was to generate concrete lessons for future educational reforms in Germany.

As the self-affirmation intervention was translated into this new context, there were several implementation details to consider. Attempts were made to retain many of the procedures used in the original interventions, but adjustments had to be made. Knowing the key theoretical considerations, however, made adjustments possible without undermining psychological impact. See Lokhande and Müller (2019) and Müller and Lokhande (2017) for a detailed description of the procedure and results.

The study took place in lower secondary schools (age range 12–13 years) in the state of Berlin. These schools are usually attended by students with lower academic ability and from socially disadvantaged families. Moreover, most schools were ethnically diverse. About two-thirds of the students spoke a language other than German at home. Many had a Turkish, Arabic, or Eastern European background. The research was designed as a large-scale replication study in 11 schools ($N = 820$). Because ethical guidelines and data protection requirements are strict in Germany, it was not possible to present the study as a regular classroom exercise. Instead, we designed a cover story that integrated the intervention into the classroom as a supportive exercise for all students that, though initiated by outside researchers, was supported by the school. This way, we increased the chances that a key psychological element of the affirmation experience—the sense that “my values” are being recognized and respected by institutional authorities—would be preserved.

The timing and context of the intervention were considered carefully. It was decided to implement the intervention in a mathematics class where psychological threat was expected to be most acute and debilitating (Borman et al., 2016). To interrupt the emergence of recursive cycles, the intervention was administered at the beginning of the new school year and, for seventh graders, right after the transition from primary to secondary

school. Also, an exam was administered immediately after the first affirmation, and then 8 weeks later. This way, the effect of the initial affirmation might be immediately channeled into better performance, which might then facilitate better performance on subsequent exams (Cohen et al., 2009). To facilitate this recursive process, students across all conditions received feedback on each of the two exams that emphasized their capacity for growth (see Yeager & Dweck, 2012; all materials can be obtained from the authors upon request).

The intervention was implemented by trained research administrators rather than teachers. On the positive side, this facilitated treatment fidelity, ensuring maximal control over the implementation was obtained. On the negative side, this element of the procedure might undercut certain key psychological elements from the experience. Students might be less engaged by the activity because it was being delivered by outsiders. Accordingly, innovative procedures were introduced to support student engagement. For instance, one novel procedural element was the use of an appealing interactive comic strip to increase students' motivation to write an essay. In the story, an alien wants to learn more about young people on Earth and asks students several questions related to their values. (The annotated and translated materials can be found in Appendix 3.2.) As in the original studies, students were told to write down their thoughts and feelings and told that the assignment was nonevaluative.

Additionally, several *prompts* focused students on the intrinsically rewarding nature of their values (Schimel, Arndt, Banko, & Cook, 2004). Students answered yes/no questions about different statements related to their two chosen values, such as "When I think about [value x , value y], . . . I'm happy and content." This element was designed to focus students on the intrinsic rationale for their values (Schimel et al., 2004) and on emotional experiences associated with these kinds of rationales (e.g., joy, contentment, lack of anxiety; Rheinberg & Eser, 2018).

Replicating previous results, the affirmation interventions improved the performance of students from an identity-threatened group (Lokhande & Müller, 2019). A significant interaction effect between affirmation condition and ethnic background was obtained. On the first exam, there was a positive effect of the affirmation on the math achievement of immigrant students, though this was confined to Turkish immigrants and did not occur for students of Arabic descent. Eight weeks later, however, both immigrant groups performed significantly better on the second math test. Echoing results of previous studies, no significant effect of the affirmation was found for the nonimmigrant group. Overall, the achievement gap between immigrant and nonimmigrant students was reduced by approximately 40%.

The experience of adapting the value-affirmation procedure to the German context highlights the importance of attention to psychological detail and meaning (see Lee & Luykx, 2005). After the publication of the results (Müller & Lokhande, 2017), many teachers showed an interest in using the intervention materials in their own classrooms. But many thought that it would be a simple matter of handing out the comic strip and, once completed, students would "magically" improve (cf. Yeager & Walton, 2011). As the case study illustrates, implementation fidelity requires the creation of a positive psychological experience, and this requires careful consideration of the meaning that every procedural element will have for students. Implementation fidelity also requires setting the stage so that any initial psychological effects of the intervention can be channeled, sooner rather than later, into performance and the experience of progress.

IMPLICATIONS FOR PSYCHOLOGICAL THEORY

The research reported in this chapter demonstrates the pervasive power of self-integrity in mediating responses to many experiences in social life: confronting threats to one's social identity in social contexts, such as school, coping with regrettable actions, processing medical and political information, and dealing with intergroup divides. When people are able to affirm self-integrity by drawing on alternative self-resources, they are able to tolerate, and even grow, from threatening experiences in their lives. The consistency of affirmation effects across these diverse domains suggests a psychological unity.

Additionally, self-affirmation research has shown how “psyche and structure” interact, propagating outcomes through time (Cohen et al., 2017; Cohen & Sherman, 2014; Goyer et al., 2017). Psychological processes interact with processes in the social environment in recursive feedback loops. Rather than psychologize social problems—or sociologize them—the perspective offered in self-affirmation research suggests that the action is in the interaction between these levels of analysis.

FUTURE DIRECTIONS

There are many questions to be answered. Three form the focus of our concluding section:

1. Under what conditions can self-affirmations have negative effects?
2. How does the self-affirmation process unfold spontaneously, when there is no intervention to trigger it?
3. What are the specific pathways through which the self-affirmation process interacts with the social environment through time?

First, self-affirmations can have negative effects. One type of situation in which this is the case are those where threat has positive effects (Rokeach, 1973; Stone & Focella, 2011), and affirmation could short-circuit that process. In situations where self-protective responses have proved adaptive, affirmation may have negative consequences (e.g., Jessop, Ayers, Burn, & Ryda, 2018). Affirmation is not a panacea. For instance, when people persist on a task because they are motivated to protect their self-integrity, an affirmation could lead to disengagement. After repeated failure on a task where there is little opportunity for improvement, affirmation has been shown to lead people to disengage (Vohs, Park, & Schmeichel, 2013). If a person is persisting on a task because of psychological threat (e.g., “I don't want to look dumb”), affirmation might lift this self-evaluative concern and lead the person to give up.

Another situation where affirmations may backfire is in the absence of psychological threat. For example, in educational contexts, for the most part affirmation intervention studies have had null or negligible mean effects on the academic performance of non-identity-threatened students. In a few studies, however, there appears to be some evidence of negative trends for these groups, at least on the focal outcome (e.g., Brady et al., 2016; Kizilcec, Saltarelli, Reich, & Cohen, 2017). Researchers do not yet know how robust these effects occur or, to the extent that they occur, why (Binning & Browman, 2020). One possibility, however, is that when an individual is not under consistent identity

threat, a self-affirmation may introduce alternative processes. For example, perhaps self-affirmation leads people to feel more like an individual than a member of their group; this may lead non-identity-threatened students to benefit less from “stereotype lift,” the psychological boost they get from being on the upside of negative stereotypes (Walton & Cohen, 2003). Additionally, insofar as some degree of threat or stress helps performance, perhaps affirmation might lower it to suboptimal levels for some groups (Zajonc, 1965). In research on persuasion, affirmation in nonthreatening contexts has increased self-confidence, causing resistance rather than openness to change (Briñol, Petty, Gallardo, & DeMarree, 2007).

A second question for future research is the spontaneity of the affirmation processes (see Harris et al., 2019). An affirmation intervention—or any wise intervention—is but a spark for a psychological process. That process can occur even without an intervention to trigger it. Some people may engage the self-affirmation process spontaneously (Harris et al., 2019). Indeed, it may be possible to train people to activate the self-affirmation process on their own. Brady and colleagues (2016) examined the self-affirmation process as it occurred spontaneously, by asking people to write down their thoughts after a stress induction. They found that people do indeed differ in the extent to which they spontaneously self-affirm. A strong predictor of this tendency was high self-esteem.

Another study taught female engineering students how to self-affirm spontaneously through a short slide show (Walton et al., 2015). Female students who worked in predominantly male fields of engineering earned higher grades as a result of this training. Harris and colleagues (2019) have also examined individual differences in spontaneous self-affirmation through the use of a self-report measure. Spontaneous self-affirmers exhibit open-mindedness to threatening health information akin to those who complete experimental affirmations (see also Cornil & Chandon, 2013; Ferrer et al., 2015). This research highlights an important new frontier in self-affirmation research: How the process of self-affirmation unfolds spontaneously and how differences in people’s ability to spontaneously marshal the self-affirmation process may explain individual differences in resilience, self-esteem, and perhaps clinical outcomes.

A third direction for affirmation research involves further exploring the interactions between the self-affirmation process and the social environment. For example, sometimes a psychological process may have effects on the larger social environment. In one study (Powers et al., 2016), classrooms with a higher proportion of minorities who had been self-affirmed performed better on the whole. The benefits of the self-affirmation intervention did not end with minority students but spilled over to affect the entire classroom. How the environment changed was unclear, but one possibility is that the classroom became more orderly and positive (Binning et al., 2019), enabling teachers to reach a greater number of students, especially low-performing students who might have otherwise been overlooked.

FINAL WORDS

Self-affirmation theory has had a long evolution. It began as a basic theory of how people maintain the integrity of self. It has grown into a theory with applications to a wide range of applied arenas, including education, health, and conflict. On the one hand, the effects of affirmation interventions can be powerful and long lasting. On the other hand, these

effects are conditional. They do not occur for all people and in all contexts. “Powerful but conditional” is an apt way to describe them and many other wise interventions. A large dose of humility is thus needed whenever scientists or practitioners apply them. To adapt an intervention to a new context, it is important to understand whether and how psychological threat plays out, for whom, and when. It is important to adapt the intervention so that it is engaging and actually affirming. With these caveats acknowledged, we can also be excited about the range of domains where self-affirmation can be applied—many of which are still yet to be imagined.

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APPENDIX 3.1. Annotated Self-Affirmation Materials

Name _____ Date _____ Teacher _____



WHAT ARE YOUR PERSONAL VALUES?

In this assignment you will be answering several questions about your ideas, your beliefs, and your life. **It is important to remember while you are answering these questions that there are no right or wrong answers.**

Please read carefully over this list of personal values and think about each of the values. Then circle the two or three values that are MOST important to you. We understand that all of these values may be important to you. Even if you feel that many of the values are important, please pick **only TWO or THREE** of them to circle.

The most important values to me are: (Circle two or three)

- Athletic Ability
- Being Good at Art
- Creativity
- Independence
- Living in the Moment
- Membership in a Social Group
(such as your community, racial group, or school club)
- Music
- Politics
- Relationships with Friends or Family
- Religious Values
- Sense of Humor



← Name signifies self and importance; teacher signifies that the authority is taking students' values seriously.

← This prompt conveys that it is not evaluative, and encourages a broad perspective.

← For younger or less literate students, prompt was simplified because many did not know what the term value means: "Remember that there are no right or wrong answers to any of these questions. Please read this list carefully. Then circle the TWO or THREE things that are MOST important to you."

← Picking two or three things gives students the opportunity to focus on more than one value if they want, so that they don't feel as though they are leaving one out that is important to them.

← Although not typically considered a "value," calling music a "value" imbues it with a higher meaning.

← This list was originally developed through research with U.S. college students about what matters most to them and then adapted to the middle school context; studies done in different cultures should identify core values/topics that resonate.

← The list of values typically excludes the domain most relevant to the threat, school, or academics, at least for the first intervention.

← Clip art chosen to appeal to seventh graders, not used for college student affirmations.

(continued)

Used in Cohen, Garcia, Apfel, and Master (2006); Cohen, Garcia, Purdie-Vaughns, Apfel, and Sherman et al. (2013).

Directions:

1. Look at the values you picked as most important to you.
2. Think about times when these values were or would be very important to you.
3. In a few sentences, describe why these values are important to you. Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

← Students are encouraged to think about concrete instances when these values served as resources.

← Instructions emphasize nonevaluative nature.

← Ample space provided for expressive writing, but not so much space that students feel intimidated.

(continued)

Again, look at the values you picked as most important. List the top two reasons why these values are important to you:

1. _____
2. _____

Make a check mark to show how much you agree with each of the following statements:

1. These values have influenced my life.

Strongly Disagree	_____	Disagree	_____	Somewhat Disagree	_____	Somewhat Agree	_____	Agree	_____	Strongly Agree	_____
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2. In general, I try to live up to these values.

Strongly Disagree	_____	Disagree	_____	Somewhat Disagree	_____	Somewhat Agree	_____	Agree	_____	Strongly Agree	_____
-------------------	-------	----------	-------	-------------------	-------	----------------	-------	-------	-------	----------------	-------

3. These values are an important part of who I am.

Strongly Disagree	_____	Disagree	_____	Somewhat Disagree	_____	Somewhat Agree	_____	Agree	_____	Strongly Agree	_____
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4. I care about these values.

Strongly Disagree	_____	Disagree	_____	Somewhat Disagree	_____	Somewhat Agree	_____	Agree	_____	Strongly Agree	_____
-------------------	-------	----------	-------	-------------------	-------	----------------	-------	-------	-------	----------------	-------

← Based on theories of ease of retrieval, participants asked for a limited number of reasons why value was important (Schwarz et al., 1991).
 ← Research suggests that focusing on “why” rather than “how” a value is important is more self-affirming (Schmeichel & Vohs, 2009).
 This prompt provides another opportunity to focus students on the rationales for their values.

← These statements were constructed to be easy for students to agree with and to reinforce the writing that they did earlier.

(continued)

Name _____ Date _____ Teacher _____



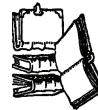
WHAT ARE YOUR PERSONAL VALUES?

In this assignment you will be answering several questions about your ideas, your beliefs, and your life. **It is important to remember while you are answering these questions that there are no right or wrong answers.**

Please read carefully over this list of personal values and think about each of the values. Then circle the two or three values that are LEAST important to you. Even if you feel that several of the values are not very important, please pick **only TWO or THREE** of them to circle.

The least important values to me are: (circle two or three)

- Athletic Ability
- Being Good at Art
- Creativity
- Independence
- Living in the Moment
- Membership in a Social Group
(such as your community, racial group, or school club)
- Music
- Politics
- Relationships with Friends or Family
- Religious Values
- Sense of Humor



← Control condition designed to appear identical to affirmation condition so that students looking at one another's desks could not detect differences easily.

(continued)

Directions:

1. Look at the values you picked as **least** important to you.
2. Think about times when these values would be important to **someone else** (like another student at your school or a person you've heard about).
3. In a few sentences, describe why these values would be important to **someone else** (like another person at your school or a person you've heard about). Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

← Several different control conditions have been used. The purpose of this control condition is to have participants engage in values-related writing that is not self-relevant.

(continued)

Again, look at your least important values. List the top two reasons why **someone else** (like another student at your school or a person you've heard about) would pick these as their most important value:

- 1.
- 2.

Make a check mark to show how much you agree with each of the following statements:

1. These values have influenced some people.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
_____	_____	_____	_____	_____	_____

2. In general, some people try to live up to these values.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
_____	_____	_____	_____	_____	_____

3. These values are important to some people.

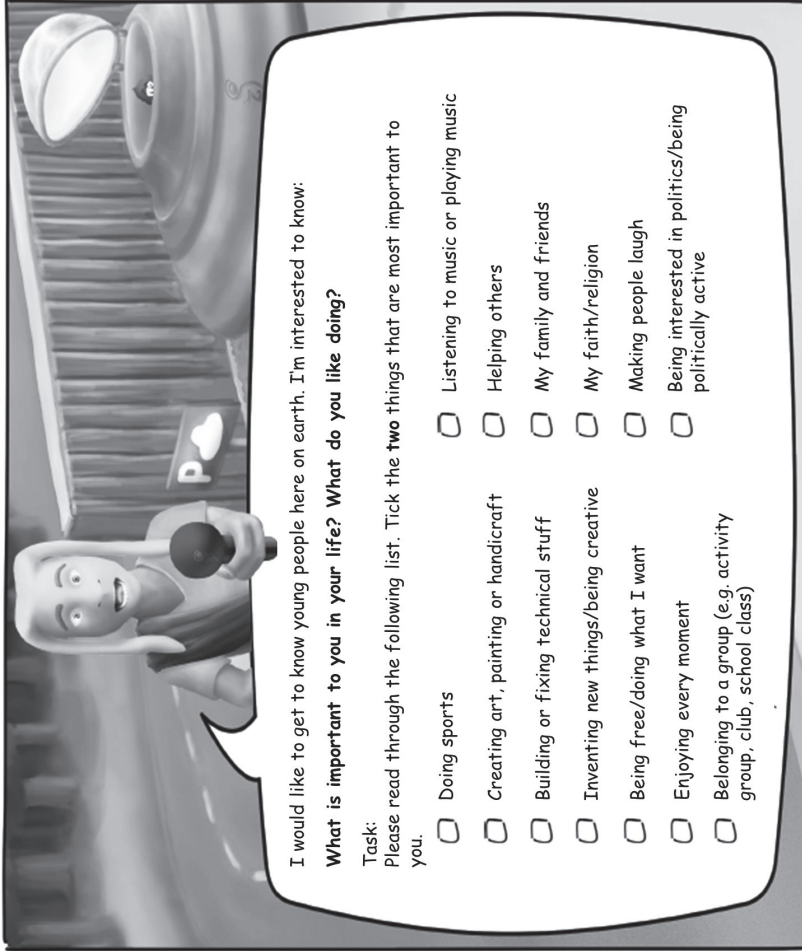
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
_____	_____	_____	_____	_____	_____

4. Some people care about these values.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
_____	_____	_____	_____	_____	_____

← The control condition is designed to take a similar amount of time and be equally engaging, but to not make salient personally important values.

APPENDIX 3.2. Annotated Extracts from the Comic Strip in the Intervention Study Conducted in Germany



- ← The character's name is Nari. Nari is introduced as an alien visiting Earth, whose task it is to interview the kids for Nari's (extraterrestrial) school newspaper. An alien character was chosen in order to serve as an identity figure for children from all ethnic or social backgrounds. Nari is not human and therefore does not resemble any existing ethnic/racial group, nationality, or religion. In order for boys and girls to identify equally, Nari also lacks any fixed gender.
- ← The value affirmation task was strongly simplified in order to match a target group with high variation in literacy skills. Pretests showed that a longer and more complex task led to students being easily bored or unwilling to write a substantial essay.
- ← The notion of "values" was not adopted here, since it was regarded as a little too abstract for the age group (12–13 years). Furthermore, writing essays about personal values (as opposed to concrete experiences) is a less common task in German schools. We aimed to paraphrase values as concrete actions or things of importance.
- ← The items were adopted to the German context. In comparison to the U.S. original, we added "building or fixing technical stuff" and "helping others" to the list.

Used in Müller and Lokhande (2017). Translated from German. Source: SVR Research Unit/Christian Müller.

(continued)



Task:
Write the two things that you picked into the box in the center.

Use the blank spaces to write down at least 7 words that explain:

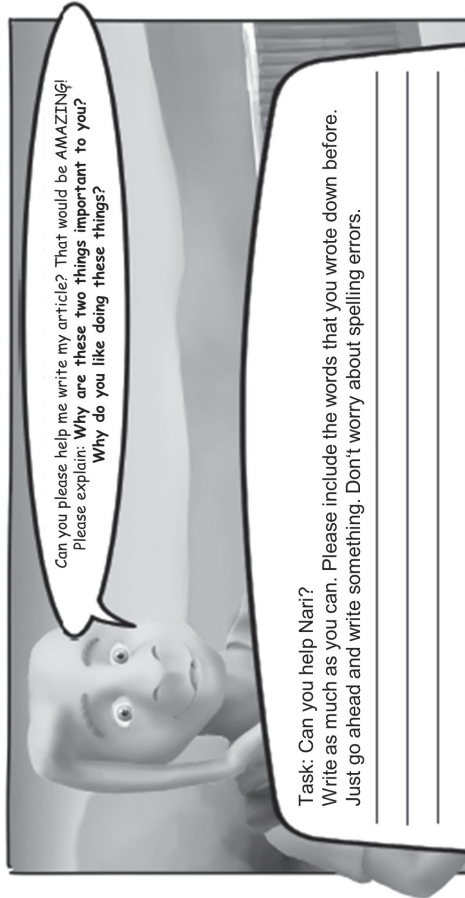
Why is this important to you?
Why do you like doing this?

1.) _____

2.) _____

← The writing task was broken down into several steps to facilitate the writing process, enhance engagement with the task, and support a deeper processing of the chosen items.

← The students are first asked to repeat their chosen items and to generate seven words that describe why the two things are important.



Can you please help me write my article? That would be AMAZING!
Please explain: Why are these two things important to you?
Why do you like doing these things?

Task: Can you help Nari?
Write as much as you can. Please include the words that you wrote down before.
Just go ahead and write something. Don't worry about spelling errors.

← In the essay task, the students are then asked to include as many of the previously generated words as they can.