Self-Affirmation: Understanding the Effects

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Abstract

Self-affirmation theory proposes that individuals possess a flexible self-system, such that they can respond to threats in one domain of life by affirming self-worth in other domains. In social psychology research, this has been examined in studies where people affirm important values in the context of self-threatening events or information. This paper reviews the literature demonstrating the effects of values affirmations and proposes a theoretical account to understand how self-affirmations reduce defensiveness in response to threats to individuals' health, attenuate physiological stress responses to laboratory and naturalistic stressors, and improve academic performance among individuals experiencing identity threat. The proposed model has three components: Self-affirmations boost self-resources, broaden the perspective with which people view information and events in their lives, and lead to an uncoupling of the self and the threat, reducing the threat's impact in affecting the self. This model helps explain what occurs when individuals affirm values in the context of threats, and how self-affirmations may instantiate lasting effects through changing the nature of ongoing experience.

Over the past 30 years, psychological researchers have induced people to affirm their values in the context of self-threatening events and information. When affirmed, smokers are more open to anti-smoking information (Crocker et al., 2008; Harris et al., 2007), athletes take more responsibility for their teams' defeats and less credit for their successes (Sherman & Kim, 2005), and minority students experiencing stereotype threat feel greater belonging in school and show improved academic performance over a substantial period of time (Cohen et al., 2009; Cook et al., 2012; Sherman et al., 2013). Self-affirmation theory has evolved from an alternative explanation for cognitive dissonance phenomena (Steele & Liu, 1983; Steele, 1988; see also J. Aronson et al., 1999) to a theory that informs intervention in a wide range of settings (see Cohen & Sherman, forthcoming; Harris & Epton, 2009; Garcia & Cohen, 2012 for reviews). The question of precisely what it is that causes such effects is still – in many psychologists' eyes – unresolved and the topic of continued research attention.

The purpose of the present review is to (i) summarize self-affirmation theory; (ii) review major new discoveries in affirmation research with an emphasis on how affirmations affect defensiveness, stress, and academic performance under identity threat; and (iii) present a general theoretical account of how these effects occur. I propose that affirming important values enhances the psychological resources available to an individual to confront a threat. With this enhanced perception of self-resources, a focal threat can be viewed from a broader perspective, as individuals will view events more generally from a higher level of construal. This broader perspective enables people to experience the threat such that it does not affect, to the same extent, overall self-evaluation. This theoretical account identifies the general "psychological shifts" that occur at a higher level than specific mediating mechanisms and thus apply well to the positive findings across disparate problem domains.

Self–Affirmation Theory

Self-affirmation theory begins with the premise that people are motivated to maintain the perceived worth and integrity of the self, a global perception of adequacy rather than their perceived worth in specific domains and in response to particular threats (Steele, 1988; see also Cohen & Sherman, forthcoming; McQueen & Klein, 2006; Sherman & Cohen, 2006). Stressful or threatening events and information − those that call into question perceptions of global adequacy − focus attention and an immediate need to mobilize physiological and psychological resources to combat them (Sapolsky, 2004; S. E. Taylor, 1991). Threatening events and information can prompt rationalizations or other defensive responses aimed to lessen the threat. For example, being reminded of one's hurtful actions toward others could be threatening, but the threat could be reduced if one rationalizes the victims as deserving it (E. Aronson, 1999). What is central to affirmation theory is that the self-system is flexible, and people have many responses in their "psycholog-ical immune system" that they can draw on (Gilbert et al., 1998). When people affirm their overall self–integrity, their view of the self as being capable and adaptive, they will have less need to rationalize away threatening information (Sherman & Cohen, 2006; Steele, 1988). Reminded of who they are and what is important to them, such self-affirmations can reduce stress by putting threats in the context of an overall narrative of self-integrity.

A self-affirmation is an act that demonstrates a person's adequacy (Cohen & Sherman, forthcoming), and there are many experimental operationalizations of self–affirmation (McQueen & Klein, 2006). These include positive feedback on a personally important skill (e.g., Cohen et al., 2000, Study 2), purchasing of status goods (Sivanathan & Pettit, 2010), and updating one's Facebook page (Toma & Hancock, 2013). This review focuses on values affirmations, as the focal outcomes reviewed have all been assessed most reliably as a function of values affirmations; moreover, other manipulations may operate through different processes (e.g., positive feedback may introduce mood effects, which have generally not been observed to result from values affirmations). In addition, this review speaks to how values affirmations affect people under *threat*, as the process for those not experiencing threat is likely to be different (Briñol et al., 2007).

In a standard affirmation induction, people write about central values such as relation–ships with friends or family or complete questionnaires that evoke their central values such as religion or social values. What is key about these manipulations is that they are self-generated and enable people to express what is important to them and why in terms of their own personal values, the standards they use to evaluate personal integrity (Rokeach, 1973). When timed to threatening circumstances, such values affirmations can serve as turning points for an individual's narrative, and catalyze changes in the person and in the person's interaction with the environment, resulting in more adaptive responses to threat (Cohen & Sherman, forthcoming).

Self–Affirmation Effects

In the sections that follow, I provide a brief review of recent self-affirmation research on defensive responses, physiological stress responses, and academic performance under identity threat.

Defensive responses

As self-affirmation theory originated in the context of dissonance theory, early affirmation studies showed how people are less likely to rationalize their decisions if given the opportu-nity to affirm an important value (Steele & Liu, 1983; see key papers by Blanton et al., 1997;

Stone & Cooper, 2001). That led to the hypothesis that self-affirming thoughts should "reduce defense mechanisms such as denial and rationalization (p. 290; Steele, 1988)". This hypothesis had relevance to both threats to individual identity, with much work centered on health threats, as well as threats to the collective self, threats that relate to a valued social or group identity (Sherman & Cohen, 2006).

As health information has the potential to threaten an individual's self-image both by linking the self with disease and by suggesting that an individual has acted maladaptively or wrongly, many studies have examined whether bolstering the self by having people engage in value affirming activities can reduce defensive, self-serving health assessments. The logic of these studies is that people are defensive in response to health threatening information because of its self-threatening nature. People reduce the potential threat of the information, in part, by engaging in motivated inferences about the health information that leads to the desired conclusion that they are not at risk (Kunda, 1990). However, if self-threat can be attenuated then defensiveness should be reduced and openness facilitated (e.g., Reed & Aspinwall, 1998; Sherman et al., 2000). For example, self-affirmed people in one study were more open to risk feedback for an untreatable disease (Howell & Shepperd, 2012). Affirmation also led at risk people to be more open to taking a diabetes screening test (van Koningsbruggen & Das, 2009).

Beyond the many demonstrations of the beneficial effects of affirmation in health information settings (see Cohen & Sherman, forthcoming; Harris, 2011; Harris & Epton, 2009, 2010; McQueen & Klein, 2006; Sherman & Hartson, 2011, for reviews; see also Zhao et al., 2012), recent research has made several key discoveries. First, affirmations seem to help people calibrate to an appropriate level of threat, based on their individual risk factors such that people with high risk can learn from information but people with low risk are not unduly alarmed (Griffin & Harris, 2011). Second, affirmations lead to greater message scrutiny (Klein et al., 2011; see also Correll et al., 2004), as there is greater openness when affirmed, but only to strong and not to weak health messages. Third, affirmations lead people to focus on and attend to the high threat content of the message that they would otherwise shun (Klein & Harris, 2009; van Koningsbruggen et al., 2009). Finally, affirmation has been incorporated into behavioral interventions with patients with chronic health conditions such as hypertensive African American patients, increasing their adherence to prescribed medicine use (Ogedegbe et al., 2012), and in another intervention, improving doctor–patient communication (Havranek et al., 2012). Thus, affirmations can serve as catalysts that unleash the impact of important health information that may otherwise be rejected (Cohen & Sherman, forthcoming).

Physiological stress responses

Self-threat can activate an individual's stress system (Keough & Markus, 1999). By broadening the sources of self-worth, values affirmations can reduce the evaluative stress people may feel when important aspects of the self are threatened. Studies examining both acute stressful situations (Creswell et al., 2005) and chronic naturalistic stressors support this hypothesis. In one study, college students identified their most stressful midterm examination and provided urine samples to assess catecholamine levels, an indicator of sympathetic nervous system activation. Compared to baseline, students in the control condition showed an increase in epinephrine levels, whereas there was no change among those who completed two value affirming activities in the weeks of studying and preparation for the exam (Sherman et al., 2009). Students who were most concerned about negative evaluation in college showed the

most pronounced increases in epinephrine levels (relative to baseline) and were the individuals most buffered by the affirmation. This pattern of results has occurred in many studies (e.g., Harris & Napper, 2005; Jaremka et al., 2011; Sherman et al., 2000, Study 1) wherein those who experience the greatest threat in a domain are the ones who experience the greatest benefit from the affirmation.

Academic underperformance under identity threat

The stress of identity threat when one's social group (e.g., gender, racial, or ethnic group) is devalued in the academic environment is a consistent source of underperformance (Steele, 1997). For individuals from certain groups, such as African Americans or Latino Americans in the United States education system, or women in quantitative fields, identity threat can dampen performance and thus serve as a barrier to academic success (Steele, 2010). However, values affirmations can make any one stressor, such as concerns about prejudice against one's social group, less psychologically disruptive by broadening the perceived sources of self-integrity (Garcia & Cohen, 2012). This, in turn, can help focus students on the academic tasks at hand – studying, learning, and taking tests – rather than on the self-evaluative and social-evaluative implications of success or failure at these tasks.

Social psychological interventions that have featured value affirmation activities have yielded long-term benefits on both academic performance and learning (Cohen et al., 2009; Cook et al., 2012; Miyake et al., 2010). African American middle school students who completed in class value affirmation activities had improved grades, effects that maintained over a two-year period (Cohen et al., 2009). Latino American middle school students who completed in class values affirmations had significantly improved grade point average over the school year, as the affirmation deflecting the downward trajectory in performance that was observed among the non-affirmed Latino American students (Sherman et al., 2013; see also Miyake et al., 2010). Such values affirmation interventions led to lasting affects by serving as catalysts for change, initiating positive feedback loops between the self and the social system that carried the intervention effects forward (Cohen & Sherman, forthcoming).

Understanding the Effects of Self-Affirmations

Across a wide variety of threats and stressful, identity-threatening situations, values affirmations attenuated defensiveness, reduced physiological stress responses, and facilitated academic performance among students experiencing identity threats. The effects of the social psychological manipulations fostered, in some cases, lasting changes. What drives these long-term effects when they occur? The effects are not magical (cf., Wilson, 2011; Yeager & Walton, 2011) but rather work through shifts in the way people construe and engage with their social environment. With self-integrity concerns assuaged, other forces whose influence was suppressed by self-threat – educational, social, and persuasive – were able to exert their fuller impact (Cohen & Sherman, forthcoming). I suggest that three psychological consequences of affirmation open people up to such change.

Value affirming activities encourage people to reflect on and express important, core aspects of the self. The first proposition, then, is that **values affirmations boost self-resources, that is, the psychological resources that people have to cope with threats**. An important part of the coping process is a determination by individuals as to whether they have the resources to cope with a focal threat or stressor (Lazarus & Folkman, 1984). Yet, as has been documented by many (e.g., Pratto & John, 1991; S. E. Taylor, 1991), negative or stressful events (e.g., an important and difficult exam) tend to dominate an

individual's focus and attention, interfering with the ability to draw on one's full range of adaptive resources. Values affirmations, by contrast, introduce a psychological resource in the form of a valued self-domain that may have helped the individual to cope with similar events in the past and thus could conceivably be drawn upon to deal with an ongoing threat. For example, one seventh grade student in a values affirmation study wrote: "These things are important to me because I really like playing sports with my friends a lot. Also I like being with my family and friends because I don't want to lose them some day. Finally, I like living in the moment because I want to enjoy my life as much as I can". In this case, the student is affirming a narrative of himself as a person who enjoys life, athletics, family and friends, a narrative he will presumably be able to sustain regardless of what may happen with a given test or in the face of a stressful day at school.

This self-narrative as a person replete with psychological resources, strengths, and values may help people self-regulate at times when their resources would otherwise be depleted (Muraven & Baumeister, 2000). Enhanced psychological resources are inferred based on (i) the fact that affirmations cause people to write about or reflect upon their values, relationships, and experiences, and thus, these resources are likely to be salient; and (ii) the finding that affirmation manipulations can counteract the effects of psychological resource depletion in a manner consistent with the strength model of self-control (Baumeister et al., 2007). Although there is no direct measurement of psychological resources and thus the inferences about self-resources are indirect, recent research does suggest that affirmations can boost self-resources.[1]

In one series of studies, laboratory induced ego-depletion was counteracted by values affirmations (Schmeichel & Vohs, 2009). In one representative experiment, participants watched a video while being instructed to *not* attend to words written on the screen, a standard ego-depleting task (see Vohs & Faber, 2007). Participants completed a values affirmation, a control activity, or a positive mood induction (to examine whether positive mood produces analogous effects as the affirmation) before being given a tedious, depleting task to perform. The prediction was that the prior depleting task would impair persistence on this new task, unless participants were affirmed, and thus equipped with additional resources. The study supported the hypothesis, as affirmation counteracted depletion and increased persistence, whereas control or positive mood inductions did not (Schmeichel & Vohs, 2009; see also Burson et al., 2012).

The proposition that affirmation boosts self-resources has wide-ranging implications for outcomes such as health behaviors where the short term desires to eat, drink, or smoke can overwhelm the longer term health goals. One study (Logel & Cohen, 2012) examined college-age women, the majority of whom were obese or overweight and reported dissatisfaction with their weight and thus may have been in a chronic state of depleted resources in weight-relevant situations (Polivy & Herman, 2002; Ward & Mann, 2000). The women completed a values affirmation and were weighed on a scale, a potentially self-threatening event. Approximately 2.5 months later, they returned to the lab, weighed themselves again, and completed a test of their working memory. Participants in the affirmation condition had significantly smaller waistlines and lower body mass index at follow-up. Those in the affirmation condition also had greater working memory and for those in the affirmation condition, their increased working memory ability was associated with greater weight loss, suggesting that the affirmation increased their ability to deploy their self-regulatory resources to meet their weight related goals (Logel & Cohen, 2012). Collectively, demonstrations that affirmations can facilitate self-regulation across a wide variety of domains suggest that they boost self-resources.

The second proposition of the theoretical account to explain the effects of values affirmations is that **affirmation broadens the perspective with which people view information and events in their lives**. Broader perspective here refers to a more expansive view of the self, less

focused on and consumed by the threat (Cohen & Sherman, forthcoming). Affirmations may facilitate a broader perspective by reminding people of other aspects of the self – psychological resources – that are important to them. They may also remind people of external resources, people and relationships whom they care about beyond the threat (Crocker et al., 2008). Affirmation does not merely add additional resources in some sort of internal equation but enables people to view a threat in a quite different manner, with greater perspective and in the context of sources of self-integrity that are not contingent upon the threatened domain.

Consistent with this, the threat of failure does not loom as large for those who complete self-affirmations. Affirmation leads people to ruminate less over failures that occur in the laboratory (Koole et al., 1999) and led students to report dwelling less on what would happen if they failed during a highly stressful examination (Sherman et al., 2009). Affirmations remind people of the whole self, rather than the narrow self that might be under attack, by expanding the bases of self-worth salient at times of threat (see also Critcher & Dunning, 2013).

Affirmation-induced broader perspective could manifest itself as an overall ability to see events at a higher level of construal. Research that has examined affirmation and object construal (Wakslak & Trope, 2009) found, across several studies, that participants who were affirmed were more likely to view objects and events at a higher level of construal. For example, they were more likely to identify locking a door in terms of the goal of the act – securing the house – than the means through which it is achieved – turning a key in the lock (Schmeichel & Vohs, 2009; Vallacher & Wegner, 1989; Wakslak & Trope, 2009). However, these effects of affirmation occurred absent any clear psychological threat (Briñol et al., 2007) and thus provide only suggestive evidence for how affirmation affects people under threat.

When people experience threat, such as occurs for minorities who are stereotyped in educational settings (Steele, 1997), they tend to become more vigilant (Cohen & Garcia, 2008; Murphy et al., 2007) about aspects of a situation that could indicate that they are at risk of being judged as a member of a stereotyped group (Steele, 2010). We hypothesized that being under a potential identity threat could lead minority students to have a lower level of construal – to focus more on detailed and concrete aspects of the situation. By contrast, self-affirmation may allow students to pull back and view events from a more relaxed and broader level of construal. We tested this in a year-long study in a mixed ethnicity middle school composed predominantly of Latino American and White students (Sherman et al., 2013).

At multiple points during the year, students completed scales (Vallacher & Wegner, 1989) to assess their construal levels. We observed an interaction effect, such that Latino American students saw events at a higher level of construal when they were affirmed than when they were not, whereas the affirmation had no effect on the White students, the unthreatened group. Supporting the notion that identity threat could lead to a focus on concrete aspects of the situation, in the control condition, Latino American students had a marginal tendency to see events at a lower level of construal than White students. Taken together, these findings suggest that affirmations help people broaden the perspective with which they view events in their lives.

The third and final proposition is that **affirmation leads to an uncoupling of the self and threat, reducing the threat's impact on the self** (Sherman & Hartson, 2011). In the absence of affirmation, people's self-evaluation can become engulfed by a focal threat – but with the increased breadth of perspective offered by values affirmation, focal threats can be evaluated on their own terms, with fewer self-evaluative implications.

In the realm of defensiveness, this can be operationalized as correlations between self- and threat-related variables. For example, in the political arena, individuals' patriotism predicted their responses to an article linking US foreign policy with 9/11, such that strongly patriotic people were resistant to this information, whereas non-patriotic people were more open to it. Affirmation attenuated this correlation, such that people evaluated the information

irrespective of their self-identified patriotism (Cohen et al., 2007), reducing political polarization. In the emotionally charged domain of sports, athletes were more self-serving and group-serving in their attributions after victory than defeat; affirmation not only reduced these biased judgments but attenuated the correlation between them such that people evaluated their team independent of the self (Sherman & Kim, 2005). In both cases, people were less group-serving and their evaluations of the threat were more weakly associated – or decoupled – from self-evaluation.

In the realm of chronic identity threats and academic performance, affirmation changed the subjective construal of minority students, such that daily stressful events became less associated with perceptions of racial threat (Sherman et al., 2013; see also Walton & Cohen, 2007). Intervention studies including multiple assessments of each student across the school year assessed decoupling on a within–person level (Cook et al., 2012; Sherman et al., 2013). The studies examined whether students who perceive greater threat on a given day also experience corresponding decrements in belonging or motivation on a daily level and how affirmation affected this relationship. In the study with Latino American and White students described above (Sherman et al., 2013), unaffirmed Latino American students had a strong association between daily stressors and subjective identity threat. On days when they experience greater adversity and stress (e.g., "Today I feel stressed out at school"), they also experienced greater levels of identity threat (e.g., "Today in school, I am worried that other people might judge me based on my race"). Unlike White students, stressful days for Latino students seemed to be subjectively experienced through the lens of their race. Moreover, on days when they experienced greater identity threat, they also experienced a decrement in academic motivation, feeling as though they belonged less at school, and with decreased academic efficacy. The affirmation eliminated these within–person correlations. Affirmed Latino American students experienced the same daily ups and downs as other students experience, but without linking it to evaluations of their group. Further, for affirmed Latino American students, identity threat was not associated with (i.e., was decoupled from) their academic motivation (Sherman et al., 2013).

In a longitudinal examination of the effect of values affirmations on belonging and academic performance of African American and White middle school students, Cook et al. (2012) observed a similar within–person decoupling effect of values affirmation. In this case, affirmation led perceptions of felt belonging to be decoupled from academic performance. For unaffirmed African American students, performance impinged on the extent to which they felt they belonged in the school, such that when they did well, they felt more belonging than when they did poorly. (White students' feelings of belonging were generally unrelated to their performance). By contrast, affirmation decoupled this link, so that the African American students' feelings of belonging were independent of their academic performance. Although the details of the decoupling vary across the two studies (Cook et al., 2012; Sherman et al., 2013), the general point is clear: Affirmation enabled minority students to decouple threatening circumstances such that they were not as detrimental to their psychological state.

Questions, Challenges, and Future Directions

The theoretical account presented here draws on recent studies derived from self-affirmation theory. It presents a suite of processes – enhanced resources, broader perspective, and decoupling of self and threat – theorized to be related to the important outcomes observed in affirmation studies. It is, however, only part of the story. There are other levels of analysis

to be explored for a fuller understanding of the effects of values affirmation. Two recent examples highlight the methodologically diverse ways researchers are examining affirmation theory. Studies examining the neural signals of the brain's error detection system found that self-affirmed participants showed increased error-related negativity (Legault et al., 2012), suggesting that the affirmed brain is more oriented toward learning opportunities. Examining the content of the essays that middle school students wrote about their values revealed that writing about social belonging is key. Affirmed African American students who wrote more about belonging themes showed the greatest academic improvement (Shnabel et al., 2013).

Such findings can potentially be integrated into the present model. For example, social belonging is a particularly affirming self-resource, and the discovery of its importance shines a light on the nature of affirmational resources and their efficacy (Shnabel et al., 2013). It may be that greater detection of one's errors at the neural level (Legault et al., 2012) observed among affirmed participants occurs when errors are decoupled from self-evaluation – and that this could be associated with greater learning (V. J. Taylor & Walton, 2011). Such integration awaits future research.

Questions remain as to the relationship of the processes outlined here to each other and to the outcomes identified in the earlier part of this review. Although it was proposed that enhanced resources could lead to a broadened perspective on threat, it is also plausible that when people take a broader perspective they are able to draw on a wider range of resources. This mutually reinforcing nature of the components in the model presents challenges for sequencing them into discrete stages. But are discrete stages plausible considering the ongoing and reciprocal influence likely responsible for long-term effects on behavior over time (Cohen & Sherman, forthcoming)? The issue is further complicated because outcomes such as improved performance and reduced stress may feed back and affect the resources people draw on and the perspective that they have on threat. When multiple aspects of the model were tested within one sample, such as the assessment of construal and decoupling (Sherman et al., 2013), they were uncorrelated with each other, and moreover, neither construal nor decoupling predicted academic performance (Cook et al., 2012; Sherman et al., 2013). Although it is logically possible that the processes are independent, it is also possible that future studies will better identify how to examine whether the psychological processes affect key outcomes. Timing of assessments may be crucial. In the study described earlier, the decoupling measures, the construal measures and grades were taken concurrently, or in some cases the psychological measures were taken after some grades were assessed (Sherman et al., 2013). When the link between daily stressors and belonging was assessed immediately after the intervention and prior to grades, it served as a mediator of a belonging intervention on performance (Walton & Cohen, 2007). Consideration of timing is of paramount importance in understanding affirmation effects (Cohen & Sherman, forthcoming; Critcher et al., 2010; Garcia & Cohen, 2012), not only in the time that affirmations are delivered – at key moments of threat – but also in terms of when potential mediators are assessed.

There are other challenges (and research opportunities) for examining mediation of long-term affirmation effects. Different problem domains may have different mediators; performance under identity threat may be related to reduced stress, whereas openness to health information may be related to reduced defensiveness, two levers by which affirmations exert effects (Cohen & Sherman, forthcoming). Additionally, there may be different mediators for different people, and thus, while overall researchers can observe effects of values affirmation on processes such as construal and decoupling, a given mediator may not be linked to the outcome of interest consistently. For example, affirmations may increase self-resources primarily for those with low self-esteem or self-worth, whereas for those with high self-esteem or self-worth, affirmation may broaden perspective. Thus, mediational heterogeneity could obscure relationships between theorized mediators and outcomes. The self gets involved in different ways in different contexts and for different people.

Despite these challenges, progress has been made in understanding the effects of self-affirmation. Many laboratories and researchers have examined affirmation effects from different theoretical perspectives. Affirmation research has incorporated insight and methods from construal level theory (Wakslak & Trope, 2009), ego depletion and self-control (Schmeichel & Vohs, 2009), the ecosystem and self-transcendence (Crocker et al., 2008), the elaboration likelihood model (Briñol et al., 2007), and terror management theory (Schmeichel & Martens, 2005), all contributing to a richer understanding of the psychology of self-affirmation. In addition, a great deal of insight has come from moving outside the laboratory to the field and testing how affirmation interventions affect real-world outcomes over weeks, months, and even years. Doing so revealed that affirmations do not directly cause changes in people's attitudes toward health behaviors, stress levels, and academic performance but serve as catalysts for other forces in the person's environment to exert impact, forces that may have been restrained by threat (Cohen & Sherman, forthcoming; Lewin, 1945).

Affirmation researchers have made considerable advances over the past 30 years in understanding threats to and affirmations of self-integrity. On one hand, the research has examined specific and short-term psychological mediators and mechanisms underlying the effects of affirmation. On the other hand, the research has examined real world problems and how the small but potent act of writing about values can change diverse aspects of psychological experience over the long-term. Like a writer typing a story or a juggler keeping multiple balls in the air, understanding the effects of self-affirmation will likely require both hands to work together.

Acknowledgement

Short Biography

David Sherman is an associate professor in the Department of Psychological & Brain Sciences at the University of California, Santa Barbara. He is a social and health psychologist whose research centers on how people cope with threatening events and information. He earned his BA in psychology at Cornell University, his PhD in psychology at Stanford University, and completed a post-doctoral fellowship in health psychology at University of California, Los Angeles. He is currently an associate editor at the *Journal of Personality and Social Psychology*.

Endnotes

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[1] Another issue is whether affirmation increases actual self-resources or the perception of self-resources (see for example Clarkson et al., 2010; Job et al., 2010).

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