🗨 **COMMENTARY**

Advancing values affirmation as a scalable strategy for mitigating identity threats and narrowing national achievement gaps

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Since the publication of the landmark "Coleman Report," *Equality of Educational Opportunity*, in 1966 (1) through more than 40 y of historical trend data from the National Assessment of Educational Progress (NAEP) (2), the academic performance gaps separating black and Latino students from their white counterparts have remained substantial and persistent. Although some policies and programs aimed at narrowing these gaps among children and adolescents have shown short-term benefits, these initial successes typically fade away over time (3). Why are these inequalities in our schools so persistent and seemingly intractable, and how did Goyer et al. (4) find success when so many others have failed?

A compelling explanation concerns the idea of stereotype threat (5). Indeed, a meta-analysis of the stereotype threat literature concluded that the phenomenon degrades black and Latino students' performances on standardized tests of ability by approximately one-fifth of 1 SD (6). A recent study applying current stereotype-threat theory to an analysis of the original data from the study by Coleman (1) suggested that, dating back to the 1960s, African-American students confronted with more threatening educational contexts were burdened by a less favorable self-image, partially explaining how internalization of racial stereotypes can depress their test scores (7). With current nationally representative data from the NAEP test, the so-called "nation's report card," indicating that achievement gaps separating black and Latino students from their higher scoring white peers are between about 0.8 and 1 SD (2), stereotype threat may account for as much as 20–25% of these national gaps.

In PNAS, Goyer et al. (4) demonstrate that over time, initial reductions of ~40% of the academic performance gaps that were realized at the end of the eighth grade, 2 y following the advent of a stereotype threat-buffering, values-affirmation intervention, later helped minority students achieve academic opportunities and outcomes that placed them on a trajectory to a college education. How did the delivery of several affirming 15-min writing activities in the seventh grade fundamentally change the academic outcomes and life chances of these students? The explanation for the long-term benefits conferred by values affirmation aligns well with a recent set of ideas that distinguish interventions and environments that tend to promote persisting impacts (3).

First, values affirmation induces a "trifecta skill": one that is malleable and fundamental, and would not likely have developed in the absence of the intervention. Affirmation did not directly increase students' ability, as a powerful new educational program might, but it influenced malleable beliefs about minority students' identities, buffering them from the full brunt of stereotype threat, a foundation for academic success unlikely to be acquired without the intervention. Also, similar to the "foot-in-the-door" principle, affirmation lifted a psychological barrier at a key time of academic transition, helping students avoid the imminent risks of identity threats, and the pattern of academic underperformance and disengagement that often follows, while opening up new opportunities, such as entry into advanced coursework. Finally, the "sustaining environments" perspective highlights the need for high-quality educational environments subsequent to the completion of the intervention as crucial for sustaining earlier gains. Although the relative quality of the high schools in the sample of Goyer et al. (4) is unknown, they clearly had the rich resources of a well-known college-preparatory intervention for marginalized and first-generation students and college-readiness tracks to help launch students on a pathway to postsecondary success.

Given the relative ease of administering these virtually costless classroom writing exercises and the remarkable benefits they confer, an important question follows: Should we not be implementing values-affirmation interventions in every school across the country? Indeed, a district-wide field trial across
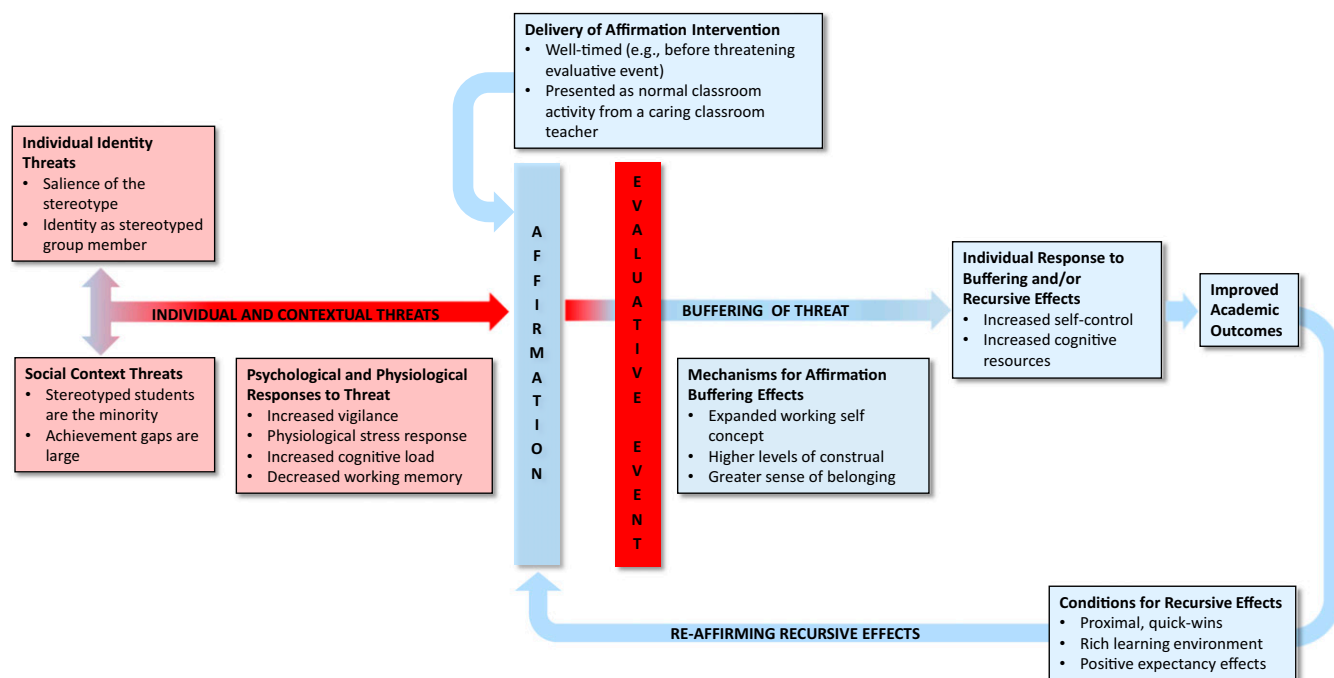
Fig. 1. Model of values-affirmation impacts on secondary and postsecondary academic outcomes.

11 middle schools revealed evidence of short-term impacts on black and Latino students' seventh-grade test scores and course grades (8). Longitudinal results, after the completion of the seventh-grade exercises, showed growing effects on eighth-grade grade point averages, which were equivalent to one-fifth of 1 SD, and subsequent ninth-grade impacts of nearly one-third of 1 SD, equivalent to a reduction of ∼25% of the baseline gap (9). These impacts, achieved across an entire school district, suggest that values affirmation can be used as a scalable intervention to narrow achievement gaps. Several other relatively small-scale replications of the original study by Cohen et al. (10) have also shown promise (11–13). However, some well-powered and relatively large-scale replications (14–16) have not reproduced these promising results. What might explain these discrepant findings?

Psychological theory posits that values affirmation is beneficial in specific circumstances; it does not work for everyone under all conditions (17). Prior research demonstrates that only certain subgroups benefit, namely, stereotyped black and Latino students. In addition, the characteristics of the social context in which the interventions are fielded may moderate their benefits. The mediating role of implementation and delivery of the writing exercises also can be a source of treatment effect heterogeneity. Finally, there are some social-psychological constructs that may be important mechanisms, or mediators, through which the affirmation intervention produces its short- and long-term academic impacts on students. Understanding these specific sources of moderation and mediation could advance both the theoretical and practical understanding of affirmation benefits and more clearly suggest the boundary conditions under which we might predict success.

With regard to social context, the effectiveness of values affirmation depends on the identity threats "in the air" in a particular setting (18). As stereotype threats increase, the buffering effects of affirmation will tend to have stronger impacts on academic outcomes than in those contexts that are less threatening. For example, minority students attending schools composed of primarily nonminority students and in which there are large and apparent racial achievement gaps benefit most from values affirmation (19), because these contexts are the ones most likely to cue one's stereotyped status as a marginalized, low-performing minority student. In addition, the hypothesized recursive benefits of affirmation are theorized to depend on relatively rich learning environments for threatened students to take advantage of as they are buffered from perceived threats (17, 20). These contextual variations provide insight into the failed Philadelphia replication (14), because this study was conducted in high-poverty schools in which black students were the overwhelming majority, the contextual conditions under which one might predict that intervention effects would be limited.

Attention to the implementation of affirmation exercises is also hypothesized to be necessary for students to benefit. For example, the timing of the intervention is important, because it may be effective only when introduced before a threatening evaluative event, such as a high-stakes test (21). The manner in which the intervention is framed also may affect how students perceive the writing activities. By making individuals aware that exercises are beneficial (22) or introducing the exercises as an externally imposed task (23), the delivery may depress affirmation's benefits. Conversely, researchers contend that the exercises are most beneficial when presented as normal classroom activities delivered by teachers who may care to know more about their students' most important values (10, 17). This issue may have compromised the success of a recent New York replication, because the participating schools did not permit teachers to administer the exercises and, by necessity, the researchers were required to carry out the implementation (15).

With regard to mechanisms, or mediators, that may explain affirmation effects, the evidence is limited. Some research suggests that the direct effects of affirmation on black and Latino students' academic outcomes are explained by an increased sense of social belonging in school (24). A second mechanism suggests

an "affirmation as perspective" model, in which affirmations "expand the contents of the working concept—thus narrowing the scope of any threat" (ref. 25, p. 4). Relatedly, affirmation may help by broadening the perspective through which students assess salient threats (17). Threatened students tend to construe negative events in more narrow, concrete terms, but evidence suggests that affirmed students report higher levels of construal and report less adversity in school related to their social identity than do threatened control students (11). To date, however, no large-sample field trials have provided generalizable evidence regarding how affirmation impacts academic outcomes.

In summary, values affirmation is a relatively simple, virtually costless method easily taken to scale to close persistent achievement gaps, when implemented with fidelity and when delivered in the right context. As summarized in Fig. 1, some limited empirical evidence points to key moderators and mediators of affirmation effects that may broadly define the conditions under which the intervention may have its greatest benefits. However, few have been explored systematically in large, well-powered trials. With the exception of one failed Wisconsin replication (16), which remains somewhat of a puzzle, other recent nonreplications seem to have compelling explanations. Nonetheless, the tentative model of affirmation effects suggested in Fig. 1 is worthy of further empirical investigation. Having the ability to, in a sense, inoculate black and Latino middle-school students from identity threats that may have caused them to stray from the pathway to a college education is a highly important outcome. Future empirical work is needed to understand how values affirmation can be most effectively targeted to the students and contexts most in need, and to deploy the intervention reliably using methods that confer the greatest benefits.

1 Coleman JS, et al. (1966) *Equality of Educational Opportunity* (Government Printing Office, Washington, DC).
2 National Center for Education Statistics (2013) *The Nation's Report Card: Trends in Academic Progress 2012 (NCES 2013-456)* (National Center for Education Statistics, Washington, DC).
3 Bailey DH, Duncan G, Odgers C, Yu W (2017) Persistence and fadeout in the impacts of child and adolescent interventions. *J Res Educ Eff* 10:7–39.
4 Goyer JP, et al. (2017) Self-affirmation facilitates minority middle schoolers' progress along college trajectories. *Proc Natl Acad Sci USA* 114:7594–7599.
5 Steele CM, Aronson J (1995) Stereotype threat and the intellectual test performance of African Americans. *J Pers Soc Psychol* 69:797–811.
6 Walton GM, Spencer SJ (2009) Latent ability: Grades and test scores systematically underestimate the intellectual ability of negatively stereotyped students. *Psychol Sci* 20:1132–1139.
7 Borman GD, Pyne J (2016) What if Coleman had known about stereotype threat? How social-psychological theory can help mitigate educational inequality. *RSF: The Russell Sage Foundation Journal of the Social Sciences* 2:164–185.
8 Borman GD, Grigg J, Hanselman P (2016) An effort to close achievement gaps at scale through self-affirmation. *Educ Eval Policy Anal* 38:21–42.
9 Borman GD, Grigg J, Rozek C, Hanselman P (2015) The sustained effects of a brief self-affirmation intervention on students' academic outcomes across middle and high school. *Spring Conference of the Society for Research on Educational Effectiveness* (Society for Research on Educational Effectiveness, Washington, DC).
10 Cohen GL, Garcia J, Apfel N, Master A (2006) Reducing the racial achievement gap: A social-psychological intervention. *Science* 313:1307–1310.
11 Sherman DK, et al. (2013) Deflecting the trajectory and changing the narrative: How self-affirmation affects academic performance and motivation under identity threat. *J Pers Soc Psychol* 104:591–618.
12 Cook JE, Purdie-Vaughns V, Garcia J, Cohen GL (2012) Chronic threat and contingent belonging: Protective benefits of values affirmation on identity development. *J Pers Soc Psychol* 102:479–496.
13 Bowen NK, Wegmann KM, Webber KC (2013) Enhancing a brief writing intervention to combat stereotype threat among middle-school students. *J Educ Psychol* 105:427–435.
14 Dee TS (2015) Social identity and achievement gaps: Evidence from an affirmation intervention. *J Res Educ Eff* 8:149–168.
15 Protzko J, Aronson J (2016) Context moderates affirmation effects on the ethnic achievement gap. *Soc Psychol Personal Sci* 7:500–507.
16 Hanselman P, Rozek CS, Grigg J, Borman GD (2017) New evidence on self-affirmation effects and theorized sources of heterogeneity from large-scale replications. *J Educ Psychol* 109:405–424.
17 Cohen GL, Sherman DK (2014) The psychology of change: Self-affirmation and social psychological intervention. *Annu Rev Psychol* 65:333–371.
18 Steele CM (1997) A threat in the air. How stereotypes shape intellectual identity and performance. *Am Psychol* 52:613–629.
19 Hanselman P, Bruch SK, Gamoran A, Borman GD (2014) Threat in context: School moderation of the impact of social identity threat on racial/ethnic achievement gaps. *Sociol Educ* 87:106–124.
20 Purdie-Vaughns V, et al. (September 23, 2009) Improving minority academic performance: How a values-affirmation intervention works. *Teach Coll Rec.* Available at www.tcrecord.org/content.asp?contentid=15774. Accessed June 20, 2017.
21 Critcher CR, Dunning D, Armor DA (2010) When self-affirmations reduce defensiveness: Timing is key. *Pers Soc Psychol Bull* 36:947–959.
22 Sherman DK, et al. (2009) Affirmed yet unaware: Exploring the role of awareness in the process of self-affirmation. *J Pers Soc Psychol* 97:745–764.
23 Silverman A, Logel C, Cohen GL (2013) Self-affirmation as a deliberate coping strategy: The moderating role of choice. *J Exp Soc Psychol* 49:93–98.
24 Shnabel N, Purdie-Vaughns V, Cook JE, Garcia J, Cohen GL (2013) Demystifying values-affirmation interventions: Writing about social belonging is a key to buffering against identity threat. *Pers Soc Psychol Bull* 39:663–676.
25 Critcher CR, Dunning D (2015) Self-affirmations provide a broader perspective on self-threat. *Pers Soc Psychol Bull* 41:3–18.