Creating Turning Points: Targeted, Tailored, and Timely Psychological Intervention

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Montreal
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Formative Experiences
When influence lasts

Targeted, tailored, and timed (3ts)

Right person, right support, right place and time

Cohen, Garcia, & Goyer (2017)
-Michael Lewis, *Coach Fitz’s Management Theory*
We listened to the man because he had something to tell us, and us alone. Not how to play baseball, though he did that better than anyone. Not how to win, though winning was wonderful. Not even how to sacrifice. He was teaching us something far more important: how to cope with the two greatest enemies of a well-lived life, fear and failure.

-Michael Lewis, Coach Fitz’s Management Theory
Martha Zinn was my 4th grade teacher. She was big and she had a commanding voice. She scared people. She was the first to help me feel good about myself.
Martha Zinn was my 4th grade teacher. She was big and she had a commanding voice. She scared people. She was the first to help me feel good about myself.

She knew I was from a poor family and said she knew I could do more than become a farmer. She gave me extra work. She was the first to notice I needed glasses. She said that she knew I understood how to do the work but when it was on the board, I missed every question. After having glasses, I excelled.
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I understood she really did believe in me. Mrs. Zinn saw that I had abilities I did not know I had. She was a counter-weight to the harsh and degrading experience I was used to. Martha was the spark that made me believe in me.
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A person that has their self-worth pounded on day after day needs proof that there is something of value still in them. The person that can do that for another is worth their weight in gold.
Out on the streets of the city I saw white parents pushing double-wide strollers down gentrifying boulevards. I saw mothers and fathers lost in conversation with each other, while their sons commanded entire sidewalks with their tricycles. The galaxy belonged to them, and as terror was communicated to our children, I saw mastery communicated to theirs.

— Paraphrased from T. Coates, *Between the World and Me*
The chair asked me nothing about my interests. Instead he said, “Why does a pretty girl like you want to major in biochemistry?” Questions raced through my mind at that moment. Would other people in this field see me and treat me as a woman first? Do I want to have a career like this? What smart person would go into a field knowing she would be judged on her looks not on her achievements. Maybe he did me a favor.
Some essence drained out of my body. I couldn’t have gotten out of my chair even if the building were on fire. My face burned as if I’d been repeatedly slapped. My heart felt as if it had been crushed into a walnut. . . . I was angry, sure, but I also felt worthless, as if I had just been discarded into the trash by someone I cared about.

-Kareem Abdul-Jabbar, Coach Wooden and Me
When influence lasts

Targeted, tailored, and timed (3ts)

Right person, right support, right place and time

Cohen, Garcia, & Goyer (2017)
Framing
Reframing Critical Feedback in Middle School to Foster Trust

Julio Garcia, Stanford  David Yeager, UT Austin  Valerie Purdie Vaughns, Columbia
Decline in trust in middle school

Source: Yeager et al. (2015), *under review*
Decline in trust in middle school

- African American Students
- White Students

Graph showing the decline in trust for African American and White students from 6th to 8th grade, with p-values and effect sizes indicated for each semester.
Decline in trust in middle school

Point of vulnerability
Decline in trust in middle school

Point of vulnerability, window of opportunity

School Trust

- Fall 6th
- Spring 6th
- Fall 7th
- Spring 7th
- Fall 8th
- Spring 8th

Semester

African American Students

White Students

\[ d = 0.08 \]
\[ p = 0.557 \]

\[ d = 0.25 \]
\[ p = 0.063 \]

\[ d = 0.38 \]
\[ p = 0.004 \]

\[ d = 0.54 \]
\[ p = 0 \]

\[ d = 0.5 \]
\[ p = 0 \]

\[ d = 0.35 \]
\[ p = 0.009 \]
Dear Mr. Warner Prouty,

My hero is Dr. Martin Luther King JR. My hero has courage to do what he has to and when he has to do it. He is a testimony to others, and when he was tested he over came it. He went through trials after trials and he did not hold a grudge.

First Dr. Martian Luther King JR has courage. He did not have to speak for “his people” but he did it because he cares. King lead some civil rights movements in his time. Dr. King also gave a speech in front of 200,000 of his supporters. where?

Second Dr. Martian Luther King is a testimony to me and others. He is a testimony to me because he did everything he could to fight for the freedom for him, his family, and others. Now when I look at the simplest things and complain I think of what Dr. King would do.

Finally Dr. King is my hero because when he was tested he did not complain instead he over came the worst. Dr. King had many good reasons to quit what he was doing and curse everyone, but he didn’t. In the worst of times Dr. King kept his chin up. When King’s home was bombed all he said was “We must learn to meet hate with love” Dr. King was a great man and he helped change our world as we know it. say more about the change

In conclusion Dr. Martian Luther King JR is my hero because he had courage. He is a testimony to me and to others. Also he over came his troubles when he was tested.

“I have a dream that little black boys and little black girls will be able to join hands with little white boys and little white girls and walk together as sisters and brothers.”
Positive frame group [in teacher’s handwriting]:

I’m giving you these comments because I have high standards and I know that you can meet them.
Control group: [in teacher’s handwriting]: I’m giving you these comments so you have feedback on your essay.

Finally Dr. King is my hero because when he was tested he did not complain instead he overcame the worst. Dr. King had many good reasons to quit what he was doing and curse everyone, but he didn’t. In the worst of times Dr. King kept his chin up. When King’s home was bombed all he said was “We must learn to meet hate with love” Dr. King was a great man and he helped change our world as we know it.

In conclusion Dr. Martin Luther King JR is my hero because he had courage. He is a testimony to me and to others. Also he overcame his troubles when he was tested.

“I have a dream that little black boys and little black girls will be able to join hands with little white boys and little white girls and walk together as sisters and brothers.”
Percentage of students revising their essay:

- White students, both conditions: 75%
- African American students, control: 17%
- African American students, intervention: 71%*

*p<.05

Source: Yeager et al. (2014), J. Exper. Psych: General
Wise Criticism

Seven years later, percentage of students attending college:

- White students, both conditions: 47%
- African American students, control: 45%
- African American students, intervention: 64%*

* treatment effect, p < .05

Source: Yeager et al. (in press), Child Development
**Intervention Interrupts the Effect of Mistrust:**

Quality of final essay as a function of school trust

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**Source:** Yeager et al. (2014), *J. Exper. Psych: General*
Seven years later, percentage of students attending college:

- White students, both conditions: 47%
- African American students, control: 45%
- African American students, intervention: 64%*

* treatment effect, p < .05

Source: Yeager et al. (in press), *Child Development*
Reframing college transition to foster belonging

Greg Walton, Stanford  Shannon Brady, Stanford
Hardships Reported by Students in College Diary Study
Hardships Reported by Students in College Diary Study

• My teacher returned my paper covered in red ink.
• Everyone is going out without me, and they didn’t consider me when making their plans
• My teacher cancelled her meeting with me.
• A peer didn’t email me back.
• I haven't gone on any dates.
• I wasn’t recognized at awards dinner.
• Dumped by girlfriend.
• My boyfriend didn't call.
• I’m working on a paper that is due tomorrow and I have writers block.
• Found a dead mouse under a pile of my clothes.
Belonging intervention at college transition:
Sample survey quotes presented to participants in intervention condition:

After winter break, I realized that all my good friends were at home. I didn’t have friends like that at school. But I got involved in extra-curriculars, and met people who had common interests. I also got to know people in class who later became close friends. But this took time. And before I found my niche here, there were times when I felt quite lonely.

-Respondent # 77, senior, White female

I worried that I was different from other students . . . . Now it seems ironic. Everybody feels they are different freshman year from everybody else, when really in at least some ways we are all pretty similar.

-Respondent, #23, African American female
504 ** Juniors and Seniors completed survey materials. Participants were randomly sampled from the population of all [school name] Juniors and Seniors. Percentages are accurate within +/- 4 percentage points …

Results were consistent across class year and across racial and gender groups.

**During their freshman year, many if not most students worry about whether other people at [college name] accept them.**

- 73% - 86% of upperclassmen reported that, during their freshman year, they:
- “sometimes” or “frequently” worried whether other students would accept them in the context of classes and coursework.
- …
- “sometimes” or “frequently” felt intimidated by professors.

**But after their freshman year, most students come to feel confident that other people at [college name] accept them.**

- 82% - 97% of upperclassmen reported that, since their freshman year:
- they are “confident” or “certain” that most other students accept them
- “sometimes” or “frequently” felt their comfort in the academic environment at ** has improved “some” or “a lot.”**
College grade point average by year

Walton & Cohen (2011, Science)
College grade point average by year

Walton & Cohen (2011, Science)
College grade point average by year

Walton & Cohen (2011, Science)
College grade point average by year

Intervention

Walton & Cohen (2011, Science)
Belonging intervention

- Treated minority participants spontaneously frame the college experience in line with intervention
Belonging intervention

- Treated minority participants spontaneously frame the college experience in line with intervention
- Buffered against daily adversity
Belonging intervention

• Treated minority participants spontaneously frame the college experience in line with intervention

• Buffered against daily adversity

• Higher likelihood of lasting mentoring relationship
Belonging intervention

- Treated minority participants spontaneously frame the college experience in line with intervention
- Buffered against daily adversity
- Higher likelihood of lasting mentoring relationship
- Better subjective health and well-being
- Higher job satisfaction after college
- More leadership roles after college
Urban High School Graduates: Full-Time College Enrollment

(Yeager, Walton, Duckworth, Cohen, Dweck, et al., 2016, *PNAS*)

<table>
<thead>
<tr>
<th>Cohort 1: N= 333</th>
</tr>
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<tbody>
<tr>
<td><strong>Control</strong></td>
</tr>
<tr>
<td>Cohort 2: N=1,060</td>
</tr>
<tr>
<td><strong>Control</strong></td>
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</tbody>
</table>

*Significant controlling for high school GPA and SAT*
Affirming
The Implicit Power Motive in Intergroup Dialogues About the History of Slavery

Ruth K. Ditlmann  
WZB Berlin Social Science Center, Berlin, Germany

Valerie Purdie-Vaughns  
Columbia University

John F. Dovidio  
Yale University

Michael J. Naft  
Columbia University

This research demonstrates that individual differences in the implicit power motive (i.e., the concern with impact, influence, and control) moderate how African Americans communicate with White Americans in challenging intergroup dialogues. In a study with African American participants we find that the higher their implicit power motive, the more they use an affiliation strategy to communicate with a White American partner in a conversation context that evokes the history of slavery (Study 1). In a study with White American participants we find that, in the same conversation context, they are more engaged (i.e., open, attentive, and motivated) if they receive an affiliation message rather than a no-affiliation message from an African American partner (Study 2). In interracial dyads we find that African American participants’ implicit power motives moderate how much they intend to signal warmth to a White American discussion partner, how much they display immediacy behaviors and use affiliation imagery in the discussion, and with what level of engagement White American participants respond (Study 3). High but not low implicit power African Americans thus employ a communication strategy—expressing affiliation and warmth—that can be effective for engaging White Americans with uncomfortable, race-identity-relevant topics.
Affirming the self in institutional settings

Parker Goyer, Stanford
Julio Garcia, Stanford
Valerie Purdie Vaughts, Columbia
Jonathan Cook, Penn State
David Sherman, UCSB
Kevin Binning, U. Pittsburgh
Examples of affirmations

Teenagers

To me, independence is important because your parents won’t always be there to baby you. You have to live your life.

My friends and family are most important to me when I have a difficult situation. My friends give me companionship and courage. My family gives me love and understanding.

Adults

My religious values are the foundation of my life. I have always had a strong faith which has taught me to love others and led me to be a better person. My faith has taught me to be grateful, to trust that everything will be fine, and to enjoy every day as if it were the last.

For me, sense of humor is the most important thing. Every time someone makes me laugh it gives me comfort and happiness.
• Affirmed students spontaneously self-affirm in response to later stressors.

Shannon Brady, Stanford
*J. Ed Psych* (2016)
Percentage of 7th graders receiving a D or F in the course where intervention given:

- White students, both conditions: 6%
- Black students, control: 20%
- Black students, affirmed: 9%*

Cohen et al., 2006, 2009, Science
Branching River of Academic Opportunity

- Regular course

6th Grade

- Advanced courses
- Regular courses
- Remedial clinics

7th Grade

- Advanced courses
- College preparation (AVID)
- Regular courses
- Remedial clinics

8th Grade

- Regular courses
- Alternative high school
- Remedial courses

High school

Advanced placement/ Honors

Intervened here
One year after intervention, percentage of low-performing students assigned to remedial track:

- White students, both conditions 3%
- African American students, control 18%
- African American students, affirmed 5%*

*Comparison with control, p < 0.01

Cohen et al., 2009, *Science*
Values Affirmation in Middle School

Seven years after intervention, percentage of students in college:

- White students, control and affirmation: 80%
- African American students, control: 76%
- African American students, affirmed: 87%*

*Comparison with control, p = 0.01

Values Affirmation in Middle School

Seven years after intervention, percentage of students in college:

- White students, control and affirmation 80%
- African American students, control 76%

Values Affirmation in Middle School

Seven years after intervention, percentage of students in college:

- White students, control and affirmation 80%
- African American students, control 76%
- African American students, affirmed 87%*

*Comparison with control, p = 0.01

Values Affirmation in Middle School

Seven years after intervention, percentage of students in selective college:

- White students, control and affirmed 22%
- African American students, control 3%
- African American students, affirmed 15%*

*Comparison with control, p = 0.02

Affirming the poor

Michael Schwalbe, Stanford
Affirming the poor

Michael Schwalbe, Stanford

Raven's Matrices

Financial Scenario
Affirming the poor

Michael Schwalbe, Stanford

Raven's Matrices

% Accuracy

Rich | Easy | Hard
---|---|---
Control | Affirmation

Financial Scenario
Affirming the poor

Michael Schwalbe, Stanford

Raven's Matrices

Financial Scenario

* \( d = .45 \)

* \( p < .05 \)
Affirming the poor: 7 month follow-up
Affirming the poor: 7 month follow-up

Color Stroop Incongruent Trials
(Error bars = standard errors)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Easy</th>
<th>Hard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affirmation</td>
<td>1600</td>
<td>1600</td>
</tr>
<tr>
<td>Control</td>
<td>1800</td>
<td>1800</td>
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</tbody>
</table>

* *p < .05, **p < .01
Reducing the Gender Achievement Gap in College Science: A Classroom Study of Values Affirmation

Akira Miyake,† Lauren E. Kost-Smith, Noah D. Finkelstein, Steven J. Pollock, Geoffrey L. Cohen, Tiffany A. Ito

In many science, technology, engineering, and mathematics disciplines, women are outperformed by men in test scores, jeopardizing their success in science-oriented courses and careers. The current study tested the effectiveness of a psychological intervention, called values affirmation, in reducing the gender achievement gap in a college-level introductory physics class. In this randomized double-blind study, 399 students either wrote about their most important values or not, twice at the beginning of the 15-week course. Values affirmation reduced the male-female performance and learning difference substantially and elevated women’s modal grades from the C to B range. Benefits were strongest for women who tended to endorse the stereotype that men do better than women in physics. A brief psychological intervention may be a promising way to address the gender gap in science performance and learning.

The substantial underrepresentation of women in science, technology, engineering, and mathematics (STEM) disciplines has long concerned policy-makers and the educational community (1, 2). In 2006, women earned only 28% of Ph.D.s in physical sciences, 25% in mathematics and computer science, and 20% in engineering in the United States (3). Although women made up 47% of the North American workforce in 2009, the percentage of women in lucrative technical professions, such as “computer and mathematical occupations” and “architecture and engineering occupations,” reached only 25% and 14%, respectively (4). Similar underrepresentation of women in STEM-related professions is also evident in other parts of the world (5).

The gender gap in STEM disciplines goes beyond the limited representation of women. In college physics—the field studied in the present investigation—women earn lower exam grades and lower scores on standardized tests of conceptual mastery (6, 7). Students’ prior background and preparation in mathematics and physics, iden-
Closing the Social Class Achievement Gap for First-Generation Students in Undergraduate Biology

Judith M. Harackiewicz, Elizabeth A. Canning, Yoi Tibbetts, Cynthia J. Giffen, Seth S. Blair, Douglas I. Rouse, and Janet S. Hyde
University of Wisconsin–Madison

Many students start college intending to pursue a career in the biosciences, but too many abandon this goal because they struggle in introductory biology. Interventions have been developed to close achievement gaps for underrepresented minority students and women, but no prior research has attempted to close the gap for 1st-generation students, a population that accounts for nearly a 5th of college students. We report a values affirmation intervention conducted with 798 U.S. students (154 first-generation) in an introductory biology course for majors. For 1st-generation students, values affirmation significantly improved final course grades and retention in the 2nd course in the biology sequence, as well as overall grade point average for the semester. This brief intervention narrowed the achievement gap between 1st-generation and continuing-generation students for course grades by 50% and increased retention in a critical gateway course by 20%. Our results suggest that educators can expand the pipeline for 1st-generation students to continue studying in the biosciences with psychological interventions.
Feeling left out, but affirmed: Protecting against the negative effects of low belonging in college


* California State University, East Bay, United States
* University of Texas, Austin, United States
* Stanford University, United States
* Columbia University, United States
* Pennsylvania State University, United States

HIGHLIGHTS

- Non-affirmed students with a low sense of belonging declined in GPA over three semesters.
- Affirmed students with a low sense of belonging increased in GPA over three semesters.
- Findings extend the protective effect of self-affirmation to subsets of the majority culture.

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ABSTRACT

Evaluative domains such as work and school present daily threats to self-integrity that can undermine performance. Self-affirmation theory asserts that, when threatened, people can perform small but meaningful acts to reaffirm their sense of competency. For instance, brief self-affirmation writing interventions have been shown in numerous studies to boost the academic achievement of those contending with negative stereotypes in school because of their race, gender, or generational status. The current paper tested the protective effects of self-affirmation for students who have the subjective sense that they do not belong in college. Such a feeling is not as visible as race or gender but, as a pervasive part of the students’ inner world, might still be as debilitating to the students’ academic performance. Among a predominantly White sample of college undergraduates, students who felt a low sense of belonging declined in grade point average (GPA) over three semesters. In contrast, students who reported low belonging, but affirmed their core values in a lab-administered self-affirmation writing activity, gained in GPA over time, with the effect of affirmation sufficiently strong to yield a main effect among the sample as a whole. The affirmation intervention mitigated—and even reversed—the decline in GPA among students with a low sense of belonging in college, providing support for self-affirmation theory’s contention that affirmations of personal integrity can lessen psychological threat regardless of its source.
Stereotypes as Stumbling-Blocks: How Coping With Stereotype Threat Affects Life Outcomes for People With Physical Disabilities

Arielle M. Silverman\(^1\) and Geoffrey L. Cohen\(^2\)

Abstract

Stereotype threat, the concern about being judged in light of negative stereotypes, causes underperformance in evaluative situations. However, less is known about how coping with stereotypes can aggravate underperformance over time. We propose a model in which ongoing stereotype threat experiences threaten a person’s sense of self-integrity, which in turn prompts defensive avoidance of stereotype-relevant situations, impeding growth, achievement, and well-being. We test this model in an important but understudied population: the physically disabled. In Study 1, blind adults reporting higher levels of stereotype threat reported lower self-integrity and well-being and were more likely to be unemployed and to report avoiding stereotype-threatening situations. In Study 2’s field experiment, blind students in a compensatory skill-training program made more progress if they had completed a values-affirmation, an exercise that bolsters self-integrity. The findings suggest that stereotype threat poses a chronic threat to self-integrity and undermines life outcomes for people with disabilities.
An Effort to Close Achievement Gaps at Scale Through Self-Affirmation

Geoffrey D. Borman
University of Wisconsin-Madison
Jeffrey Grigg
Johns Hopkins University
Paul Hanselman
University of California, Irvine

In this districtwide scale-up, we randomly assigned seventh-grade students within 11 schools to receive a series of writing exercises designed to promote values affirmation. Impacts on cumulative seventh-grade grade point average (GPA) for the district's racial/ethnic minority students who may be subject to stereotype threat are consistent with but smaller than those from prior smaller scale studies. Also, we find some evidence of impact on minority students’ standardized mathematics test scores. These effects address a substantial portion of the achievement gap unexplained by demographics and prior achievement—the portion of the gap potentially attributable to stereotype threat. Our results suggest that persistent achievement gaps, which may be explained by subtle social and psychological phenomena, can be mitigated by brief, yet theoretically precise, social-psychological interventions.

Keywords: stereotype threat, self-affirmation, scale-up, randomized trial, achievement gap

Several recent high-profile but small-scale experimental studies have shown that relatively simple, brief, but well-conceptualized social-psychological interventions, which focus on individual and socially constructed beliefs that affect school outcomes, can have important impacts on secondary and postsecondary students’ short- and longer term educational outcomes (Cohen, Garcia, Apfel, & Master, 2006; Cohen, Purdie-Vaughns, Apfel, & Brzustoski, 2009; Sherman et al., 2013; Yeager & Walton, 2011). Typically, these interventions target student beliefs that may depress academic performance, including effects that may stem from being a stigmatized minority. The power of such brief mind-set interventions is difficult to understand and, to some extent, lacking in face validity, as most educational treatments involve far more costly and comprehensive reforms of curriculum, instruction, or school and classroom organization. The puzzle is complicated because the prior small-scale experiments were not specifically designed to assess whether the interventions are capable of making a difference at scale and how varying school settings may moderate the effects of any treatment-induced psychological changes.

Indeed, of the numerous theories that have been advanced to explain the failure of students from minority backgrounds to achieve at the same levels as students from majority backgrounds, the concept of stereotype threat has received increasing attention in recent years. The notion that stereotypes can affect individuals' thinking, feelings, and behaviors when those individuals are aware that they are being evaluated against the standards of a stigmatized group has been well documented (Steele, 1997, 2007). A growing body of research shows that such awareness can have a profound impact on individuals' performance in a variety of tasks, including academic achievement.
Promoting Bone Marrow Donorship
With Affirmation

Taylor Phillips, NYU  Hazel Markus, Stanford  Jennier Eberhardt, Stanford  Lee Ross, Stanford
Control Condition

Registration Form

First Name
Last Name
Birth Date MM/DD/YYYY
E-mail
Phone
Company
Country
Mailing Address
Comment
Current Date MM/DD/YYYY
Signature

Survey What personal values led you to register today?

Treatment Condition

Registration Form

First Name
Last Name
Birth Date MM/DD/YYYY
E-mail
Phone
Company
Country
Mailing Address
Comment
Current Date MM/DD/YYYY
Signature

Survey What personal values led you to register today?
Donate Bone Marrow Over Next Year

Phillips, Cohen, et al. (in progress)
Donate Bone Marrow Over Next Year

Percent Increase in Conversion

Affirmation Condition

Control Condition (Baseline)

Phillips, Cohen, et al. (in progress)
Affirmation: Qualifications and Extensions

- Context matters (Hanselman et al.; Vohs; Brinol)
Affirmation: Qualifications and Extensions

- Context matters (Hanselman et al.; Vohs; Brinol)
- Timing matters (Cook et al.; Critcher et al.; Hanselman et al.)
Affirmation: Qualifications and Extensions

• Context matters (Hanselman et al.; Vohs; Brinol)

• Timing matters (Cook et al.; Critcher et al.; Hanselman et al.)

• Classroom ripple effects (Powers et al.)
Affirmation: Qualifications and Extensions

- Context matters (Hanselman et al.; Vohs; Brinol)
- Timing matters (Cook et al.; Critcher et al.; Hanselman et al.)
- Classroom ripple effects (Powers et al.)
- Benefits in other domains
  - Latino middle schoolers (Sherman et al.); First generation college students (Harackiewicz & Tibbetts), White college students with low sense of belonging (Layous), Female undergraduates in physics (Miyake et al.)
  - Health (Harris; Havranak; Ogedegbe; Sherman), online education and global achievement gaps (Kizilce), intellectual performance among poor (Schwalbe), disabled (Silverman), financial aid uptake (Fotuhi), intergroup conflict and interpersonal relationships (Binning; Cohen; Stinson; Jaremka), job performance (Brady)
Disrupting and channeling
A Disrupt-Then-Reframe Technique of Social Influence

Barbara Price Davis and Eric S. Knowles
University of Arkansas

Several theories of change imply that disrupting a person’s understanding of an event will facilitate a new representation of that event. The authors created a new influence technique involving a small disruption (stating the price of a package of note cards in pennies rather than dollars) and a direct reframing (saying, “It’s a bargain”). Four studies showed that a disrupt-then-reframe (DTR) technique was influential in getting household residents to purchase cards supporting a local charity. Studies 2 and 3 showed that the new technique required both the disruption and the new reframing in that sequence. Study 4 showed the effect when sellers learned a sales script and were blind to other scripts. These studies establish the DTR technique and demonstrate the subtlety of some social influence.

The psychology of social influence has identified a series of seemingly small variations in a request that can produce great differences in compliance. These have acquired clever nicknames such as foot-in-the-door, door-in-the-face, and lowballing (Cialdini, 1993). In this research, we establish a new influence procedure, which we call the disrupt-then-reframe (DTR) technique. The DTR technique rests on the assumption that many everyday experiences may contain errors that are not immediately obvious. By introducing conflicting inferences, the DTR technique can result in more effective persuasion.

Two theories in psychology implied that a disruption followed by a reframing might be an effective way to produce compliance. These two theories come from disparate domains of psychology and draw attention to different aspects of the DTR technique.

Ericksonian Confusion Techniques

Erickson (1964; Erickson, Rossi, & Rossi, 1976; Haley, 1976) emphasized the use of confusion techniques to create a state of paradox. This is achieved by causing clashing inferences. When two incompatible statements are presented, the individual is forced to choose one and reject the other. In the context of social influence, this technique can be used to create confusion and, consequently, a shift in the individual's perspective.
LONG-RANGE EXPERIMENTAL MODIFICATION OF VALUES, ATTITUDES, AND BEHAVIOR

MILTON ROKEACH

University of Western Ontario

SINCE the summer of 1966, a major portion of the research effort at Michigan State University has been devoted to a systematic investigation of the effects of experimentally induced feelings of self-dissatisfaction on long-range changes in values, attitudes, and behavior. The theoretical approach used differs from other approaches in experimental social psychology in three major respects:

1. Contemporary social psychologists generally

terminants of attitudes as well as of behavior. Such a shift in focus becomes scientifically possible only if clear conceptual and operational distinctions can be made between the attitude and value concepts. Relevant discussions concerning this distinction are presented elsewhere (Rokeach, 1968a, 1968b, 1968c, 1968–69, 1971) and need not be repeated here except to say that an attitude represents an organization of interrelated beliefs that are all focused on a specific object or situation, while
Rokeach (1970)

• Percentage joining NAACP 3-5 months later
Rokeach (1970)

- Percentage joining NAACP 3-5 months later
  - Control: 7%
  - Treatment: 15%
Rokeach (1970)

- Percentage joining NAACP 3-5 months later
  - Control: 7%
  - Treatment: 15%

- Percentage majoring in ethnic core program
Rokeach (1970)

• Percentage joining NAACP 3-5 months later
  • Control: 7%
  • Treatment: 15%

• Percentage majoring in ethnic core program
  • Control: 22%
  • Treatment: 42%
Broockman and Kalla (2016)
Reducing transphobia
Broockman and Kalla (2016) Reducing transphobia
Broockman and Kalla (2016)
Reducing transphobia

Fig. 1. Complier average causal effects on transgender tolerance scale. The 95% confidence intervals surround point estimates; the thicker lines represent one standard error. Both transgender and nontransgender canvassers produced large and lasting increases in tolerance.
Delivering assessments and interventions through mobile technology

Values Affirmation Example

Hi Andy,
You indicated that being a good friend is very important to you. Please write a short note about why it is important to you, or take a picture of something that makes you think about being a good friend.

Channel Factors Example

Hi Andy,
Well done! You’re halfway there!

Here is the next chunk you need to complete, click one of the sections to tackle:

- Find bank information
- Get bank statement
- Find asset information
- Fill out asset details
- Calculations
Creating the right context:
Combining psychological intervention with contextual channel:
Percentage of poor students receiving financial aid (Fotuhi et al.)

- Control 39%

Omid Fotuhi
Stanford
Creating the right context:
Combining psychological intervention with contextual channel:
Percentage of poor students receiving financial aid (Fotuhi et al.)

• Control 39%
• Affirmation 22%

Omid Fotuhi
Stanford
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Omid Fotuhi
Stanford
Creating the right context:
Combining psychological intervention with contextual channel:
Percentage of poor students receiving financial aid (Fotuhi et al.)

- Control 39%
- Affirmation 22%
- Reminders 58%
- Reminders + Affirmation 78%

Omid Fotuhi
Stanford
Action in interaction

Social System

Psychological System

Biological System

Source: Cohen & Sherman (2014), Annual Review in Psychology
Big Picture
THANK YOU!
Research Team, Collaborators, and Funders

Acknowledgments
Teachers, administrators, and students at our school sites; Eric Bettinger and Demetra Logan

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Institute for Social and Policy Studies
National Institute of Mental Health
Nellie Mae Education Foundation
School of Arts & Sciences, Yale University
Society for the Psychol. Study of Social Issues
Scaling up:
Interventions in Online Learning Contexts

Rene Kizilcek, Stanford
Interventions Close the Global Gap

A value relevance affirmation and a social-belonging intervention raise performance in less developed countries

First experiment  
N = 2,286 (16% in LDCs)

Kizilcec, Saltarelli, Reich, & Cohen, in press, Science
Creating the right context:
Combining psychological intervention with contextual channel:
Percentage of poor students receiving financial aid (Fotuhi et al.)

- Control: 39%
- Affirmation: 22%
- Reminders: 58%

Omid Fotuhi
Stanford
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- Control 39%
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- Reminders 58%
- Reminders + Affirmation 78%

Omid Fotuhi
Stanford
Key purposes of academic probation letter: Lost in communication (Brady et al.)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Admin M</th>
<th>Student M</th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect students with helpful resources</td>
<td>5.57</td>
<td>3.96</td>
<td>1.61</td>
</tr>
<tr>
<td>Warn students that they are not meeting academic expectations</td>
<td>5.57</td>
<td>5.39</td>
<td>0.18</td>
</tr>
<tr>
<td>Let students know that staff/faculty are concerned and care about them</td>
<td>5.35</td>
<td>3.29</td>
<td>2.06</td>
</tr>
<tr>
<td>Serve as a &quot;wake-up call&quot;</td>
<td>5.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivate students</td>
<td>4.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comply with federal and state regulations</td>
<td>4.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify students who can’t be successful</td>
<td>2.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punish students</td>
<td>1.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Survey: College students who had been on academic probation said...
Intervention: Revise the letter

• Frame probation as process not a label
  – Placement on academic Probation...
  – The process for academic probation...

• Communicate “you’re not the only one”
  – You should also know that you are not alone in experiencing these difficulties.

• Acknowledge many reasons
  – Whatever difficulties
  – There are many reasons students enter the academic probation process. These reasons can include personal, financial, health, family, or other issues.

• Offer hope for returning to good standing
  – By working with their advisors, many [students on probation] leave the process and continue a successful career at [School].

• Offer testimonials from previous students on probation
Percentage of students still enrolled at the university (Brady et al.)

- Standard letter: 48%
Percentage of students still enrolled at the university (Brady et al.)

• Standard letter: 48%
• Revised letter: 79%
Scaling up:
Interventions in Online Learning Contexts

Rene Kizilcek, Stanford
Cultural Differences in MCII’s Effects

An 8-minute self-regulation intervention raises course completion in individualist but not in collectivist cultures

First experiment \((N = 9,619)\)

<table>
<thead>
<tr>
<th></th>
<th>Collectivist countries</th>
<th>Balanced countries</th>
<th>Individualist countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>MCII</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

Second experiment \((N = 8,344)\)

<table>
<thead>
<tr>
<th></th>
<th>Collectivist countries</th>
<th>Balanced countries</th>
<th>Individualist countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>II</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>MC</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
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<td>■</td>
<td>■</td>
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Kizilcec & Cohen, R&R
Interventions Close the Global Gap

A value relevance affirmation and a social-belonging intervention raise performance in less developed countries

First experiment  N = 2,286 (16% in LDCs)

Kizilcec, Saltarelli, Reich, & Cohen, in press, Science
Experiment 1: Subsequent Enrollment

N = 2,286

- Control (Study Skills)
- Self-Affirmation Intervention
- Social-Belonging Intervention

Enrolled in Subsequent Course (%)
Interventions Close the Global Gap

A value relevance affirmation and a social-belonging intervention raise performance in less developed countries

N = 1,165 (7.4% in LDCs)

Kizilcec, Saltarelli, Reich, & Cohen, in press, *Science*
Big Picture
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