Supplementary Tables

Following the organizational structure depicted in Figure 2, Supplementary Tables 1-3 summarize more than 325 interventions: Interventions that capitalize on the need to understand (Supplementary Table 1), the need for self-integrity (Supplementary Table 2), and the need to belong (Supplementary Table 3). In some cases, interventions that cut across categories are referenced in multiple tables but with a primary description in one. All interventions met the following criteria.

1. Featured one or more independent variable designed to alter specific meanings;
2. Assessed real-world behaviors, attitudes, or emotions of inherent importance to the person and/or society. This excludes studies that assessed only behavioral intentions, or behavior, attitudes, or emotions in response to a stimulus presented in a laboratory; and
3. Were evaluated in randomized controlled trials to test causal effects.

Each entry describes a single study (in some cases, direct replications reported in the same paper and combined by the original authors are listed together). Studies that compare two or more interventions to a control condition are described in separate entries highlighting each intervention while acknowledging the other intervention(s) tested in the study.

Table S1. Wise interventions that capitalize on the need to understand.

Sub-Category of Object of Judgment	Specific Object of Judgment	Reference	Specificity of Object of Judgment	Content Area	Change Strategy	Summary
Category of Object Judgment: Selves (My Own and Others')						
Changing beliefs about self-identity	Who am I? (Current self-identity)	Miller et al., 1975, Study 1	Specific	Education	Direct labeling, of an aspect of self	5th graders commended by teachers and other school personnel for keeping their room clean and being litter-conscious, as compared to encouraging them to clean up and those in a control condition, littered less when unobtrusively observed as long as seven weeks later.
		Miller et al., 1975, Study 2	Specific	Education	Direct labeling, of an aspect of self	2nd graders told by teachers and the school principal they were very good at math or that they worked very hard at math performed, as compared to those encouraged to be good at math or to work hard at math, performed better on a math test two weeks later.
	Who could I become? (Prospective or potential self-identity)	Bryan et al., 2011, Experiment 2	Specific	Civic behavior	Prompting with leading questions	A convenience sample of eligible California voters completed a 10-item survey the day before the 2008 US presidential election. Referring to voting in survey items using nouns—as an opportunity to become "a voter"—rather than as verbs—as a task to be completed, "to vote"—increased voter turnout by 13.7 percentage-points.
		Bryan et al., 2011, Experiment 3	Specific	Civic behavior	Prompting with leading questions	A diverse sample of eligible New Jersey voters completed a 10-item survey the day before the 2009 New Jersey gubernatorial election. Referring to voting in survey items using nouns—as an opportunity to become "a voter"—rather than as verbs—as a task to be completed, "to vote"—increased voter turnout by 10.9 percentage-points.
		Cable et al., 2013, Study 1	Specific	Work	Prompting with information; Active reflection, on a positive aspect of self	In an hour-long session, new employees at an Indian call center (1) listened to a senior leader discuss how the company offered each new employee opportunities to express him or herself and generate individual opportunities; (2) completed an individual problem-solving task, ranking items in order of importance if stranded on a life raft at sea; (3) reflected on how their decisions might compare to others'; (4) listed three words that "best describe you as an individual,"

					described "what is unique about you that leads to your happiest times and best performance at work," described "a specific time—perhaps on the job, perhaps at home—when you were acting the way you were 'born to act'," and "how can you repeat that behavior on this job"; and (5) introduced "their best selves to their future work group" and discussed how they approached the problem-solving task. Participants also received a sweatshirt with their individual names on them and an individual badge. As compared to new employees who took part in an hour-long session that focused on the strengths of the company and to a control condition that received standard training, those in the individual condition were less likely to leave the firm and showed greater customer satisfaction over the next six months.
		Campos et al., 2017	Specific	Work	Prompting with information	Microbusiness owners in Togo (<50 employees, non-agricultural) completed a personal initiative training designed to facilitate "a mindset of self-starting behavior, innovation, identifying and exploiting new opportunities, goal-setting, planning and feedback cycles, and overcoming obstacles" over three half-day sessions per week across 4 weeks (36 hours of classroom instruction) plus a 3-hour trainer visit to the business once a month for the next four months. As compared to business owners who received a traditional business training focused on "accounting and financial management, marketing, human resource management, and formalization," businesses in the personal initiative condition showed greater growth in profits over the next two and plus years, and more diversified product lines, greater use of personal initiative, greater capital and labor inputs, greater innovation, and greater access to finance.
		Gerber et al., 2016	Specific	Civic behavior	Prompting with leading questions	A diverse sample of eligible voters completed a 10-item survey up to 4 days before 2014 primary elections, most of which were not competitive. Referring to voting in survey items using nouns—as an opportunity to become "a voter"—rather than as verbs—as a task to be completed, "to vote"—had no effect on voter turnout.
		Gerber et al.,	Specific	Civic	Prompting	A diverse sample of eligible voters completed a 10-item

		2017		behavior	with leading questions	survey up to 4 days before 2015 general elections in three states with a gubernatorial election (Kentucky, Louisiana, and Mississippi) and a large city with a contested mayoral election (Houston, TX). Referring to voting in survey items using nouns—as an opportunity to become "a voter"—rather than as verbs—as a task to be completed, "to vote"—had no effect on voter turnout, including in various subsamples of participants.
		Oyserman et al., 2006	General	Education	Active reflection, on future selves; Prompting with information	Predominantly African American inner city students in a high poverty middle school took part in an 11-session program delivered approximately twice weekly over 7 weeks to encourage children to imagine themselves as becoming more successful in school and becoming successful adults, to identify potential obstacles, to understand these as normal and not self-defining, and to identify strategies to overcome obstacles. As compared to a randomized control group this improved students' standardized test scores and grades, and reduced depression, absences, and in-school misbehavior through a 2-year follow-up. A prior study using non-random assignment to condition found improvements in school bonding and attitudes, better self-reported attendance and, for boys, better reported behavior in school (Oyserman et al., 2002).
	Who do I not want to be, become, or be confused with?	Berger & Rand, 2008	Specific	Health	Prompting with information	Posting a flier in undergraduate dorms indicating that most drinking on campus is done by graduate students reduced drinking among undergraduates who did not want to be confused with graduate students.
		Hameiri et al., 2014	Specific	Intergroup relationships	Prompting with information	Based on theory about paradoxical thinking, which suggests that exposure to views that are extreme, even absurd, but consistent with existing beliefs can cause people to pull back from those views, Israeli Jewish participants were exposed to extreme view of the Israeli-Palestinian conflict (e.g., "Israelis are peace loving and always reached out for peace") in a series of videos leading up to the 2013 Israeli election. As compared to a randomized control group, more right-wing participants in the paradoxical thinking intervention expressed more willingness to compromise for peace immediately and up to a year later, and reported having voted for more

						political parties that supported a peaceful resolution to the conflict.
		Hameiri et al., 2016	Specific	Intergroup relationships	Prompting with information	Based on theory about paradoxical thinking, a multichannel media campaign in a small Israeli city promoted an absurd, extreme view of the Israeli-Palestinian conflict (e.g., "Without it we would never be moral…For morality, we probably need the conflict"). The campaign, conducted in a period of ongoing intergroup violence, included 4.4 million exposures to online banners, nearly 1 million views of 5 20-second videos, billboard posters in 20 central locations, and hundreds of themed t-shirts, balloons, and brochures distributed in the city center over 6 weeks. As compared to residents of a matched control city and their own pre-campaign reports, more hawkish residents in the treatment city surveyed independently at the end of the campaign reported less support for conflict-supporting attitudes. As compared to the matched control city, they also expressed less support for aggressive government policies, and more support for conciliatory policies.
		Hameiri et al., 2018, Experiment 2	Specific	Intergroup relationships	Prompting with information	Replicating Hameiri et al., 2018, more right-wing Israeli Jewish participants exposed to the paradoxical thinking intervention over 4 weeks, as compared to both a randomized control condition and an "inconsistent" intervention (described below), reported at the end of this period marginally greater willingness to reevaluate their beliefs about the conflict and greater openness to meet Palestinians and view Palestinian media to learn about their views of the conflict. In the same study, a message focused on ways the Palestinians were credible partners for peace (inconsistent with predominant Israeli Jewish views) was marginally more effective in leading centrist Israeli Jewish participants to consider reevaluating their beliefs about the conflict.
		Sherman et al., 1992	Specific	Crime; Interpersonal relationships and behavior	Prompting by altering situations	Arresting rather than warning married and employed men detained for misdemeanor domestic battery reduced the incidence of subsequent domestic violence offenses; however, for unmarried/unemployed men, who may have less stake in conventional society, such arrests increased recidivism.

Changing beliefs about emotions, states, and the valence of the self-concept	Do I think and feel positively about myself?	Boehm et al., 2011	General	Well-Being	Active reflection, on a positive aspect of self	Asking Anglo American adults to express optimism ("write about their best possible life in the future") once a week for 10 minutes reported increased life satisfaction relative to a control condition (list what they had done in the past week) over this period and one month later. Asian American adults showed no such benefits. Similar benefits arose from asking people to convey gratitude (write letters of appreciation to friends or family members).
		Chancellor et al., 2015	General	Health; Well-being	Active reflection, on a positive aspect of self	Employees at a Japanese engineering firm spent 10 minutes per week for 6 weeks writing about three things that went well at work during the previous week and their feelings about what went well. As compared to control participants who outlined work tasks, participants in the treatment condition reported greater happiness and moved more at work but, especially if they put more effort into the treatment task, interacted less with others.
		Emmons & McCullough, 2003, Study 1	General	Health; Well-being	Active reflection, on a positive aspect of self	Asking college students enrolled in a health psychology class to write briefly each week for 10 weeks about things they were grateful for over the past week increased well-being, reduced physical symptoms of illness, and increased exercise hours as compared to two control conditions over this period.
		Emmons & McCullough, 2003, Study 2	General	Health; Well-being	Active reflection, on a positive aspect of self	Asking college students enrolled in a health psychology class to write briefly each day for 2 weeks about things they were grateful for increased positive affect and the likelihood of offering emotional support to others as compared to two control conditions over this period. There was no effect on physical symptoms of illness or health behaviors.
		Emmons & McCullough, 2003, Study 3	General	Health; Well-being	Active reflection, on a positive aspect of self	Asking adults with neuromuscular disease to write briefly each day for 3 weeks about things they were grateful for increased positive affect, reduced negative affect, increased life satisfaction and felt connection with others, and improved sleep hours and quality as compared to a control condition over this period. There was no effect on experiences of physical pain, exercise frequency, or physical symptoms.
		King, 2001	General	Health; Well-	Active	College students were asked to write about (1) their

		and specific	being	reflection, on a positive aspect of self; Active reflection, on negative experiences	most traumatic life event, (2) their best possible future self, (3) both topics, or (4) a control topic for 20 minutes/day for four consecutive days. Writing about best possible selves led to a greater increase in subjective well-being (greater life satisfaction and optimism) three weeks later. All three treatments significantly reduced illness (health center visits) over the next five months as compared to the prior three months.
		Layous et al., 2013	General	Well-Being	Active reflection, on a positive aspect of self; Prompting with information	College students wrote 15-minutes once a week for 4 weeks about their "best possible selves"—one week about academic experiences, one about social experiences, one about career experiences, and one about health experiences—and specific goals that would help them attain each ideal. As compared to a control condition, this increased positive affect and marginally increased feelings of social connectedness. The benefits were similar whether the task was completed in person or online. However, they were greatest when people read a testimonial from a peer who said the activity helped them.
		Lyubomirsky et al., 2004, Study 2, described in Lyubomirsky et al., 2005	General	Well-Being	Active reflection, on a positive aspect of self	Asking college students to reflect on things they are grateful for once a week for 6 weeks increased happiness over this period, as compared both to a no-treatment control group and students asked to think of things they are grateful three times a week.
		Lyubomirsky et al., 2011	General	Well-Being	Active reflection, on a positive aspect of self; Prompting with information	College students were asked to take 15-minutes per week over 8 weeks to make regular expressions of optimism—"to visualize living a life consistent with their ideal self" in terms of romance, educational attainment, family life, etc.. In a second treatment, students were asked to make regular expressions of gratitude—to write about "times in their lives when they were grateful for something that another person did for them and then writing a letter about those experiences directly to that person (but not sending it)." Among students who self-selected into a study on a "happiness intervention," who were presumably motivated to increase their happiness, completing either of these

						exercises as compared to a randomized control exercise (listing what they had done over the past week to increase "organizational skills") increased reported greater well-being at the end of the 8-week writing period and at a 6-month follow-up. Among students who self-selected into a study on "cognitive exercises" there was no difference by condition.
		Seligman et al., 2005	General	Well-Being	Active reflection, on a positive aspect of self; Prompting with information	Asking visitors to a website on "happiness exercises" (1) to "write down three things that went well each day and their causes every night for a week" or (2) to take an online survey of "character strengths," where they received individualized feedback on their top five strengths, and were then asked to "use one of these top strengths in a new and different way every day for one week," as compared to writing down early memories every day for a week, increased happiness and reduced depressive symptoms over six months.
		Sheldon & Lyubomirsky, 2006	General	Well-Being	Active reflection, on a positive aspect of self	Asking college students to (1) reflect on things they are grateful for or (2) visualize their best possible selves once increased positive affect immediately as compared to a randomized control group. There was no effect on negative affect. People who reported continuing to use the best possible selves exercise 2 and 4 weeks later showed greater sustained positive affect.
		Taylor et al., 2017	General	Well-Being; Health	Prompting by altering situations; Active reflection, on a positive aspect of self; Active reflection, values-affirmation	People seeking clinical treatment for anxiety and/or depression with clinically elevated symptoms took part in 10 hour-long sessions focused on cultivating positive emotions (e.g., noticing and amplifying positive events, counting blessings, performing acts of kindness, taking part in pleasureable and meaningful activities, using strengths, imagining best possible futures, making others happier, and reflecting on others' kindness) as well as values-affirmation. As compared to a wait-list control group, participants in the treatment group showed greater improvements in positive affect and psychological well-being and greater reductions in negative affect and anxiety and depression symptoms through a 6-month follow-up.
	Are negative past emotions, states,	Booth et al., 1997	Specific	Health	Active reflection,	Asking medical students to describe their "deepest thoughts and feelings" about "the most traumatic and

					on negative experiences	upsetting experiences of your whole life" for 20 minutes/day on four consecutive days improved measures of immune system function (reduced circulating CD4 lymphocytes).
		Christensen et al., 1996	Specific	Health	Active reflection, on negative experiences	Asking undergraduates to verbally disclose traumatic or stressful experiences increased a measure of immune system function, natural killer cell activity, among students higher in hostility relative to those lower in hostility, as compared to students not asked to disclose.
		Esterling et al., 1994	Specific	Health	Active reflection, on negative experiences	Asking undergraduates to write or talk about stressful events they had not disclosed to many people in three weekly 20-minute sessions improved measures of immune system function 1 week after the final writing session, especially in the verbal condition, relative to students who wrote about trivial events.
		Francis & Pennebaker, 1992	Specific	Health; Work	Active reflection, on negative experiences	Asking university employees to write about personally traumatic experiences for 20-minutes once a week for four weeks showed drops in selected blood measures associated with stress and disease and lower absentee rates during the month of writing, relative to employees who wrote about nontraumatic topics.
		Greenberg et al., 1996	Specific	Health	Active reflection, on negative experiences	Asking undergraduate women with a history of trauma to write about a personal experience of trauma or the imagined trauma another woman experienced reduced doctor visits 1 month later relative to women who wrote about trivial events.
		Greenberg & Stone, 1992	Specific	Health	Active reflection, on negative experiences	Asking undergraduates to write about previously undisclosed or previously disclosed traumas reduced reported physical symptoms over the next several months relative to a control condition but only when these traumas were severe.
		King, 2001	General and specific	Health; Well-being	Active reflection, on a positive aspect of self; Active reflection, on negative experiences	College students were asked to write about (1) their most traumatic life event, (2) their best possible future self, (3) both topics, or (4) a control topic for 20 minutes/day for four consecutive days. Writing about best possible selves led to a greater increase in subjective well-being (greater life satisfaction and optimism) three weeks later. All three treatments significantly reduced illness (health center visits) over the next five months as compared to the prior three

| and experiences ongoing and undermining? | |

					months.
		Kirk et al., 2011	Specific	Well-being; Work	Active reflection, on negative experiences	Working adults were asked to write for 20-minutes a day for 3 days about their "feelings and thoughts connected to events that occurred during their last workday or an especially important workday from the more distant past… Explore whether by analysing your thoughts and feelings you can build confidence in your ability to perceive and manage emotions in yourself and others" or about "any topic related to their 'non-workday.'" Two weeks later participants in the former condition exhibited higher emotional intelligence, more positive affect, and reported less perpetration of workplace incivility.
		Kross & Ayduk, 2008, Study 2	Specific	Well-being	Active reflection, on negative experiences	Young adults were asked to "recall an experience in which they felt overwhelming feelings of sadness and depression." Then, participants were (1) asked to adopt a self-distanced perspective ("Go back to the time and place of the experience…take a few steps back and move away from your experience…watch the experience unfold as if it were happening all over again to the distant you"), (2) asked to adopt a self-immersed perspective ("relive the situation as if it were happening to you all over again") or (3) were distracted by responding to various survey statements (e.g., "pencils are made with graphite"). One and seven days later, participants in the self-distanced condition showed reduced depressed affect and reported experiencing fewer recurring thoughts about their depression experience.
		Lutgendorf et al., 1994	Specific	Health	Active reflection, on negative experiences	Asking college undergraduates to discuss a stressful or traumatic topic in three weekly 20-minute individual sessions did not affect immune function (Epstein-Barr virus antibody titers) one week later relative to a control condition. However, participants who were more involved in the disclosure process, avoided less, and who disclosed older and more negative events showed greater immune function.
		Murray & Segal, 1994	Specific	Well-being	Active reflection, on negative	Asking undergraduates to write or talk about personally traumatic life events for 20-minutes/day on 4 consecutive days reduced the self-reported pain people

					experiences	experienced in thinking about this event over this period. However, during this period people experienced increasing levels of negative mood and decreasing levels of positive mood, relative to students who wrote or talked about trivial events.
		Park et al., 2015, Study 1	Specific	Well-being	Active reflection, on negative experiences	College students were asked to write about their most distressing life experience ("their deepest thoughts and feelings regarding their experience by focusing on their past, present, and future, and their relationships with others") or a nonemotional topic (what they had done since waking that morning) for 15 minutes on three consecutive days. Those in the former condition showed greater self-distancing from the distressing experience a day and 1-month later, and less emotional reactivity 1-month later. There was no effect on self-reported physical health symptoms.
		Park et al., 2015, Study 2	Specific	Well-being	Active reflection, on negative experiences	College students were asked to write about their most distressing life experience ("their deepest thoughts and feelings regarding their experience by focusing on their past, present, and future, and their relationships with others"), to think privately about their most distressing life experience, or to write about a nonemotional topic (what they had done since waking that morning) for 15 minutes on three consecutive days. Those in the first condition as compared to the two control conditions showed greater self-distancing from the distressing experience a day, 1-month, and 6-months later, and less emotional reactivity 1- and 6-months later. There was no effect on self-reported physical health symptoms and on number of visits to the university health center.
		Pennebaker et al., 1988	Specific	Health; Well-being	Active reflection, on negative experiences	Asking undergraduates to describe their "deepest thoughts and feelings" about "the most traumatic and upsetting experiences of your entire life" for 20 minutes/day on four consecutive days improved measures of immune system function and reduced doctor visits and subject distress over six weeks, as compared to writing about trivial topics. There was no effect on self-reported physical symptoms.
		Pennebaker &	Specific	Health	Active	Asking undergraduates to write about personally

		Beall, 1986			reflection, on negative experiences	traumatic life events, including both the emotions they experienced and the facts of this experience, on 4 consecutive days increased blood pressure and negative mood immediately but reduced doctor visits and self-reported illness over the next 6 months relative to students who wrote about trivial topics.
		Petrie et al., 1995	Specific	Health	Active reflection, on negative experiences	Asking medical students to write about their "deepest thoughts and feelings" in personal traumatic experiences in 4 consecutive daily sessions showed higher antibody levels in response to a hepatitis B vaccine delivered 1 day after the last writing session 4- and 6-months later as well as improvement in other immune functions, as compared to medical students who wrote about trivial topics.
		Spera et al., 1994	Specific	Health; Work	Active reflection, on negative experiences	Asking recently unemployed middle-aged professionals to write about their "deepest thoughts and feelings" about their job loss for 20-minutes/day over 5 consecutive days found a new full-time job more quickly over the next 8-months (53%) relative to individuals who wrote about nontraumatic topics (24%) or a nonrandomized group that did not write at all (14%). The treatment group also reported drinking alcohol less over the six weeks following the study. There was no effect on other health behavior measures.
	Are current or upcoming emotions, states, and experiences negative and undermining?	Ben-Zeev et al., 2017	General	Education	Prompting with information; Active reflection, on negative experiences	Undergraduate underrepresented racial-ethnic minority students enrolled in science, technology, engineering, or math (STEM) programs learned about stereotype threat, how it can affect test performance, and that awareness of stereotype threat can help people protect against it. They then reflected on a stereotype threat situation they had experienced and strategized about how they could cope with the experience effectively. This exercise reduced stereotype-based evaluative concerns, improved performance on a laboratory test of abstract reasoning, and improved semester grades in STEM courses, eliminating a racial-ethnic disparity. At the same time, a values-affirmation intervention also reduced stereotype-based evaluative concerns and improved test performance but did not affect semester grades among minority students.

		Brady et al., 2017	Specific	Education	Prompting with information	Adding a short paragraph to a logistics email sent the night before the first midterm exam in an introductory psychology course telling students that stress and anxiety "generally do not hurt performance and can even help performance" (adapted from Jamieson et al., 2010) led first-year students to report less negative reactions to anxiety and improved their test scores and final course grades. Upper-year students, who showed lower levels of anxiety and less negative responses to anxiety did not benefit.
		Cameron & Nicholls, 1996	Specific	Education; Health	Active reflection, on negative experiences	Asking students entering college to write about (1) thoughts and feelings about entering college and formulating coping plans (self-regulation) or (2) expressing thoughts and feelings only (disclosure only) in three weekly writing sessions reduced doctor visits over the following month among dispositionally optimistic students, relative to students who wrote about trivial topics. Among pessimists, only the self-regulation task reduced doctor visits. The disclosure task also raised grades.
		Crum et al., 2013	General	Health; Well-being	Prompting with information	Employees of a major financial services company who learned that stress can promote functioning and performance reported reduced symptoms of anxiety (headaches, insomnia) and greater improvement in "hard" and "soft" work skills (e.g., efficiency, communication) several days later.
		Frattaroli et al., 2011	Specific	Health; Well-being; Education	Active reflection, on negative experiences	Students preparing for the graduate school entrance exams (GRE, MCAT, LSAT, or PCAT) given the opportunity to write about their "deepest thoughts and feelings" about the upcoming exam, as compared to those in a neutral writing condition (activities they had participated in during the prior 24 hours), reported lower depressive symptoms 3 days before the exam, scored higher (50th percentile vs. 41st percentile), and were more satisfied with their score. There was no difference in depressive symptoms 8 days after the exam. Exploratory analyses found that although the reduction in depressive symptoms was found for all testtakers the rise in test performance was found for student taking the MCAT or LSAT;

		Halperin et al., 2013	General	Intergroup relationships	Active reflection, on negative experiences	Five days before Palestinian President Mahmud Abbas formally sought full membership for Palestine in the United Nations, Jewish Israelis were taught to reappraise experiences of anger. They were given six pictures designed to induce anger and asked "to respond to them like scientists, objectively and analytically—to try to think about them in a cold and detached manner." They were then asked to use that technique in the next week. They also received three text message reminders over the week. As compared to a control condition in which Jewish Israelis were asked to respond to the same pictures naturally, those in the reappraisal condition expressed less negative emotions (e.g., anger) toward Palestinians, greater support for conciliatory policies, and less support for aggressive policies toward Palestinians both 1 week later (2 days after the Palestinian bid) and 5 months later.
		Harvey-Knowles et al., 2017	Specific	Health	Active reflection, on negative experiences	Asking spousal caregivers of cancer patients to write once a week for three weeks about either undisclosed thoughts and feelings they had about the cancer experience or any positive outcomes related to the cancer experience reduced caregivers' self-reported depression a day after the final writing exercise relative to a control condition, with the greatest benefits for participants with higher baseline levels of depression. However, there was no reduction in stress and, in fact, for participants with higher baseline line levels of stress there was a negative effect of the treatments.
		Hülsheger et al., 2012	General	Well-being; Work	Active reflection, on emotions	Employees in diverse jobs took part in a 2-week intervention to teach them "mindfulness mediation and informal daily exercises [aimed] at cultivating an accepting, nonjudgmental attitude to what one experiences in each moment." As compared to a no-treatment randomized control group, this reduced emotional exhaustion and increased job satisfaction over 10 work days.
		Hülsheger et al., 2015	Specific	Work	Active reflection, on emotions	Hairdressers learned about emotion-regulation techniques including "(a) reappraising difficult situations by considering that offensive client behavior is not meant as personal assault, but rather reflects the

						customer's personal problems (reappraisal); (b) reappraising difficult situations by considering them a personal challenge and opportunity for growth (reappraisal); (c) putting themselves in the client's shoes (perspective taking). To train attentional deployment, participants were encouraged to (d) trigger positive emotions by thinking of positive and enjoyable past or future events." They then wrote down, on each of four consecutive mornings, how they could use these techniques in a "typical difficult situation with a customer" at work and, on each of 10 consecutive evenings, how they had done so, what was effective and how they could improve their use of the strategy. As compared to those in a control condition, hairdressers in the treatment condition earned higher tips over the 10 days.
		Pennebaker et al., 1990	Specific	Education; Health	Active reflection, on negative experiences	Asking first-year college students to write about their "deepest emotions and thoughts" about coming to college for 20-minutes/day on 3 days in the first semester reduced doctor visits over the next 4 months relative to students who wrote about trivial topics. However, the treatment increased self-reported homesickness and worry about college. There was a trend for a benefit on grade-point-average, and no effect on positive mood, or health behaviors.
		Pennebaker & Francis, 1996	Specific	Education; Health	Active reflection, on negative experiences	Asking first-year college students to write about their "deepest emotions and thoughts" about coming to college for 20-minutes/day on 3 consecutive days in the first semester reduced doctor visits and improved grade-point-average, relative to students who wrote about trivial topics.
		Jamieson et al., 2010	Specific	Education	Prompting with information	Telling people preparing for the GRE that arousal "doesn't hurt…and can actually help performance" improved scores on the math section of the GRE taken up to 3 months later.
		Jamieson et al., 2016	Specific	Education	Prompting with information	Community college students enrolled in a developmental (remedial) math program read prior to the second exam summaries of scientific articles that conveyed the adaptive functions of stress, including how the stress response evolved to help people address demands and

						that arousal can aid performance. As compared to a control condition urged to ignore stress in testing situations, those who received the treatment reported less evaluative math anxiety and performed better on Exam 2. They also performed marginally significantly better on subsequent class assignments.
		Job et al., in prep	General	Education	Increasing commitment through action, saying-is-believing	College students learned that how you think about willpower—as dependent on a limited resource or not—matters, and that you can choose how to think about it, and wrote a letter of advice to a person who struggles with willpower. Among students who faced high demands on self-control this improved self-reported academic regulation a month later and raised end-of-term grades.
		Ramirez & Beilock, 2011	Specific	Education	Active reflection, on negative experiences	9th-grade students given the opportunity to write down thoughts and feelings about the first final exam of high school immediately before taking the test earned higher scores if they were anxious about test-taking (B+ vs. B-).
		Redelmeier et al., 2003	Specific	Health	Prompting by altering situations	Based on the theory that people's evaluations of experiences are disproportionately shaped by the end of experiences, modifying a colonoscopy by leaving the tip of the colonoscope in patients' rectums for up to an additional three minutes without moving it reduced patients' recalled pain and, at a median of 5.3 years follow-up, increased the likelihood patients agreed to have another colonoscopy if needed by 41%, controlling for medical circumstances.
		Storms & Nisbett, 1970	Specific	Health	Prompting by altering situations	Insomniacs were given a pill to take at bedtime over two nights. The pill was inert but participants were told either that it would increase physiological arousal (e.g., heart rate, temperature), encouraging them to attribute arousal to the pill rather than to other emotional sources, or that it would decrease it arousal. As compared to participants told the pill would decrease arousal, participants told that the pill would increase arousal reported falling asleep more quickly over the two nights. A no-pill control group fell in between the two pill groups.
Changing	Where and when	Ehret &	General	Health	Active	[see Table S2]

beliefs about goals	will I accomplish my goals? (Implementation intentions)	Sherman, 2018	and specific		reflection, values-affirmation; Active reflection, on goals	
		Harris et al., 2014	General and specific	Health	Active reflection, on goals	[see Table S2]
		Hulleman et al., 2017, Experiment 2	Specific	Education	Prompting with leading questions	Undergraduate students enrolled in an introductory psychology class were asked, following the first exam, to reflect on ways that the course material might be relevant to their life in an online survey and, following the second exam, to describe how a topic in the course is useful or meaningful to them and how learning about it will be beneficial to them in the future. Among students who performed poorly on the first exam, this raised final exam scores and interest in psychology as compared to a randomized control condition. The greatest benefits were for men. There was no additional effect of a randomized implementation intention element, which additionally asked students where and when they might think about the relevance of the course materials to their lives, obstacles that could prevent this, and how they could overcome these obstacles.
		Jessop et al., 2014	General and specific	Health	Active reflection, on goals	[see Table S2]
		Leventhal et al., 1965	Specific	Health	Prompting with leading questions	College seniors learned about the importance of getting a tetanus shot in either a high or low fear condition. Regardless of this manipulation, giving seniors a map with the health center circled and asking students when would be a convenient time for them to go increased the percentage of students who got a tetanus shot from 3.3% to 27.6%.
		Milkman et al., 2011	Specific	Health	Prompting with leading questions	3,272 employees of a large utility company received mailers with information about upcoming flu shot clinics. Including a prompt to write down the date and time the employee would get the shot increased vaccination rates from 33.1% to 37.3%.

		Nickerson & Rogers, 2010	Specific	Civic Behavior	Prompting with leading questions	Adding to a get-out-the-vote call script implementation intention questions—asking when a person would vote, where they would be coming from, and what they would be doing beforehand—increased turnout in a competitive presidential primary by 0.9% (intention to treat) or 4.1% (average treatment on treated). There was no effect of simply asking people to predict whether they would vote (see Greenwald et al., 1987).
		Prestwich et al., 2005, Study 1	Specific	Health	Active reflection, on goals	Female undergraduates were asked to decide where and when they would perform a breast self-exam and to commit to doing so. This increased the number of breast self-exams women reported performing one and six months later.
		Prestwich et al., 2005, Study 2	Specific	Health	Active reflection, on goals	Female undergraduates randomized to form implementation intentions were more likely to perform breast self-exams over the next month. Those who had a romantic partner and chose to have their partner perform the exam for them were especially likely to have performed a breast self-exam.
		Prestwich et al., 2008	Specific	Health	Prompting with information; Active reflection, on goals	People who were both (1) exposed to information concerning the health risks of saturated food and (2) asked to make "If….then…" plans to avoid buying foods high in saturated fat (e.g., "If I'm in the supermarket then I will check the food labels of the product and not buy the product if the label says the food contains more than 1.5% saturated fat") reported less consumption of saturated fat 1 month later. This effect was found relative to people who did neither (1) nor (2) and who did either but not both.
		Prestwich et al., 2010	Specific	Health	Active reflection, on goals	Adults asked to form specific plans about when they would walk briskly 5 days/week using the form "When I'm in situation X, then I will do Y" and who received text message reminders of either their walking goal or plan reported walking briskly for at least 30 minutes/day more than participants in a control condition over the next month.
	How will I accomplish my goals?	Chen et al., 2017	Specific	Education	Active reflection, on goals	Encouraging undergraduates to reflect on what learning resources would help them learn best—identifying specific resources, writing about why each resource they chose would be helpful, and creating a specific plan to

						use that resource—improved performance in an introductory statistics class by one-third of a letter grade. The effect was mediated by greater reflection students reported on their learning progress, which, in turn, predicted greater reported effectiveness of learning resources.
		Christiansen et al., 2010	Specific	Health	Active reflection, on goals	Chronic pain patients who, in addition to conventional care at an outpatient pain center, completed a 1-hour intervention focused on goal setting with regard to exercise. The intervention comprised (1) mental contrasting (listing positive aspects of exercising more and obstacles to this), (2) problem-solving to overcome these obstacles using a cognitive-behavioral approach, and (3) implementation intentions using "If…then…" statements (e.g., "If I am afraid of hurting myself, then I will remember that movement is good against pain"). As compared to patients who received only conventional care, those in the treatment condition had greater physical capacity along both behavioral measures and subjective ratings 3-weeks after discharge and 3-months after returning home.
		Destin & Oyserman, 2010	Specific	Education	Prompting with information	Representing career success (e.g., earnings) as dependent on education led predominantly low-income, African American 7th graders to plan to work harder on homework and to be more likely to complete an extra-credit assignment that night (23% vs. 3%).
		Duckworth et al., 2011	Specific	Education	Active reflection, on goals	High school students in a socioeconomically and diverse school preparing to take a high stakes exam imagined "as vividly as possible" two positive outcomes associated with completing all of the practice tests and two obstacles that could prevent them from doing so. They then wrote what they would do if each obstacle arose following an "If…, then…" template ("mental contrasting with implementation intentions"). As compared to an active control condition, this led students to complete 60% more practice problems.
		Duckworth et al., 2013	Specific	Education	Active reflection, on goals	Asking urban 5th grade students to identify an important personal goal relevant to their school work and to write about obstacles that could prevent them from achieving this goal and what they would do if such obstacles arose

					following an "*If…, then…*" template ("mental contrasting with implementation intentions") improved students' grades, attendance, and classroom behavior that academic quarter.
		Eskreis-Winkler et al., 2016, Study 2	General	Education	Increasing commitment through action, saying-is-believing	5th and 6th grade students learned in a 25-minute online module (1) the tenants of deliberate (or "deep") practice—"(a) focus on weakness, (b) get feedback, (c) concentrate 100%, and (d) repeat until mastery"—, (2) the importance of deliberate effort in academic success and how this is often underestimated, and (3) how frustration and confusion is a sign that "one is engaging in optimal practice activities" using stories from other students and by writing a letter to another student advocating deliberate practice. As compared to students who received standard study advice, this improved performance on Khan Academy math problems completed one week later for students with lower prior math achievement.
		Eskreis-Winkler et al., 2016, Study 3	General	Education	Increasing commitment through action, saying-is-believing	Undergraduates learned in a 25-minute online module (1) the tenants of deliberate (or "deep") practice, (2) the importance of deliberate effort in academic success and how this is often underestimated, and (3) how frustration and confusion is a sign that "one is engaging in optimal practice activities" using stories from other students and by writing a letter to another student advocating deliberate practice. As compared to students who received standard study advice, this improved semester GPA, with the greatest benefits for students with lower prior achievement.
		Eskreis-Winkler et al., 2016, Study 4	General	Education	Increasing commitment through action, saying-is-believing	6th grade students learned in a 50-minute online module (1) the tenants of deliberate (or "deep") practice, (2) the importance of deliberate effort in academic success and how this is often underestimated, and (3) how frustration and confusion is a sign that "one is engaging in optimal practice activities" using stories from other students and by writing a letter to another student advocating deliberate practice. As compared to students who reflected on motivation (what it is, what it feels like, obstacles), this improved quarter GPA, with the greatest benefits for students with lower prior achievement.

		Eskreis-Winkler et al., 2016, Study 5	General	Education	Increasing commitment through action, saying-is-believing	7th grade students learned in a 50-minute online module (1) the tenants of deliberate (or "deep") practice, (2) the importance of deliberate effort in academic success and how this is often underestimated, and (3) how frustration and confusion is a sign that "one is engaging in optimal practice activities" using stories from other students and by writing a letter to another student advocating deliberate practice. As compared to students who reflected on motivation (what it is, what it feels like, obstacles), this improved quarter GPA among students with lower prior achievement. Students who received half the treatment module and half of the control module fell in between the full-treatment and control groups.
		Kizilcec & Cohen, 2017 Experiment 1	Specific	Education	Active reflection, on goals	At the start of an online graduate-level 10-week business course, students were randomized to complete a mental contrasting with implementation intentions exercise—vividly describing the positive outcomes associated with watching most of the course lectures and obstacles that could interfere with this goal (mental contrasting), and writing if-then plans, one for each obstacle and how they would overcome it and one for when and where they intended to watch the lectures (implementation intentions) (Duckworth et al., 2011)—or control exercise (a personal experience that day). Whereas students from individualistic cultures (e.g., the United States Australia, France) were more likely to complete the course in the treatment condition (7.28%) than in the control condition (5.52%), those from collectivist cultures (e.g., Mexico, China, Romania) showed no benefit (treatment: 4.80%; control: 5.03%).
		Kizilcec & Cohen, 2017 Experiment 2	Specific	Education	Active reflection, on goals	At the start of an online 6-week introductory computer science course, students were randomized to complete a mental contrasting with implementation intentions exercise—vividly describing the positive outcomes associated with watching most of the course lectures and obstacles that could interfere with this goal (mental contrasting), and then writing if-then plans, one for each obstacle and how they would overcome it and one for when and where they intended to watch the lectures (implementation intentions) (Duckworth et al., 2011)—

					or control exercise (prior experience with the course topic, expectations for the course, how much time they intended to spend on the course per week). Whereas students from individualistic cultures (e.g., the United States Australia, France) were more likely to complete the course in the treatment condition (29.5%) than in the control condition (25.7%), those from collectivist cultures (e.g., Mexico, China, Romania) showed no benefit (treatment: 21.1%; control: 23.5%). Students who completed either the mental contrasting or the implementation intention exercise (but not both) showed no benefits, regardless of cultural context.
		Morisano et al., 2010	Specific	Education	Active reflection, on goals	A series of online exercises in which struggling college students identified personal life goals and how they would implement these (i.e., goal-setting + implementation intentions) raised term GPA over the next four months, and reduced the percentage of students who ended the term less than full-time enrolled from 20% to 0%.
		Pham & Taylor, 1999	Specific	Education	Active reflection, on goals	Undergraduates asked to mentally simulate the process for doing well on an exam (good study habits), as compared to those asked to simulate a positive outcome (getting a good grade) or those in a control condition, earned higher exam scores 1 week later. The intervention also increased planning, reduced anxiety, and increased studying.
		Sherman et al., 2010	Specific	Health	Prompting by altering situations	Based on the theory that some forms of cognition are represented in the motor system, researchers theorized that the physical embodiment of health behaviors can promote those behaviors among people who intend to enact them. Among people who intended to floss, those who held floss while watching a video about the importance of flossing, instead of just watching the video flossed more over the next week. People who jogged in place while watching a video of a person exercising, as compared to those who just watched the video, exercised 16 minutes/day more over the next week.
		Stadler et al., 2009	Specific	Health	Active reflection,	Women received information about the benefits of exercise. Those in the "mental contrasting +

					on goals	implementation intentions" group also wrote down "(1) their most important current wish regarding physical activity (e.g., biking to work); (2) the most positive outcome of realizing their wish (e.g., getting into better shape) and events and experiences they associated with this positive outcome; (3) the most critical obstacle (e.g., getting up too late) together with events and experiences they associated with this obstacle; and (4) three implementation intentions with the following questions: (1) When and where does the obstacle occur, and what can I do to overcome or circumvent the obstacle?; (2) When and where is an opportunity to prevent the obstacle from occurring, and what can I do to prevent it from occurring?; and (3) When and where is a good opportunity for me to act on my wish, and what would this action be?". Participants in the latter group were twice as physically active as participants in the former group (1 hour more per week) over the course of a 4-month follow-up period.
		Stadler et al., 2010	Specific	Health	Active reflection, on goals	Adults received information about the role fruit and vegetables play in a healthy diet. Those in the "mental-contrasting + implementation intentions" group also were asked to write down "(a) their most important wish regarding their diet that should be both challenging and feasible (e.g., 'eating more fruits and vegetables'); (b) the most positive outcome of realizing their wish (e.g., 'greater wellbeing') and events and experiences they associated with this positive outcome; (c) the most critical obstacle (e.g., 'no fruits at work') together with events and experiences they associated with this obstacle; and (d) formed three implementation intentions with the following questions: (1) 'When and where does the obstacle occur, and what can I do to overcome or circumvent the obstacle?'; (2) 'When and where is an opportunity to prevent the obstacle from occurring, and what can I do to prevent it from occurring?'; and (3) 'When and where is a good opportunity for me to act in a goal-directed way, and what would the goal-directed action be?' Both groups reported greater consumption of fruit and vegetables through four months later but only

					people in the mental-contrasting + implementation intentions group showed sustained higher intake two years later.
	What were my goals?	Asensio & Delmas, 2015	Specific	Sustainability	Prompting with information	Residential energy consumers received access to online information with real-time appliance-level electricity usage information. Linking this to health and environmental issues (e.g., pounds of pollutants, childhood asthma, cancer) reduced usage by 8% over 100 days, with especially large reductions for families with children (19%) and for households in the top quantile of use (15.5%). Linking the same information to increased utility bills had no effect.
		Dal Cin et al., 2006	Specific	Health	Prompting by altering situations	Sexually active undergraduates who watched a video about the risks of unprotected sex—and who were given a "friendship" bracelet and told to remember the dangers of unprotected sex when they looked at it—were more likely to use a condom over the next 5-7 weeks during sex than those who just watched the safe sex video or an unrelated video. The effect was greatest when people had sex after drinking, a state in which people are especially responsive to situational cues.
		Graham et al., 2011	Specific	Sustainability	Prompting with information; Prompting with leading questions	People who reported how much they drove online every two days for two weeks reported driving less within this period and, after this period ended, less over the subsequent two weeks. In addition, people who received online feedback information about how much money (on gasoline and maintenance) and pollution they had saved by reducing their driving drove even less.
		Kato et al., 2008	Specific	Health	Active reflection, on goals	Adolescents and young adults with cancer played a video game in which they controlled a nanobot within the bodies of young patients with cancer to "ensure strategically that virtual patients engage[d] in positive self-care behaviors such as taking oral chemotherapy to fight cancer cells, taking antibiotics to fight infection, taking stool softener to prevent bowel perforations, practicing good mouth care to combat mucositis, using relaxation techniques to reduce stress, and eating food to gain energy." As compared to patients who played a control game, those in the treatment group showed greater adherence to antibiotics and oral chemotherapy

						assessed through electronic pill-monitoring devices and serum metabolite assays as well as greater self-efficacy, and greater knowledge of cancer over 3 months. There were no effects on self-reported general treatment adherence, stress, control, or quality of life.
		Papies & Hamstra, 2010	Specific	Health	Prompting by altering situations	Displaying a poster on the glass entrance door to a butcher's store announcing a recipe that was "good for a slim figure" and low in calories reduced the number of free meat snacks consumed by restrained eaters. There was no effect for unrestrained eaters.
		Papies et al., 2014	Specific	Health	Prompting by altering situations	Handing a flier with a recipe including health related words (e.g., "good for your figure"), rather than one with neutral words (e.g., "try it out"), to grocery shoppers led overweight customers to buy 74% fewer unhealthy snacks. There was no effect for normal weight customers.
		Papies & Veling, 2013	Specific	Health	Prompting by altering situations	Embedding diet-related words in a restaurant menu—the description of the salads included "low in calories," "calorie-conscious," "Are you also watching your weight?")—versus not ("special offer") increased the selection of low-calorie foods (salad or fish) for chronic and current dieters (nearly 50% of menu choices, versus about 15%). There was no effect for nondieters.
		Rogers & Feller, 2017	Specific	Education	Prompting with information	Parents of students (K-12) in the Philadelphia school district (28,080 households across 203 schools) were sent mailings five times throughout the school year emphasizing "absences matter and you can help" (reminder condition). In a second group, the mailing also included the number of absences their child had had so far in the school year (total absences condition). A third included a comparison to the modal number of absences among the student's classmates (relative absences condition). Both treatments reduced absences over the school year (total absences: 16 days absent; relative absences: 15.9 days absent; reminder: 16.4 days absent; no-mailing control: 17 days absent). Other students in the same households as target students showed nearly as large reductions in the total absences and relative absences conditions. There was no moderation by student grade. There was no effect on end-of-year

					standardized test scores among students in grades 4-8.
		Stöckli et al., 2016, Experiment 1	Specific	Health	Prompting by altering situations	Placing posters on vending machines at a European university with a health-evoking nature image (grassland, trees, and a blue sky with clouds) or an activity-evoking image (running legs in sport shoes), instead of a pleasure-evoking image (two carousels with a summery blue sky) or no poster, led customers to purchase more healthy snacks.
		Stöckli et al., 2016, Experiment 2	Specific	Health	Prompting by altering situations	Placing posters on a vending machine at the National Office of Public Health with a skinniness-evoking image (Giacometti sculptures) or an activity-evoking image (running legs in sport shoes), instead of a pleasure-evoking image (two carousels with a summery blue sky) or no poster, led customers to purchase more healthy snacks (58% and 44% versus 29% and 21%, respectively).
		Zohar, 2002	Specific	Work	Prompting with information	Providing supervisors in a regional maintenance center focused on heavy-duty equipment weekly feedback on the cumulative frequency of subordinates' reports of safety-related conversations with supervisors over 8 weeks, as well as communications of the priority put on safety by superiors, increased the frequency of safety-related conversations reported by subordinates and improved workplace safety, including frequency of ear plug use from 25% to 73%, up to 5 months after the intervention ended as compared to a randomized control group. In addition, whereas the microaccident rate (minor injuries that occurred due to unsafe behavior during work hours) increased in the control group over a three-month assessment period, it declined in the treatment group.
		Zohar & Polachek, 2014	Specific	Work	Prompting with information	Providing supervisors in a midsize heavy manufacturing company individual feedback 6 weeks apart comprised of the priority their workers perceived them to place on safety, productivity, and teamwork, highlighting differences between sent and received messages, and setting informal goals for future communications led workers to perceive significantly better safety climate, safety behavior, teamwork and workload and independent auditors to assess more safe practices 6-8

					weeks later.
Is this goal my own or imposed?	Bryan, Yeager et al. 2016	Specific	Health	Increasing commitment through action, saying-is-believing	Adolescents read about journalism exposing the deceptive and manipulative marketing practices of food companies and their harmful effects on society, especially to young children and the poor (e.g., formulating foods based on research designed to make it more addictive) as well as stories from older students describing their outrage about food company practices and efforts to "fight back against the companies by buying and eating less processed food." They then wrote essays explaining why they were outraged and might fight back. As compared to a traditional public health message (conveying scientific information about how the body processes food, recommendations for a balanced diet, etc.), the "exposé" message, which connected with adolescents' goals around autonomy and social justice, led students to choose fewer unhealthy foods in a snack form in their homerooms a day later, representing less carbohydrates and sugar.
	Halvari & Halvari, 2006	Specific	Health	Prompting with information	Participants had a 1-hour conversation with a dental hygienist about dental problems including personalized information based on participants' dental records, which emphasized choice and options for preventative behaviors and included demonstrations of correct brushing and flossing behaviors and practice and feedback on these behaviors. As compared to people who did not have this conversation, those who received the treatment showed reduced plaque and gingivitis over seven months.
	Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 1	Specific	Education	Prompting by altering situations	Belgian college students studying to become preschool teachers learned about recycling in class. For some the instructions used autonomy-supportive phrases like "you can," "you might," and "if you choose." For others the instructions used controlling phrases like, "you should," "you have to," and "you'd better." Students in the autonomy-supportive condition learned more, performing better on a test of conceptual understanding and contributing more to a group discussion a week later, reported more autonomous motivation, and were more likely to seek out further information about

					recycling. Similar benefits were also found for an intervention that represented the course content as linked to students' intrinsic goals to be teachers.
		Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 2	Specific	Education	Prompting by altering situations	Belgian college students studying marketing learned about business communications in class. For some the instructions used autonomy-supportive phrases like "you might decide to try to learn more about communication styles." For others the instructions used controlling phrases like, "you should learn more about communication styles." Students in the autonomy-supportive condition learned more, performing better on a test of conceptual understanding immediately after the course and 2 weeks later and contributing more in small group presentations 5 days later, reported more autonomous motivation, and were more likely to seek out further information about business communications, taking extra reading, completing extra problems, and going to the library for related information. Similar benefits were also found for an intervention that represented the course content as linked to students' intrinsic goals in business.
		Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 3	Specific	Education	Prompting by altering situations	Belgian high school students studied Tai-bo, a physical exercise, in class. For some the instructions used autonomy-supportive phrases while for others, the instructions used controlling phrases, as in Vansteenkiste, Simons, Lens, Sheldon et al. (2004) Experiments 1 and 2. Students in the autonomy-supportive condition learned more, performing better on Tai-bo exercises 3-5 days later, and were more likely to volunteer to demonstrate Tai-bo to other students and visitors several days later. Similar benefits were also found for an intervention that represented the course content as linked to students' intrinsic fitness goals.
		Williams et al., 2006	Specific	Health	Prompting with leading questions	People who smoked more than 5 cigarettes a day with relatively low incomes (more than $10,000 below the county mean) and who were undereducated (11% of those over 24 had graduated from college) were randomly assigned to a "community care" condition or a condition designed to support an autonomous decision to quit smoking. In the community care condition,

					participants received county-provided information about quitting smoking, their cholesterol test results, and a list of local smoking cessation programs. In addition to these materials, those in the autonomy-supportive condition met with a counselor four times over 6 months, an initial 50-minute meeting and three 20-minute follow-ups. Counselors were "trained to support the participants in making a clear and autonomous decision about whether or not to make a quit attempt." They discussed the participants' smoking history and attitudes, past quit attempts, health risks, and asked whether the participant wanted to stop. If they said yes, they developed a quit plan, "setting a quit date in the next 30 days, informed the patient about the expected time course of withdrawal, and discussed the medications recommended to reduce withdrawal symptoms." As compared to those in the community care condition, people in the autonomy-supportive condition were more likely to have quite at a 6-month follow up (11.8% vs. 4.1%).
	Am I trying to promote something good (gain frame) or to prevent something bad (loss frame)?	Detweiler et al., 1999	Specific	Health	Prompting with information	Based on prospect theory, which suggests that people are risk-averse in the context of gains, the authors theorized that emphasizing "gains" rather than "losses" would promote prevention behaviors like sunscreen use. Beach goers were randomized to receive a brochure that highlighted the benefits of using sunscreen (e.g., "Protect yourself from the sun and you will help yourself stay healthy") or the potential losses of not using sunscreen (e.g., "Expose yourself to the sun and you will risk becoming sick"). Whereas 71% of those in the gain-frame condition redeemed a coupon to obtain a free sample of sunscreen, only 53% of those in the loss-frame condition did so. Additionally, those who did not intend to use sunscreen reported greater intentions to do so in the gain-frame than loss-frame condition.
		Garcia-Retamero & Cokely, 2011	Specific	Health	Prompting with information	Sexually active undergraduates read a brochure about sexually transmitted diseases. Following prospect theory, the authors hypothesized that (1) emphasizing gains rather than losses in describing a prevention behavior (condom use; e.g., "using condoms reduce[s]

						the chance of…contracting STDs" versus "not using condoms increase[s] the chance of…contracting a STD") would promote compliance but (2) that emphasizing losses rather than gains in describing a detection behavior (screening; e.g., "not conducting screening reduce[s] the chance of receiving effective treatment" versus "screening increase[s] the chance of receiving an effective treatment") would promote compliance. This was the case. Whereas ~65% of participants reported using condoms in every sexual encounter in the next six weeks in the gain-frame condition, only ~35% in the loss-frame condition did. For reports of making a screening appointment with a doctor, these numbers reversed. However, when the brochure included graphics depicting risk information, compliance rates were high overall and gain/loss framing did not matter.
Changing beliefs about ability or potential	Am I capable of learning or performing well? (Self-efficacy)	Bandura & Schunk, 1981	Specific	Education	Direct labeling, of a situation	7-10-year-old children behind and with little interest in math were asked to complete instructional items with a proximal goal (6 pages/session). As compared to students assigned a distal goal (42 pages over 7 sessions) or no specific goal ("as many pages…as possible"), the proximal goal intervention increased students' self-efficacy in math and their math learning.
	Does struggling mean I can't do it? (Attributional retraining)	Boese et al., 2013	General	Education	Direct labeling, of an aspect of self; Prompting by altering situations	Undergraduate introductory psychology students watched a brief video in which two students and a professor in psychology discussed how adopting controllable patterns of causal attributions can improve motivation and performance. Students then discussed the video in small groups and the importance of adaptive attributions. Finally, students discussed good and bad note-taking strategies so as to illustrate the importance of expending effort. As compared to a randomized control condition, this treatment improved final course grades in psychology and first-year grade-point-average among students who were more failure avoidant. There was no effect for students less failure avoidant.
		Good et al., 2003	General	Education	Prompting with information	7th grade students in a rural, low-income, and predominantly Hispanic and Black population were matched with a college student mentor with whom they

						had two in-person 90-minute meetings plus email exchanges. In a treatment condition, the mentor shared that many students experience difficulties in the transition to junior high school but bounce back as they get used to their new environment (e.g., changing classes, more difficult subjects, many teachers not one). Together with students in a growth-mindset condition and as compared to a randomized control condition, girls (but not boys) earned higher math scores on a state test while both girls and boys earned higher reading scores.
		Hall et al., 2004	General	Education	Direct labeling, of an aspect of self; Increasing commitment through action, saying-is-believing	Undergraduate introductory psychology students, most in the first year, watched an 8-minute video in which two graduate students and a professor in psychology discussed how adopting controllable patterns of causal attributions can improve motivation and performance. They then either summarized the main points and described how they could apply these ideas to their own studies or took a brief very difficult aptitude test. As compared to a randomized control condition, both treatments improved final grades in psychology and, for students high in elaborative learning, first-year GPA.
		Hall et al., 2006	General	Education	Direct labeling, of an aspect of self; Increasing commitment through action, saying-is-believing	Undergraduate introductory psychology students either watched an 8-minute video in which two graduate students and a professor in psychology discussed how adopting controllable patterns of causal attributions can improve motivation and performance or read a 1-page handout summarizing the same themes. They then summarized the main points, described how they could apply these ideas to their own studies, and wrote about a recent academic setback and were asked to reinterpret the event in a positive manner. Among poorly performing students, both treatments improved final grades in psychology among those students low in secondary academic control (e.g., who disagree with "No matter who well I do on a test or in a course, I try to 'see beyond' my grades to how my experience at university helps me to learn about myself"), relative to a randomized control condition.
		Hall et al., 2007	General	Education	Direct labeling, of	Undergraduate introductory psychology students read a 1-page handout summarizing how adopting controllable

					an aspect of self; Increasing commitment through action, saying-is-believing	patterns of causal attributions can improve motivation and performance. They then wrote about either a recent instance of academic struggle and to elaborate on its emotional impact (affective writing assignment) or summarized the main points of the handout, described how they could apply these ideas to their own studies, and completed the affective writing assignment (cognitive writing assignment). Among students high in elaborative learning (e.g., "When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions"), the cognitive writing assignment raised final course grades in psychology and grade-point average relative to a randomized control condition. For students low in elaborative learning, the affective writing assignment raised final course grades.
		Haynes et al., 2006	General	Education	Direct labeling, of an aspect of self; Increasing commitment through action, saying-is-believing	Undergraduate introductory psychology students who reported being relatively less successful in their psychology course so far and either at the top or bottom third of a dispositional optimism scale took part. In the treatment condition, students received a handout containing two lists of possible attributions for poor academic performance, one external/uncontrollable attributions (e.g., "I failed the test because it was too difficult") or controllable attributions (e.g., "I failed the test because I did not study enough"). The experimenter then described changing the former attributions to the latter. Next, participants summarized the main points of the handouts and described how it applied to their own academic experiences. As compared to a randomized control condition, this treatment increased final grades in psychology and first-year grade-point average for over-optimistic students.
		Parker et al., 2016	General	Education	Direct labeling, of an aspect of self; Prompting with information	First-year undergraduate competitive athlete students and non-athlete students enrolled in an introductory course (1) completed survey items assessing their attributions for academic failure and success, (2) watched a brief video that emphasized the importance of controllable attributions for academic experiences, and (3) summarized the video and described how it related to

						their own lives. As compared to a randomized control group, this treatment raised course grades for athletes low in perceived academic control and reduced course withdrawals for athletes in general. Non-athletes showed no benefits.
		Perry & Penner, 1990	General	Education	Direct labeling, of an aspect of self; Prompting with information	Undergraduate introductory psychology students watched an 8-minute video in which a university professor described overcoming repeated failure in college to succeed in university and graduate school and encouraged students to attribute poor performance to inadequate effort and good performance to ability and proper effort. As compared to a no-video randomized control condition, this improved student achievement on a test 1 week later, especially for students with an external locus of control.
		Perry et al., 2010	General	Education	Direct labeling, of an aspect of self; Prompting with information	First-year undergraduate introductory psychology students (1) completed survey items assessing their attributions for academic failure and success, (2) watched a 10-minute video in which two students discussed how poor performance can be improved followed by a professor who emphasized the importance of controllable attributions for academic experiences, (3) took a brief very difficult aptitude test, (4) took part in a group discussion about the importance of making adaptive attributions for academic experiences, and (5) received a handout comparing adaptive versus maladaptive attributions. As compared to a randomized control group, this treatment raised course grades and first-year grade-point-average for students performing poorly or at the average, but not for students performing well.
		Ruthig et al., 2004	General	Education	Direct labeling, of an aspect of self; Prompting with information	First-year undergraduate introductory psychology students either viewed a video in which two students discussed their academic experiences and how putting forth more effort improved grades; viewed the video followed by a short group discussion that emphasized the importance of attributing college performance to effort; or read a handout that emphasized the importance of adopting adaptive attributions for academic failures. As compared to a randomized control group, all three

					treatments raised first-year grade-point-average and reduced course dropping for over-optimistic students. There were no effects for low-optimistic students.
		Struthers & Perry, 1996	General	Education	Direct labeling, of an aspect of self; Prompting with information	Undergraduate introductory psychology students learned that students' beliefs about poor performance can influence subsequent performance, and that they would learn how their beliefs could work for them instead of against them. They then watched an 8-minute video in which a university professor introduced two students who discussed doing poorly on a test, and how they first attributed their poor performance to inability but learned that it in fact reflected a lack of effort and poor strategies. Students then discussed the causes of academic struggles in small groups. As compared to a randomized control condition, this improved course grades who had an unstable-uncontrollable attributional style.
		Weinberg et al., 2015	General	Health	Prompting with information	Older adults (80+) in a rehabilitation center who received information encouraging "personally controllable attributions for loss of function (e.g., effort invested in exercise protocols) and discouraging maladaptive attributions (e.g., 'old age')" were more motivated to exercise, reported higher life satisfaction, and exhibited greater function
		Wilson & Linville, 1982	General	Education	Prompting with information	First-year undergraduates worried about their academic performance with first-semester GPAs below 3.50 reviewed information that most students receive first-year grades lower than what they had anticipated but that their grades improved with time. They then viewed videos of upper-year students describing difficulties they experienced in their first year and how these improved with time. As compared to a randomized control condition, this raised GPA over the next year and reduced sophomore-year dropout rates from 25% to 5%.
		Wilson & Linville, 1985	General	Education	Increasing commitment through action, saying-is-believing;	Two studies replicating Wilson and Linville, 1982 were conducted but combined statistically. The first was very much like original study. In the second, the treatment was represented as an effort to give high school students more information about what to expect in college. Students wrote essays for high school students

					Prompting with information	describing why academic difficulties in the transition to college are normal and temporary, and were encouraged to attribute early academic struggles in college to unstable causes (e.g., "not knowing how to take college tests"). Combining these replications, the attributional retraining treatment again raised students' GPA. However, not enough students dropped out of college in these samples (1 out of 74) to examine treatment effects on dropout.
	Can I control important aspects of my life? (Self-control)	Langer & Rodin, 1976	General	Health	Direct labeling, of a situation; Prompting by altering situations	Nursing-home residents were told of their many responsibilities and choices and given a plant and told it was their responsibility to take care of it. As compared to a control-condition floor, this increased (at 3-weeks) residents' self-reported happiness, activity level, and nurses' judgment of improvement and (at 18-months) nurses' rating of activity level, doctors' rating of health, and reduced the mortality rate from 30% to 15% (Rodin & Langer, 1977).
		Schulz, 1976	Specific but symbolic	Health	Prompting by altering situations	Retirement-home residents were given the opportunity to control or to predict when a college student visitor would come visit them over a 2-month period, or received the same number and length of visits but without this predictability, or no visits. At 2-months, residents in the former conditions reported being happier and having more "zest for life" and were rated as being healthier and showed a smaller increase in the use of medications. Then the visits ended. At 42-months, residents in the former conditions were rated as having less "zest for live" and as less healthy and had a mortality rate of 20% as compared to 0% in the random-visit and no-visit conditions (Schulz & Hanusa, 1978).
Promoting growth-mindsets: Representing psychological qualities as capable of change	Is intelligence is fixed or can it grow? (Implicit theories of intelligence)	Andersen & Nielsen, 2016	General	Education	Direct labeling, of an aspect of self, of a situation; Prompting by altering situations	Parents of second-grade children in Denmark were taught about (1) a growth mindset about children's reading abilities ("that their child's reading ability can be improved, no matter whether that child is already good or bad at reading") and (2) the benefits of a mastery-oriented approach to reading with children ("talk to the child about the content…pose open questions…take time to answer the child's questions"). They were also (3) encouraged to praise children's

					efforts rather their performance, by completing a logbook noting every reading session. In addition, those in the treatment received three books to get started and were encouraged to read with their child. As compared to a randomized control group, children in the treatment group showed greater gains in reading test performance 2 and 7 months later and greater gains in writing test performance 7 months later, with benefits for children of both Danish and immigrant backgrounds, with both mothers high and low in education. The greatest benefits were observed among children whose parents endorsed a fixed mindset more at baseline.
		Aronson et al., 2002	General	Education	Increasing commitment through action, saying-is-believing	College students were asked to serve as pen pal mentors to a struggling middle school student, wrote the student an encouraging letter, received a thank you note from the student and his or her teacher, wrote a second letter, and then rewrote their letters into a brief speech that was audiotaped for future at-risk children. In the growth-mindset condition, students were encouraged to help the middle school student see intelligence as a capacity that can grow "like a muscle" with mental work, watched a brief video that discussed how intelligence can grow throughout life, and were encouraged to incorporate examples in their letters from their own life to illustrate how intelligence can grow. Control students either wrote similar letters but about how intelligence is not one thing but many or wrote no letters. As compared to both control conditions, students in the growth-mindset condition earned higher grades the next academic term and African American students reported enjoying school more and being more invested in doing well.
		Bettinger et al., 2018	General	Education	Increasing commitment through action, saying-is-believing	Extending Yeager, Romero, et al., 2016, Norwegian high school students randomly assigned to an online growth-mindset of intelligence intervention (2 45-minute sessions two seeks apart) solved more math problems successfully as compared to students randomized to a control condition focused on memory and brain functioning. The greatest benefits observed were for students who endorsed a fixed mindset of intelligence prior to the treatment.

		Blackwell et al., 2007	General	Education	Prompting with information	7th-grade students in a New York City public school took part in an 8-session workshop that used readings, activities, and discussion to highlight effective study skills and how intelligence can grow with effort and effective strategies, or workshops that focused only on study skills. Those in the growth-mindset group showed improved math grades the next semester, halting a downward trajectory shown by both groups since 6th grade, and more likely to be identified by teachers as showing improved classroom motivation (27% vs. 9%).
		Broda et al., 2018	General	Education	Increasing commitment through action, saying-is-believing	Extending Yeager, Walton et al. (2016 Experiment 2), a randomized growth-mindset intervention was delivered to 7,686 incoming college students through an online module in the summer before entering Michigan State University (92% of the incoming class). Analyses excluded international students. Latino/a students who received the growth-mindset intervention earned higher first-year GPAs than Latino/a students in the control condition (3.05 vs. 2.69), reducing the achievement gap with White students by 72%. The gains were greatest for Latino/a students with lower high school GPAs and test scores. The design also included a social-belonging treatment, modeled on Yeager, Walton et al. (2016 Experiment 2). There was no significant effect of the social-belonging intervention for Latino/a students, no effect of either treatment for African American or White students, and no effect of either treatment on credits attempted or completed or full-time enrollment for any group.
		Chao et al., 2018	General	Education	Prompting with information; Prompting by altering situations	2,420 students in 107 grade 3 classes in nonformal schools run by an nongovernmental organization in slum areas in a large city in western India were randomized, at the class level, to a 2 x 3 design: (1) a growth-mindset intervention (10 1-hour sessions in which students learned about how the brain grows as knowledge develops and how challenges provide opportunities for growth), versus a control condition focused on how the heart works, and (2) to an emphasis on the importance of attendance and public tracking of attendance and either a self-chosen (autonomy-supportive) or a teacher-chosen

					reward for high attendance, versus no emphasis on attendance and no reward for high attendance. At the end of the academic year, students took a standardized academic test of factual knowledge, concept recognition, problem solving, and analytic skills. Students with higher levels of prior performance in the personal choice condition performed better with growth-mindset rather than control. There was no effect of growth-mindset for students with lower levels of performance or in the no reward or teacher choice conditions.
		Good et al., 2003	General	Education	Prompting with information	7th grade students in a rural, low-income, and predominantly Hispanic and Black population were matched with a college student mentor with whom they had two in-person 90-minute meetings plus email exchanges. In a treatment condition, the mentor taught students about how the brain is capable of forming new neural connections throughout life and that it functions like "a muscle; the more you use it, the stronger it grows." Together with students in an attributional retraining condition and as compared to a randomized control condition, girls (but not boys) earned higher math scores on a state test while both girls and boys earned higher reading scores.
		Lin-Siegler et al., 2016	General	Education	Prompting with information	9th and 10th grade students in a large, diverse urban school, mostly low-income and Latino or Black, read three stories about scientists (Albert Einstein, Marie Curie, and Michael Faraday) in science class, one each over three weeks. Students randomized to read stories that focused on either intellectual struggles or life struggles the scientists faced and overcame, as compared to students for whom the stories focused on scientific accomplishments, showed improved science grades over the next 6-week marking period. The greatest benefits were among students with low prior grades.
		Outes et al., 2017	General	Education	Prompting with information	A total of 1207 secondary schools in Peru were randomly assigned to teach students a 1.5 hour growth-mindset lesson about neuroplasticity and that "with practice" the brain "will grow stronger." Students in treatment schools greater improvement in mathematics test scores (0.11-.25 standard deviations), with the

						greatest effects in schools outside Lima where achievement is lower and in helping students out of the lowest bracket of performance. There was no gain in Spanish test scores. Both students and teachers showed improved attitudes with the treatment (respectively, greater expectations of future achievement, greater willingness to encourage students' learning)
		Paunesku et al., 2015	General	Education	Increasing commitment through action, saying-is-believing	High school students in 13 diverse schools completed an online module focused on scientific findings showing how the brain can "grow and reorganize itself as a consequence of hard work and good strategies on challenging tasks," implications for students' potential to become more intelligent through study and practice, and how setbacks are opportunities for learning. They then summarized the findings in their own words and wrote a note of advise to a struggling student who "was beginning to think of himself as not smart enough to do well in school." Together with students in a sense-of-purpose purpose intervention condition and as compared to those for whom the module focused on control content (e.g., functional localization in the brain), this growth-mindset message raised core academic GPA the next semester for students at risk for dropping out of high school, and increased the likelihood students earned satisfactory grades (A, B, or C) in core academic classes.
		Yeager, Romero et al., 2016	General	Education	Increasing commitment through action, saying-is-believing	9th grade students in 10 high schools completed an online growth-mindset intervention module based on that in Paunesku et al., 2015 but revised following a design process. Focusing on students with low levels of prior achievement, students who completed the growth-mindset module, as compared to those who completed a control module, earned higher core academic GPA in the first semester of 9th grade and reduced the percentage who received D or F GPAs by four percentage points.
		Yeager, Walton, et al., 2016, Experiment 1	General	Education	Increasing commitment through action, saying-is-believing	[See Table S3]

		Yeager, Walton, et al., 2016, Experiment 2	General	Education	Increasing commitment through action, saying-is-believing	A version of the growth-mindset intervention adapted for online delivery prior to matriculation in college was delivered in online modules alongside other entrance forms in the summer before students entered a large public university. Participants were 90%+ of the entering class. In the treatment condition, an article and stories from older students emphasized that intelligence is not fixed but can grow with hard work on challenging tasks, good strategies, and help from others. Students read the stories and then wrote an essay about how they anticipated their experiences in college would reflect the themes emphasized. As compared to a randomized control condition, this exercise, along with a social-belonging intervention, increased the percentage of negatively stereotyped ethnic-minority and first-generation college students who completed the first year full-time enrolled (i.e., both semesters) by 4%, from 69% to 73%, reducing the gap with nonminority, continuing-generation students by 40%. The interventions also reduced the percentage of students deemed "at-risk" for dropping out on a multidimensional measure assessing various achievement-related behaviors and attitudes. This statistically mediated the effect on college persistence.
	Can weight change? (Implicit theories of weight)	Burnette & Finkel, 2012	Specific	Health	Prompting with information	People trying to lose weight were (1) led to view weight as changeable with effort (implicit-theories treatment); (2) received high quality information about scientifically validated means to lose weight (e.g., reduced pace of eating, mechanisms linking exercise to weight loss) (knowledge treatment); or (3) assigned to a control condition. Over a 12-week assessment period, both treatments prevented weight gain observed in the control condition. Additionally, whereas people in the knowledge treatment and control conditions gained more weight when they experienced more severe dieting setbacks (e.g., overeating at a party), those in the implicit-theories treatment *lost* more weight when they experienced greater setbacks.
	Can people change? (Implicit	Yeager, Trzesniewski,	General	Education; Health	Increasing commitment	[see Table S3]

	theories of personality)	& Dweck, 2013			through action, saying-is-believing	
	Can emotions change?	Smith et al., 2017	General	Well-being	Increasing commitment through action, saying-is-believing	Middle school students were taught through two 45-minute online modules about emotions, that difficulties with emotion regulation are normal, that emotions can be modified through specific emotion regulation strategies (e.g., reappraisal), and that people can get better at modifying their emotions with practice. Control students completed similar online modules but focused on brain localization. Two to six weeks after the second session, students in the treatment group endorsed more adaptive theories of emotion reported greater emotional well-being and belonging in school. There was no difference in general school satisfaction, overall emotional well-being, or life satisfaction.
Category of Object Judgment: Other People and Groups						
Changing beliefs about other people's potential to learn and grow	Which students are likely to grow most? (Teacher expectancies)	Raudenbush, 1984	Specific	Education	Direct labeling, of other people	A meta-analysis of 18 randomized controlled experiments found that the effects of teacher expectancy interventions (Rosenthal & Jacobson, 1968) are largest when teacher expectancies are established in the first two weeks of the school year, before teachers know students well, and among 1ˢᵗ and 2ⁿᵈ grade students.
		Rosenthal & Jacobson, 1968	Specific	Education	Direct labeling, of other people	Telling elementary-school teachers that a test administered at the beginning of the school year has identified certain children as "growth spurters" led to significantly greater intellectual growth in children, as measured by improved intelligence-quotient scores over the school year.
Changing beliefs about social groups and group conflict	Can groups change? (Implicit theories of groups)	Goldenberg et al., 2018	General	Intergroup relationships	Prompting with information	Extending Halperin et al. (2011), Israeli Jews took part in a 5-hour workshop that encouraged them to view groups in general as capable of change (not focusing on the local Israeli-Palestinian conflict) and emphasized the role leaders have in identifying and amplifying such change. As compared to a control condition taught skills to cope with stress leaders often encounter, the group malleability intervention improved attitudes toward Palestinians, increased hope for a better shared future,

						and increased conciliatory behavior toward Palestinians over a 6-month period of intense intergroup conflict. A second intervention, focused on the value of perspective-taking in conflicts in general, produced similar but if anything smaller benefits.
		Halperin et al., 2011	General	Intergroup relationships	Prompting with information	Encouraging Israeli Jews and Palestinians to view aggressive groups in general as capable of change led to more positive intergroup attitudes and increased willingness to compromise for peace.
	What connections do I have/could I have with other groups?	Aronson et al., 2016	Specific	Intergroup relationships	Prompting with information	In samples of (1) predominantly White second- and third-grade children in the United States and (2) ethnically diverse 8-9 year-old Italian children, those who read 5-6 weekly storybooks including immigrant protagonists (Somali or African and Chinese) and relevant cultural information (e.g., religious holidays, food) reported greater interest in interacting with immigrant children 2-3 weeks after the intervention ended with the greatest effects among younger children (2nd-graders and 8 year-olds). The younger children in the US sample, also reported less anxiety about interacting with immigrant children up to 9-10 weeks later; the Italian sample, however, showed the opposite pattern for anxiety.
		Broockman & Kalla, 2016	Specific	Intergroup relationships	Prompting with leading questions	Having a 10-minute face-to-face conversation with a door-to-door canvasser about transgender rights, including reflecting on their own experiences being judged negatively for being different and how this might offer a window into the experiences of transgender people, reduced transphobia over 3 months and increased support for a nondiscrimination law even after exposure to counterarguments.
		Cameron et al., 2006	Specific	Intergroup relationships	Prompting with information	White 5-11 year-old children in England were read three stories over two sessions, which represented close friendships between ingroup members and refugees. The stories emphasized the individual characteristics of refugees (*decategorization intervention*), the common ingroup identity of refugees as a member of the school community (*common ingroup identity intervention*) or both the common ingroup identity and the unique subgroup identity of refugees (*dual identity*

					intervention). One to two weeks later, children in all three intervention conditions, as compared to a no-treatment control condition, reported a greater sense of connection to refugees and more positive attitudes toward refugees, with the dual identity intervention the most effective. However, there was no effect on children's interest in interacting with refugees.
		Guerra et al., 2013	Specific	Intergroup relationships	Prompting by altering situations	9-11 year-old European and African Portuguese children worked together on a school-related activity in 45-minute weekly sessions for a month that was identified and functioned as either the "Portuguese team" (*recategorization condition*) or the "Portuguese team with Portuguese and African origin students" (*dual identity condition*). One month after the last interaction, African Portuguese children in the recategorization condition exhibited less bias against European Portuguese children as compared to both the dual identity condition and a no-treatment control condition in which students did not interact. European Portuguese children did not differ significantly by condition, but if anything the dual identity condition was more effective for them.
		Kende et al., 2017	Specific but symbolic	Intergroup relationships	Prompting by altering situations	Hungarian undergraduate students had a 60-minute one-on-one conversation with a Roma student in which each person took turns asking and answering questions that required increasing levels of self-disclosure (e.g., "What is your biggest fear in life?"). As compared to a baseline assessment (2 or 6 weeks earlier), this treatment led students to express more positive attitudes toward Roma students and greater intentions to interact with Roma students socially in the future 5 weeks later. No such change was observed for students in a control condition. There was no effect on beliefs about Roma students. The effect on more attitudes was greater the more students perceived anti-prejudice norms.
		Liebkind & McAlister, 1999	Specific	Intergroup relationships	Prompting with information	Finish middle schools were randomized to a treatment in which students read stories of close friendships between prototypical Finnish students and immigrant students and how this improved Finnish students' intergroup attitudes; heard support from university students for

					positive intergroup attitudes; and took part in brief discussion groups about intergroup relations. This treatment prevented a decline in students' "tolerance" of immigrant students observed in control-condition schools 2-3 weeks later.
		Mallett & Wilson, 2010	General	Intergroup relationships	Increasing commitment through action, saying-is-believing	Undergraduates watched a video depicting a friendship between a Black and a White student. Both friends mentioned that they did not expect to become friends or have much in common. As compared to students who just watched the video, students who then wrote about "a time when you didn't think you could become friends with a person, but were wrong for some reason" had a better interracial interaction immediately and initiated more interracial friendships in the next two weeks.
		Page-Gould, et al., 2008	Specific but symbolic	Intergroup relationships	Prompting by altering situations	Pairs of White and Latino undergraduates got to know each other using a "fast friends" procedure, asking and answering a series of increasingly self-disclosing questions and playing cooperative games over three sessions. Over this period, students, especially those higher in prejudice and in worries about prejudice, showed strong declines in cortisol levels, a stress hormone. Moreover, as compared to students in same-race dyads, the intervention led students with higher initial levels of prejudice to initiate more cross-group interactions on campus over the next ten days.
		Shook & Fazio, 2008	Specific	Intergroup relationships	Prompting by altering situations	White first-year college students randomly assigned an African American (versus White) roommate reported less satisfaction with their roommate relationship but showed reductions in automatic racial prejudice and intergroup anxiety over the first academic term of college.
		Stathi et al., 2014	Specific	Intergroup relationships	Active reflection, on a positive aspect of self	White 7-9 year-old children in England imagined interacting with a different Asian child once a week for three weeks in routine settings (park, birthday party, beach). In each session, children received a picture of the Asian child and were prompted to tell a story "about a day that you might have with a new friend." One week later, as compared to children in a no-treatment control condition, those who in the imagined contact condition reported being more similar to Asian children, more

						positive attitudes toward Asian children, and more interest in interacting with Asian children.
	Do I associate other groups with negative qualities? (Implicit bias)	Carnes et al., 2015	General	Intergroup relationships	Prompting with information	An implicit-bias reduction program modeled on Devine et al. (2012) but focused on gender bias was randomized to math, science, and engineering departments. Over 3 days and 3 months, the intervention did not reduce bias among faculty, but it did raise awareness of and motivation to remedy bias, improved faculty members' sense of fit and respect in the department, and, when at least a quarter of department faculty attended the program, increased self-reported actions to promote gender equity. Moreover, over the next two years the intervention marginally increased hiring of female faculty (Devine et al., 2017). In another study this program increased faculty hiring of women in math, science, and engineering departments (Forscher, 2016)
		Devine et al., 2012	General	Intergroup relationships	Prompting with information	Non-African American undergraduates learned about implicit bias, its link to discrimination, and strategies to reduce bias in daily life (e.g., recognizing and replacing stereotypic responses, imagining counterstereotypical outgroup members. This led to a decline in implicit prejudice that lasted through two months and an increase in concern about discrimination.
		Forscher et al., 2017	General	Intergroup relationships	Prompting with information	Extending Devine et al., 2012, a replication study found no reduction in implicit prejudice over two weeks but sustained increases in concern about prejudice over this period. A subsample recruited two years later showed that treated participants were more likely to object in an online forum to an essay endorsing racial stereotyping (79% vs. 48%).
Changing beliefs about how other people view the self	Am I loved and valued?	Layous et al., 2012	General	Interpersonal relationships and behavior; Well-being	Prompting by altering situations	Encouraging 9 to 11 year-olds to perform three kind acts (instead of to visit three places) per week over 4 weeks showed a greater increase in the number of peers who nominated them as someone they would like to spend time with.
		Marigold et al., 2007, Experiment 1	Specific but symbolic	Interpersonal relationships and behavior	Prompting with leading questions	People were asked to recall a recent compliment from their romantic partner and to "Explain why your partner admired you. Describe what it meant to you and its significance for your relationship." As compared to recalling the circumstances of the compliment, this led

					people with low self-esteem to happier and experience greater self-esteem.
		Marigold et al., 2007, Experiment 2	Specific but symbolic	Interpersonal relationships and behavior	Prompting with leading questions	People were asked to recall a recent compliment from their romantic partner and to "Explain why your partner admired you. Describe what it meant to you and its significance for your relationship." As compared to both recalling the circumstances of the compliment and no specific instructions about how to describe the compliment, this led people with low self-esteem to feel more secure in the relationship and to value the relationship more immediately and, over the next 2-3 weeks, to see their partner as behaving more positively toward them and to continue to feel more secure in the relationship.
		Marigold et al., 2007, Experiment 3	Specific but symbolic	Interpersonal relationships and behavior	Prompting with leading questions	People were asked to recall a recent compliment from their romantic partner and to "Explain why your partner admired you. Describe what it meant to you and its significance for your relationship." As compared to both reflecting on "whether" the compliment had a significant meaning for them and their relationship and no specific instructions about how to describe the compliment, this led people with low self-esteem to feel more secure in the relationship and to value the relationship more immediately and, over the next 2-3 weeks, to see their partner as behaving more positively toward them and to continue to feel more secure in the relationship and to value it more.
		Marigold et al., 2010, Experiment 1	Specific but symbolic	Interpersonal relationships and behavior	Prompting with leading questions	Extending Marigold et al., 2007, the compliment intervention also led low self-esteem participants to experienced sustained state self-esteem and greater perceived relationship quality in the face of a minor relationship threat (describing negative "secret selves" a romantic partner could discover).
		Marigold et al., 2010, Experiment 2	Specific but symbolic	Interpersonal relationships and behavior	Prompting with leading questions	Extending Marigold et al., 2007, the compliment intervention led low self-esteem participants' romantic partners (blind to participants' condition) to report less negative behaviors on the part of the partner toward them over the 2-3 weeks following the intervention.
	Why did I receive critical feedback	Yeager, Purdie-Vaughns et al.,	Specific	Education	Prompting by altering	Black and White 7th grade students turned in an essay, on which their teacher had provided critical feedback.

	(Wise feedback)	2014, Experiments 1 and 2			situations	When a paper-clipped note written by their teacher was appended to the marked-up essay reading, "I'm giving you these comments because I have high standards and I know that you can meet them" (versus "I'm giving you these comments so that you'll have feedback on your paper") this note (a) increased the percentage of White students who chose to revise their essay from 64% to 82%, and increased the percentage of Black students from 27% to 64% (raw percentages) (Experiment 1) and (b), when this revision was required, increased the quality of the revision. The greatest effects were observed for Black students who were mistrustful of school and, among these students, halted a 2-year decline in school trust over the rest of the school year. In a long-term follow-up from both experiments (Yeager, Purdie-Vaughns, et al., 2017), African American students who received the wise-feedback note received half has many disciplinary citations in 8th grade as those who did not, cutting the racial disparity in half, and were more likely to enroll in a four-year college on-time (64% versus 45%).
		Yeager, Purdie-Vaughns et al., 2014, Experiment 3	General	Education	Increasing commitment through action, saying-is-believing	High school students read stories from other students about receiving critical feedback, which emphasized understanding criticism as helping students achieve a higher level and given with this purpose, and practiced these attributions by interpreting critical feedback on another student's essay. This raised end-of-term core academic grades for Black students, reducing the achievement gap with White students by 39%, and reduced the percentage of classes in which Black students performed at a D or lower level from 43% to 23%.
		Yeager, Walton, et al., 2016, Experiment 3	General	Education	Increasing commitment through action, saying-is-believing	A version of the wise-feedback intervention (Yeager, Purdie-Vaughns, et al., 2014 Experiment 3) adapted for online delivery prior to matriculation in college was delivered in online modules alongside other entrance forms in the summer before students entered a selective private university. Participants were 90%+ of the entering class. In the treatment condition, stories from older students emphasized that instructors in college

					give critical feedback because they believe that recipients can reach a higher standard. Students read the stories and then wrote an essay about how they anticipated their own experiences with critical feedback in college would reflect this process. As compared to a randomized control condition, this exercise, along with social-belonging and cultural fit interventions, increased the first-year GPAs of negatively stereotyped ethnic-minority and first-generation White college students, reducing the achievement gap by 31%, and reduced the percentage of these students in the bottom quarter of the class in the first year from 50% to 37%. At the end of the first year, treatment-condition minority and first-generation students also reported making more close friends, getting more involved in extracurricular activities, seeking out academic support services more, and being more likely to have developed strong mentor relationships.
	Am I viewed through the lens of a negative stereotype? (Stereotype threat)	Danaher & Crandall, 2008	Specific	Education	Prompting by altering situations	High school students took the AP Calculus test with standard demographic questions (race, gender) moved to the end instead of immediately before the test. This raised girls' scores, and increased the percentage of girls who received AP credit from 32% to 38%.
		Good et al., 2008	Specific	Education	Direct labeling, of a situation	Women enrolled in demanding college calculus sequence took a practice final exam. When this exam was described as evaluative of calculus ability but as yielding "no gender differences," as compared to when it was simply described as evaluative of ability, women and especially White women performed significantly better.
		Smeding et al., 2013	Specific	Education	Direct labeling, of a situation	French undergraduates took a statistics exam represented as either a tool to train students or as a way to select the best students. Representing the exam as for the purpose of learning eliminated a large social-class performance gap.
Category of Object Judgment: Personal and Social Experiences					

Changing beliefs about personal experiences and contexts that lack meaning	Does this school or work task have personal meaning to me?	Canning et al., 2017	Specific	Education	Prompting with leading questions	Asking students in an introduction biology course to reflect either on why "specific [course content] is relevant to your life or useful for you" or on how the material could be "relevant to [another] person's life, or useful for this person" several times over the semester earned higher course grades, were more likely to enroll in the second course of the biology sequence, and more likely to stay with their STEM major than students in a randomized controlled condition. Timing (0, 1, 2 or 3 assignments) and dosage (utility value first or control exercise first) was also randomized. The overall benefits were found for students who completed any utility-value exercise. Dosage did not predict treatment effects. But benefits were greater for students with a history of poor performance who completed an exercise early in the term. By contrast, higher-performing students benefited more from an exercise later.
		Harackiewicz et al., 2012	Specific	Education	Direct labeling, of a situation	Mailing brochures to parents and creating a website highlighting the usefulness of math and science courses and how to talk with adolescents about this increased students' enrollment in math and science courses in the last two years of high school. In a long-term follow-up, the treatment raised math and science scores on a college preparatory exam (the ACT) by 12 percentile points (Rosek et al., 2017).
		Harackiewicz et al., 2016	Specific	Education	Active reflection, values-affirmation; Prompting with leading questions	Asking students in an introduction biology course to reflect on why "specific [course content] is relevant to your life or useful to you" raised the course grades of first-generation and racial-ethnic minority college students, reducing the achievement gap with advantaged students by 61%. Simultaneously, a values-affirmation intervention was not effective.
		Hulleman & Harackiewcz, 2009	Specific	Education	Prompting with leading questions	Asking 9ᵗʰ-grade science students who expected to perform poorly how the course material might be useful to them or a friend or relative 3-5 times over the course of the term raised end-of-quarter interest and grades in science for students who expected to perform poorly in the course.
		Hulleman et al., 2017,	Specific	Education	Prompting with leading	Undergraduate students enrolled in an introductory psychology class were asked, following the first exam,

		Experiment 2			questions	to reflect on ways that the course material might be relevant to their life in an online survey and, following the second exam, to describe how a topic in the course is useful or meaningful to them and how learning about it will be beneficial to them in the future. Among students who performed poorly on the first exam, this raised final exam scores and interest in psychology as compared to a randomized control condition. The greatest benefits were for men. There was no additional effect of a randomized implementation intention element, which additionally asked students where and when they might think about the relevance of the course materials to their lives, obstacles that could prevent this, and how they could overcome these obstacles.
		Jang, 2008	Specific	Education	Prompting with information	Teaching students training to be teachers that an introductory statistics lesson helps people become more effective teachers increased engagement and learning in the lesson.
		Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 1	Specific	Education	Prompting with information	Belgian college students studying to become preschool teachers learned about recycling in class. For some the content was linked to their intrinsic goals ("reading the text could help you know how to teach your future toddlers that they can do something to help the environment"). For others the content was linked to extrinsic goals ("reading the text could teach you how to save money by reusing materials"). Students in the intrinsic-goal condition learned more, performing better on a test of conceptual understanding and contributing more to a group discussion a week later, reported more autonomous motivation, and were more likely to seek out further information about recycling. Similar benefits were also found for an intervention that represented the course content in autonomy-supportive ways.
		Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 2	Specific	Education	Prompting with information	Belgian college students studying marketing learned about business communications in class. For some the content was linked to their intrinsic goals ("carefully reading the text…can contribute to your personal development"). For others the content was linked to extrinsic goals ("carefully reading the text…can help your chances of getting a well-paid job"). Students in the

					intrinsic-goal condition learned more, performing better on a test of conceptual understanding immediately after the course and 2 weeks later and contributing more in small group presentations 5 days later, reported more autonomous motivation, and were more likely to seek out further information about business communications, taking extra reading, completing extra problems, and going to the library for related information. Similar benefits were also found for an intervention that represented the course content in autonomy-supportive ways.
	Vansteenkiste, Simons, Lens, Sheldon, et al., 2004, Experiment 3	Specific	Education	Prompting with information	Belgian high school students studied Tai-bo, a physical exercise, in class. For some the content was linked to their intrinsic goals for fitness and health. For others the content was linked to extrinsic goals for being physically attractive and avoiding gaining weight. Students in the intrinsic-goal condition learned more, performing better on Tai-bo exercises 3-5 days later, and were more likely to volunteer to demonstrate Tai-bo to other students and visitors several days later. Similar benefits were also found for an intervention that represented the course content in autonomy-supportive ways.
	Vansteenkiste, Simons, Lens, Soenens, et al., 2004	Specific	Education	Prompting with information	Belgian college students studying to become preschool teachers learned about recycling in class. For some the content was linked to their intrinsic goals ("reading the text will provide you some information about how to teach your future toddlers some simple ecological strategies so that they can learn to contribute themselves to a clean and healthy environment"). For others the content was linked to extrinsic goals ("reading the text will provide you some information about how to save money on your future job by recycling materials"). For a last group the content was linked to both goals. As compared to students in both the extrinsic-goal condition and the double-goal condition, students in the intrinsic-goal condition learned more, performing better on a test of conceptual understanding and contributing more to a group presentation a week later and were more likely to seek out further information about recycling.
	Is this food	Hanks et al.,	Specific	Health	Direct	In elementary schools that posted a vinyl banner

	desirable to eat?	2016			labeling, of a situation	displaying vegetable characters around the salad bar and showed television segments about health education featuring vegetable characters, the percentage of students who took vegetables from the salad bar increased from 10% to 35%, as compared to a change in control schools from 6.5% to 7.8%.
		Turnwald et al., 2017	Specific	Health	Direct labeling, of a situation	Labeling vegetable dishes in a university dining hall in indulgent terms (e.g., "rich buttery roasted sweet corn") increased the number of people who took the vegetable by 25% and the amount of vegetables consumed by 33%, as compared to a basic label (e.g., "corn").
Changing beliefs in and about interpersonal conflicts and interactions	Why is my baby fussing?	Bugental et al., 2002	Specific	Health; Interpersonal relationships and behavior	Prompting with leading questions	Over an average of 17 home visits during the baby's first year, paraprofessionals asked mothers demographically at risk of committing child abuse to identify challenges in parenting (e.g., "My baby won't stop crying") and kept asking why they were having this challenge ("Could it be something else?") until the mother gave a reason that did not blame themselves or their baby (e.g., not "I'm a bad mom" or "My baby is a bad baby" but "Maybe the baby needs a new bottle"). They then problem-solved with the mother to address this problem. As compared to both visits without this component, which provided mothers information about healthy development and relevant services, and a no-visit condition, this reduced the rate of child abuse during the first year from 23% to 4%, with the greatest effect among high-risk infants (58% vs. 10%). It also improved children's health and reduced mothers' depression at the child's first birthday.
		Bugental & Schwartz, 2009	Specific	Health; Interpersonal relationships and behavior	Prompting with leading questions	In a replication of Bugental et al., 2002, mothers of infants born at medical risk (e.g., preterm), who are at increased risk of mistreatment, received home visits from trained staff 17 times over the baby's first year of life. In the treatment condition, the visitors asked questions designed to encourage mothers to understand challenges in parenting as problems to be solved. As compared to a randomized control condition in which visitors provided mothers with ideas and information about how to solve problems, this reduced the rate of corporal punishment from 35% to 21%, improved safety

					in the home, and reduced child injuries at 1-year post intake. The rate of physical abuse within the first year was low in both conditions (4% in the treatment, 5% in the control). Follow-ups at the age of 3 found that the treatment increased mothers' investment in time and money in more high-risk children, promoting children's health (Bugental, Beaulieu, & Silbert-Geiger, 2010); reduced children's aggression (Bugental et al., 2012); and reduced stress markers in children (basal cortisol) and improved children's cognitive functioning (short-term verbal memory) (Bugental, Schwartz, & Lynch, 2010).
	How can I appropriately influence my teenager?	Destin & Svoboda, 2017	General	Education	Prompting with information	Conveying to parents in a parent panel discussion the importance of talking with their adolescent children about future opportunities and ways to respond positively to adolescents' academic difficulties raised students' grades in 8ᵗʰ grade.
		Harackiewicz et al., 2012	Specific	Education	Direct labeling, of a situation	Mailing brochures to parents and creating a website highlighting the usefulness of math and science courses and how to talk with adolescents about this increased students' enrollment in math and science courses in the last two years of high school. In a long-term follow-up, the treatment raised math and science scores on a college preparatory exam (the ACT) by 12 percentile points (Rosek et al., 2017).
		LaBrie et al., 2016	Specific	Health	Direct labeling, of social norms; Prompting with information; Active reflection, on goals	Parents of new college students learned in a 60-minute in-person session during the summer before college began (1) about college drinking, including how they as a group tend to "overestimate how accepting other parents are of drinking," "underestimate the extent to which other parents speak to their children about alcohol," and "underestimate how much their child would drink in college," as well as (2) research showing parents' ongoing influence on students' drinking in college and (3) discussed strategies to speak with their child about college drinking effectively, reduced students' reports of the extent to which they drank in the first month of college by 30% as compared to a randomized control group. Using a non-randomized comparison group, Turrisi et al. (2001, 2010) found

						similar reductions in first-year college student drinking from a 35-page handbook distributed to parents.
	How can I better manage this conflict?	Finkel et al., 2013	Specific	Interpersonal relationships and behavior	Active reflection, on negative experiences	Asking married couples in three 7-minute writing exercises over a year to consider how "a neutral third party who wants the best for all" would think about a conflict in their marriage and how they could take this perspective in future conflict situations halted the typical decline in marital satisfaction over the year.
		Hudley & Graham, 1993	Specific	Interpersonal relationships and behavior	Prompting with information	African American 3rd through 5th grade boys in low-income schools identified by teacher ratings and peer nominations as aggressive completed a 12-lesson intervention using role-playing, discussion of personal experiences, and other experiences to encourage them (1) to accurately understand cues provided by others in social interactions, (2) to attribute ambiguous negative social encounters to nonhostile intentions, and (3) to respond appropriately. As compared to children in two control conditions, this intervention reduced perceptions of hostility in hypothetical peer encounters and teacher ratings of aggression two weeks after the intervention.
		Goldenberg et al., 2018	General	Intergroup relationships	Prompting with information	Israeli Jews took part in a 5-hour workshop that addressed the value of taking the other side's perspective in challenging situations in general (not in the local Israeli-Palestinian conflict). As compared to a control condition taught skills to cope with stress leaders often encounter, the perspective taking intervention improved attitudes toward Palestinians and increased hope for a better shared future over a 6-month period of intense intergroup conflict. A second intervention, focused on the malleability of groups in general, produced similar but if anything larger benefits.
		Okonofua et al., 2016	Specific	Education	Increasing commitment through action, saying-is-believing	Two online exercises encouraging middle-school teachers to take on an empathic rather than punitive mindset about student misbehavior—to understand misbehaving students' experience and perspective, to sustain positive relationships, and to work with students to improve behavior—reduced suspension rates among students by 50% over the school year.
Changing beliefs about	Is college accessible to me?	Destin, 2017	Specific	Education	Prompting with	Extending Destin & Oyserman (2009), representing college as accessible by providing information about

					information	need-based financial aid to socioeconomically diverse 7th-grade students led students from low-asset households to be more likely to plan to do their homework that night. There was no effect for students from high-asset households.
the attainability of a future setting						
		Destin & Oyserman, 2009	Specific	Education	Prompting with information	Representing college as accessible by providing information about need-based financial aid to low-income African American and Latino 7th-grade students led students to be more likely to plan to do their homework that night.
Changing beliefs about how experiences with the physical world affect the body	How does my body interact with the external world?	Au et al., 2008	Specific	Health	Prompting with information	Teaching 4th-grade children in Hong Kong following the 2003 SARS epidemic the biological theory of germs, challenging the traditional folk theory that being cold causes colds, increased the percentage who washed their hands before folding napkins for a class party from 14% to 41%. The effects were observed above and beyond a teacher-designed program based on publicly available resources, which emphasized the symptoms of flus, do's and don'ts, etc.
		Gripshover & Markman, 2013	Specific	Health	Prompting with information	Teaching preschool-aged children a theory of nutrition—that variety is important because different foods contain different nutrients, that nutrients are there even if you can't see them, and that foods within a category share similar nutrients—led children to take more vegetables at snack time.
	Will this treatment or behavior help me? (Placebos)	Benedetti et al., 2003	Specific	Health	Prompting by altering situations	Making the injection of drugs visible rather than invisible to patients increased their effectiveness, including greater reductions in pain from morphine, greater reductions in anxiety from diazepam, and greater reductions in heart rate from propranolol.
		Crum & Langer, 2007	Specific	Health	Prompting with information	Telling hotel room attendants that cleaning hotel rooms meets the Surgeon General's recommendations for an active lifestyle reduced attendants' weight, systolic blood pressure, and percent body fat and increased their job satisfaction four weeks later.
		Kaptchuk et al., 2010	Specific	Health	Prompting by altering situations	Telling patients with irritable bowel syndrome that a pill they are to take twice daily contains no medication (i.e., is a placebo) but that the placebo effect is powerful and can lead the body to respond effectively led, as compared to a no-pill condition, to greater improvement,

					and reduced symptoms at three weeks. At this point, 59% of treated patients, as compared to 35% of control patients, reported adequate relief.
		Stanforth et al., 2011	Specific	Health	Prompting with information	University building service workers learned in a 30-minute session that their work "is good exercise," or about taking greater responsibility for job safety. There was no difference between the two groups 4 and 8 weeks later in weight, BMI, percent body fat, or waist circumference, but the treatment group had lower their systolic and diastolic blood pressure.

Table S2. Wise interventions that capitalize on the need for self-integrity.

Specific Object of Judgment (Threat Addressed)	Reference	Specificity of Object of Judgment	Content Area	Change Strategy	Summary
Approach to Desired Meanings: Remedy Threats to Self-Integrity that Undermine Functioning					
Will I be seen or treated negatively because of my group identity? (Social identity threat)	Ben-Zeev et al., 2017	General	Education	Active reflection, values-affirmation	Undergraduate underrepresented racial-ethnic minority students enrolled in science, technology, engineering, or math (STEM) programs completed a values-affirmation intervention in a laboratory. This exercise reduced stereotype-based evaluative concerns and improved performance on a laboratory test of abstract reasoning, but did not affect semester grades in STEM courses. At the same time, an intervention that taught minority students about stereotype threat and ways to cope also reduced stereotype-based evaluative concerns and improved both test performance and semester grades in STEM courses.
	Bowen et al., 2013	General and specific	Education	Active reflection, values-affirmation; Prompting with information	Extending Cohen et al., 2006, 2009, a values-affirmation intervention was delivered to 6th-, 7th-, and 8th- grade students in a middle school that served a predominantly low-income and African American and Latino student body. The exercise was completed in homeroom classrooms two weeks before the end of the first marking period. The intervention forestalled a negative slope in social studies grades over the school year. In addition, homeroom teachers were randomized to read students' essays or not. When teachers read students' values-affirmation essays, as compared to both when they did not values-affirmation essays and when they read students' control essays, students earned higher social studies grades over the year.
	Borman et al., 2015	General	Education	Active reflection, values-affirmation	In a district-wide scale-up extending Cohen et al., 2006, 2009, a values-affirmation intervention was delivered to 6th-, 7th-, and 8th- grade students in all 11 middle schools in Madison, Wisconsin. The intervention raised cumulative 7th grade-point-average for racial-ethnic minority students, reducing the racial achievement gap by 10%. The greatest benefits were in schools in which African American students were poorly represented and where the achievement gap was highest, where identity threat may be highest (Hanselman et al., 2014).

	Brady et al., 2016	General	Education	Active reflection, values-affirmation	Latino and White students in the first or second year of a predominantly White college completed a values-affirmation intervention or control materials as part of a laboratory study. This improved the college grade-point-average of Latino students over the next two years, reducing the ethnic achievement gap by 90%. At the end of this period, Latino students who had received the values-affirmation intervention showed evidence of greater spontaneous self-affirming thoughts and fewer self-threatening thoughts in response to an academic stressor, and reported greater sense of adequacy and self-integrity, belonging.
	Cohen et al., 2006	General	Education	Active reflection, values-affirmation	7th-grade students in a middle-class suburban middle school with a student body composed of about half African American and half White students in the northeastern United States identified personally important values from a short list and then wrote about why these were important to them in several 15-20-minute in-class writing exercises beginning at the outset of 7th-grade. As compared to multiple active control conditions, this exercise raised African American students' course grades that semester, an effect that replicated in a second study. Across the two studies, the improvement in grades was associated with a 40% reduction in the racial achievement gap. The intervention also reduced the percentage of African American students who received a *D* or below from 20% to 9%. Moreover, the values-affirmation intervention improved GPA over the next two years, especially for initially low-performing students (Cohen et al., 2009), and bolstered students' sense of belonging in school (Cook et al., 2012). Six years after the original intervention, African American students who had received the affirmation were more likely to enroll in college (92% versus 78%; Goyer, Garcia et al., 2009).
	Cook et al., 2012, Study 2	General	Education	Active reflection, values-affirmation	Extending Cohen et al., 2006, 2009, a values-affirmation intervention delivered in the first week of 7th grade raised first-quarter grades among African American students more so than an affirmation delivered a month into the school year. For initially low-performing African American students, the early affirmation also promoted a greater sense of belonging in school.
	Dee, 2015	General	Education	Active	In a scale-up extending Cohen et al., 2006, 2009, a values-

				reflection, values-affirmation	affirmation intervention was delivered to 7th- and 8th-grade students in 6 Philadelphia-area middle schools over two years. Although the intervention did not lead to an overall improvement in academic performance among racial-ethnic minority students, it did improve performance among minority students in more supportive classrooms. However, in these same classrooms the intervention reduced performance among girls.
	Hall et al., 2014	General	Poverty	Active reflection, values-affirmation	Clients at a soup kitchen scored higher on IQ and cognitive-control tasks and were more likely to accept information about public benefit programs if they first described a personal success.
	Harackiewcz et al., 2014	General	Education	Active reflection, values-affirmation	Extending Miyake et al. 2010, students in an introductory biology course completed a values-affirmation intervention integrated into the course. The intervention raised grades in biology among first-generation college student, reducing the social-class achievement gap by 50%, and increased retention in the second course in the biology sequence by 20%. Moreover, first-generation students who received the affirmation earned a higher grade-point-average over the next three years (Tibbets et al., 2016).
	Harackiewcz et al., 2016	General	Education	Active reflection, values-affirmation	An attempted replication of the values-affirmation in Harackiewcz et al., 2014 did not produce the same gains in achievement, possibly because there was not a significant achievement gap along social class lines in this sample.
	Jordt et al., 2017	General	Education	Active reflection, values-affirmation	Undergraduate students enrolled in an introductory biology course completed a values-affirmation intervention in an online exercise outside of class. As compared to a randomized control condition, the intervention raised exam scores for underrepresented ethnic-minority students
	Kizilcec et al., 2017, Experiment 1	General	Education	Active reflection, values-affirmation	Students enrolled a massive open online course (MOOC) related to computer science completed a values-affirmation intervention (or social-belonging intervention, see Table S3) embedded in the course. Among students from less-developed countries (e.g., India, Pakistan, Egypt), the intervention doubled course persistence (amount of course material studied). There was no effect for students from more developed countries.
	Kizilcec et al., 2017,	General	Education	Active reflection,	Students enrolled a massive open online course (MOOC) related to US public policy completed a values-affirmation

	Experiment 2			values-affirmation	intervention (or social-belonging intervention, see Table S3) embedded in the course. Among students from less-developed countries (e.g., India, Pakistan, Egypt), the intervention increased course persistence (amount of course material studied) and raised the completion rate by 67%. Among students from more developed countries, the intervention reduced completion rate by 12%.
	Kost-Smith et al., 2012	General	Education	Active reflection, values-affirmation	A replication of Miyake et al. (2010) found the values-affirmation intervention caused similar reductions in gender differences in exam performance and course grades but did not affect performance on the standardized test of conceptual knowledge in physics.
	Miyake et al., 2010	General	Education	Active reflection, values-affirmation	College students in an introductory physics courses completed a values-affirmation intervention integrated into the course: 15-minute writing exercises in which students reflected on personal values (Cohen et al., 2009) completed in the first recitation in week 1, in an online homework assignment in week 4, and shortly before the first midterm exam in week 5. As compared to a randomized control condition, this raised women's exam scores in the course and learning as assessed by a standardized test of conceptual knowledge in physics, eliminating gender differences. The benefits were greatest for women who endorsed the stereotype that men do better than women in physics.
	Sherman et al., 2013, Study 1	General	Education	Active reflection, values-affirmation	Extending Cohen et al., 2006, 2009, 6th-, 7th, and 8th-grade students in a middle school located in a middle-class neighborhood with a primarily low-income student body composed of about half Latino and half White students completed a values-affirmation intervention in in-class writing exercises beginning at the outset of 7th grade. As compared to a randomized control condition, the values-affirmation intervention raised grades for Latino students over the next three years into high school.
	Sherman et al., 2013, Study 2	General	Education	Active reflection, values-affirmation	A replication of Sherman et al., 2013 Study 1 found the values-affirmation again improved grades for Latino students over the school year, reducing the achievement gap with White students by 28%, and also showed that the intervention led Latino students to construe events in school in a broader way and protected their daily feelings of academic fit and motivation from identity threat.

	Silverman & Cohen, 2014	General	Education	Active reflection, values-affirmation	Blind students in a compensatory skill-training program made more progress in four courses (Braille, computers, home management, and travel) over a month if they had completed a values-affirmation.
	Walton, Logel et al., 2015	General	Education	Increasing commitment through action, saying-is-believing	In small-group sessions in the fall of the first year, students in a selective engineering program read stories from male and female senior engineering students describing how they kept "balanced" by incorporating personal values in their daily lives and activities. Students watched a slideshow presentation of the stories and heard them read aloud by senior engineering students. They then wrote an essay about they incorporated values in their lives to stay balanced, and a letter to a future first-year student describing this. As compared to a randomized control condition, this "affirmation-training" intervention, along with a social-belonging intervention, raised women's GPA in male-dominated engineering majors over the first year, eliminating the gender gap in achievement. It also caused women in male-dominated majors to view daily adversities as less threatening over the next two weeks, immediately and in the second semester, improved women's evaluation of their experience in engineering, and, in the second semester, improved their perceived prospects of succeeding in the field. The affirmation-training intervention also increased women's identification with their gender group and friendships with other women.
Can I manage a stressful or threatening academic experience?	Peters et al., 2017	General	Education; Health	Active reflection, values-affirmation	Undergraduate students enrolled in an introductory psychology statistics course completed a values-affirmation exercise once in class (week 2) and a second time online several days before the first midterm (week 4). As compared to students who completed a control exercise, those who completed the affirmation showed greater self-perceived numeracy, greater performance on certain tests of numeracy (symbolic arithmetic), greater financial literacy, and greater health-related behaviors at the end of the term relative to the beginning of the term. There was no effect on course grades or subsequent enrollment in math-intensive courses.
	Sherman, Bunyan, et al., 2009	General	Health	Active reflection, values-	Undergraduate students who completed two values-affirmation exercises in the weeks preceding a major test showed reduced levels of stress hormones as the test

				affirmation	approached.
	Taylor et al., 2017	General	Well-Being; Health	Prompting by altering situations; Active reflection, on a positive aspect of self; Active reflection, values-affirmation	[see Table S3]
Can I regulate my behavior effectively to accomplish important goals?	Logel & Cohen, 2012	General	Health	Active reflection, values-affirmation	Completing a values-affirmation exercise led overweight women to lose more two-and-a-half months later, and show evidence of enhanced self-regulation.
Am I doing something that harms my health? (Health risk information)	Armitage et al., 2011	General	Health	Active reflection, values-affirmation; Prompting with leading questions	Adults (1) who described times they had behaved kindly toward others or (2) who reflected on how to affirm using if-then propositions ("If I feel threatened or anxious, then I will…think about the things I value about myself…think about things that are important to me…") were more accepting of information about the health risks of drinking and, a month later, reported drinking less.
	Ehret & Sherman, 2018	General and specific	Health	Active reflection, values-affirmation; Active reflection, on goals	College student drinkers (average of 11 drinks/week at baseline) (1) reflected on personal values (versus how a value less important to them might be important to someone else), before reading information about the risks of drinking and (2) made a plan about how to implement two strategies to reduce harm using an "If…then…" template (versus described why each strategy would be helpful). Examining the percentage of students who abstained from drinking over the next week, both main effects were significant: 41% of participants who both affirmed and completed an implementation intention abstained, as compared to 31% in the implementation-only condition, 26% in the affirmation-only condition, and 17% in the control condition. In the second week post-intervention only the main effect of affirmation was significant (combined: 35%; implementation-intention only: 23%; affirmation-only: 28%; control: 17%).
	Falk et al., 2015	General	Health	Active	Sedentary adults, mostly overweight, completed a values-

				reflection, values-affirmation	affirmation exercise and received a health message focused on the benefits of increasing activity and decreasing sedentary time once per day for a month. As compared to a control condition that received the same health messages but did not complete the affirmations, those in the treatment condition showed less sedentary behavior over the month, as assessed by wrist worn accelerometers. In addition, the initial affirmation, completed in an fMRI scanner, led to increased activity in the ventromedial prefontal cortext (VMPFC), a brain region associated with self-related processing and positive valuation.
	Harris et al., 2007	General	Health	Active reflection, values-affirmation	Smokers who first reflected on their desirable characteristics were more accepting of information about the health risks of smoking. They also reported greater motivation to smoke less 1-week later but no change in actual smoking.
	Harris et al., 2014	General and specific	Health	Active reflection, values-affirmation; Active reflection, on goals	Adults who both reflected on personal values before reading information about the benefits of eating fruits and vegetables and who made a plan about how to do so using an "If…then…" template reported eating more fruit and vegetables 7 days later; there was no benefit for either intervention on its own. At a 3-month follow-up, both the affirmation intervention and the implementation-intention intervention produced independent (non-interacting) increases in reported fruit and vegetable consumption, though the later was marginally significant.
	Jessop et al., 2014, Study 1	General and specific	Health	Active reflection, values-affirmation; Active reflection, on goals	Adults who described times they had behaved kindly toward others (a type of values-affirmation) before receiving information about the health risks of a lack of exercise reported exercising more over the next week; however, if people also completed an implementation intention exercise (reflecting on how, when, and where they would increase their exercise) this benefit was eliminated.
	Jessop et al., 2014, Study 2	General and specific	Health	Active reflection, values-affirmation; Active reflection, on goals	Adults who did not exercise much exercised *less* when they both completed a values-affirmation (describing times they had behaved kindly toward others) and an implementation intention exercise (repeating three times and committing to acting on this sentence, "And if I think about NOT doing at least one extra session of exercise over the next 7 days, then I will ignore this thought.")
Can I get along	Layous et al.,	General	Education	Active	Mostly first- and second-year college students completed a

	2016			reflection, values-affirmation	values-affirmation or control exercise immediately before taking a challenging math test described as predictive of future success. Among those who felt they did not belong in college, the values-affirmation reversed a downward slope in GPA through the subsequent semester.
with important people?					
	Stinson et al., 2011	General	Interpersonal relationships and behavior	Active reflection, values-affirmation	College students who felt insecure in their personal relationships felt more secure in their relationships and showed more confident social behavior 2-4 weeks after a values-affirmation, and this contributed to similar improvements another 4 weeks later.
	Thomaes et al., 2012	General	Interpersonal relationships and behavior	Active reflection, values-affirmation	Adolescents, especially those who were more antisocial at baseline, showed greater prosocial feelings and behavior over a 3-month period following a values-affirmation.
	Thomaes et al., 2009	General	Interpersonal relationships and behavior	Active reflection, values-affirmation	Narcissistic adolescents with low self-esteem who completed a values-affirmation were less likely to be nominated by peers as aggressive in the subsequent week.
	Approach to Desired Meanings: Link Desired Meanings for Self-Integrity to Motivate Positive Change				
Did I say I would do it? (Pre-committment)	Dholakia & Morwitz (2002)	Specific	Work	Increasing commitment through action, pre-commitment	Customers of a financial services firm were randomized to receive a telephone survey assessing satisfaction with the company; 96% reported being satisfied. As compared to customers not surveyed, this increased the percentage who opened a new account over the next year from 13% to 51%, and reduced unprofitability/customer from $13.80 to $1.20.
	Greenwald et al. 1987	Specific	Civic behavior	Increasing commitment through action, pre-commitment	College undergraduates were called just before the 1984 Presidential election and asked if they knew where and when to vote. Those who were also asked if they expected to vote were more likely to vote (87% vs. 62%) (for non-replications, see Nickerson & Rogers, 2010; Smith et al., 2003).
	Gringart et al., 2008	Specific	Intergroup relationships	Increasing commitment through action, pre-commitment	Australian hiring managers received letters emphasizing (1) common stereotypes about older workers and empirically based counter evidence and (2) information about hiring discrimination against older workers, how this violates national norms, and a booklet with names of hiring managers who oppose age discrimination, and an invitation to add their own name to this list to be distributed to the broader community. As compared to hiring managers who received only (1) or (2) or neither, those who received both reported over the next few weeks expressed more positive views of

				older workers, a greater preference for hiring older workers, and being more likely to hire older workers.
	Lewin, 1958	Specific	Civic behavior	Prompting by altering situations	[see Table S3]
	Matthies et al 2006	Specific	Sustainability	Prompting by altering situations; Direct labeling, of a situation; Prompting with leading questions	German citizens with good car access living in areas with convenient public transit were randomized (a) to receive a free public transit ticket (or not) and (b) to receive information about the negative effects of car use on the world's climate, a list of ten personal commitments to alternatives to driving (e.g., "I commit to change the way I drive to safe fuel during the next two weeks"), only two of which referenced public transit ("I commit to using public transportation at least one/two times during the next two weeks for my regular trip"), from which they selected one or more to endorse (or did not). In the two weeks following the free ticket manipulation, people who received the free ticket were more likely to try public transit. Then the commitment manipulation was delivered. While there was no main effect, and no effect in the first two weeks following its delivery, in the subsequent two weeks there was an interaction between commitment condition and the degree to which people personally endorsed reducing car use. Among endorsers, those in the commitment condition were more likely to try public transit (36.3% did) than those in the no-commitment condition (7.1%). There was no effect for people without this strong personal norm (commitment: 0%; no-commitment: 7.4%). The same pattern was observed, albeit marginally, in an assessment 20-21 weeks following the commitment manipulation.
	Shu et al., 2012	Specific	Civic behavior	Increasing commitment through action, pre-commitment	Policy owners received a car insurance form on which to report the number of miles they had driven in the previous year. Those for whom the signature line ("I promise that the information I am providing is true") was at the top rather than the bottom disclosed having driven 10% more miles (26,098 vs. 23,671), increasing payments and promoting fairness.
	Smith et al., 2003	Specific	Civic behavior	Increasing commitment through action, pre-commitment	In an attempted replication of Greenwald et al., 1987, asking registered voters if they expected to vote in a presidential primary election in telephone surveys over two days prior to the election caused no increase in voter turnout.

Did I work hard at this? (Effort justification)	Axsom & Cooper, 1985	Specific	Health	Increasing commitment through action, effort justification	Overweight undergraduates were told that various perceptual and cognitive tasks they would complete over four experimental sessions would enhance "neuro-physiological arousal" and help them lose weight. Those for whom the tasks required high effort (distinguishing similar limes, reciting text as their voice echoes back) lost an average of 6 pounds a year later. By contrast, students for whom the tasks were easy, short, and included breaks and those in a control condition lost no weight.
Am I not living up to my attitudes or values? (Hypocrisy)	Dickerson et al., 1992	Specific	Sustainability	Increasing commitment through action, hypocrisy	Female swimmers exiting a pool were led to feel hypocritical about the length of their showers by both (a) agreeing to help out with campus conservation efforts by signing their name to a flyer saying "Please conserver water. Take shorter showers," and (b) responding to survey items asking, for instance, "When you take showers, do you ALWAYS make them as short as possible, or do you sometimes linger longer than necessary?" This reduced shower time relative to a condition in which swimmers did neither (a) nor (b). Swimmers who did either (a) or (b) did not differ from either the hypocrisy or the control group. Additionally, whereas 35% of swimmers in the control group turned off the shower while shampooing or soaping up, 70% of those who did (a), (b), or both did.
	Rokeach, 1971	General	Intergroup relationships	Increasing commitment through action, hypocrisy; Prompting with information	Undergraduates in the 1960s were asked to rank their values and typically ranked "freedom" over "equality." Some were told that this ranking meant that people valued freedom for themselves more than freedom for other people, and further elaborated on this. This message led students to value "equality" and equal rights more highly over the next 15-17 months, increased the percentage who chose to major in an ethnic studies core 5 months later from 22% to 42%, and increased the percentage who responded to a solicitation from the NAACP over this period from 11% to 26%.
	Rokeach, 1976	General	Work	Increasing commitment through action, hypocrisy; Prompting with information	Student-teachers were asked to rank their values. They then reviewed rankings from peers, which indicated that most student-teachers ranked "a sense of accomplishment" more highly than "mature love." They were then told that good teachers tended to rank "mature love" more highly than "a sense of accomplishment" and discussed the interpretation of this finding. As compared to students in a control condition,

					who reflected on how education professors might rank values, those in the treatment condition showed a greater endorsement of "mature love" and were rated by supervisors on a standard scale as more effective teachers 12-13 weeks later.
	Son Hing et al., 2002	Specific	Intergroup relationships	Increasing commitment through action, hypocrisy	Undergraduates first advocated a nonprejudicial stance toward Asians and then, in the hypocrisy condition, wrote "about two situations in which you reacted more negatively to an Asian person than you thought you should or treated an Asian person in a prejudiced manner." As compared to those who did not complete the hypocrisy induction, people in the hypocrisy condition with low implicit but high explicit prejudice against Asians felt more guilt and discomfort and, subsequently, advocated smaller cuts to the Asian Student Association. There was no condition difference for people low in implicit and explicit prejudice.
	Stone et al., 1994	Specific	Health	Increasing commitment through action, hypocrisy	Sexually active undergraduates were led to feel hypocritical about their own safe sex practice by (a) helping to create an AIDS prevention program for high school students and (b) reviewing circumstances in which they personally had failed to use condoms. This led 83% of students to subsequently purchase condoms. By contrast, just 33-50% of students who did neither (a) nor (b) or either but not both purchased condoms.
Does my behavior contradict an old attitude or belief? (Counter-attitudinal behavior)	Aronson & Osherow, 1980	Specific	Education; Intergroup relationships	Increasing commitment through action, counter-attitudinal behavior	Restructured newly desegregated 5th grade classrooms to feature jigsaw groups, in which each child learns a portion of an assignment, has to teach and learn from other students, and then is tested on the whole. This procedure encourages cooperation rather than competition, requires children to behave in ways that are inconsistent with negative intergroup attitudes, and meet's classic conditions for successful intergroup contact (sanctioned by authority, equal status, intergroup cooperation, common goals) (Allport, 1954). The procedure caused students to like each other more within and across ethnic lines, raised students' self-esteem, led White and African American children (but not Latino children) to like school more, and improved academic test performance among African American and Latino children.
	Brannon & Walton, 2013,	Specific but symbolic	Intergroup relationships	Increasing commitment	White and Asian undergraduates had a positive interaction with a Mexican American student. When they (1) were led to

				through action, counter-attitudinal behavior	feel socially connected to this student, disposing them to share her interests; and (2) had the opportunity to freely work with her to design a Mexican cultural product (instead of a Portuguese cultural product), they showed reduced levels of implicit prejudice against Latinos. Moreover, in combination with participants in the treatment condition in Brannon & Walton, 2013 Study 3, they reported, an average of 6-months later, greater interest in talking with Mexican American peers and more positive attitudes toward Mexican immigrants.
	Study 2				
	Brannon & Walton, 2013, Study 3	Specific but symbolic	Intergroup relationships	Increasing commitment through action, counter-attitudinal behavior	White and Asian undergraduates had a positive interaction with a Mexican American student. When they (1) were led to feel socially connected to this student, disposing them to share her interests; and (2) had the opportunity to freely work with her to design a Mexican cultural product (instead of being required to do so), they showed reduced levels of implicit prejudice against Latinos. This was mediated by greater engagement in the Mexican cultural task. Moreover, in combination with participants in the treatment condition in Brannon & Walton, 2013 Study 2, they reported, an average of 6-months later, greater interest in talking with Mexican American peers and more positive attitudes toward Mexican immigrants.

Table S3. Wise interventions that capitalize on the need to belong.

Sub-Approach	Specific Object of Judgment (Threat Addressed)	Reference	Specificity of Object of Judgment	Content Area	Change Strategy	Summary
Approach to Desired Meanings: Remedy Threats Belonging that Undermine Functioning						
Bolstering beliefs about social connectendess	Am I noticed by others?	Carter et al., 2013	Specific but symbolic	Health	Prompting by altering situations	Receiving a series of caring notes from a hospital following a self-poisoning incident reduced psychiatric readmissions by a third over the next 5 years.
		Hassanian-Moghaddam et al., 2011	Specific but symbolic	Health	Prompting by altering situations	Receiving 9 caring greeting cards from a hospital in Tehran over 12 months following a self-poisoning incident reduced suicidal ideation and suicide attempts from 5.1% to 3.0% over the year.
		Hausmann et al., 2009	General	Education	Direct labeling, of an aspect of self	Either (1) giving first-year college students small gifts displaying the school logo, colors, or name (e.g., hat, magnet) and sending messages affirming students were a valued member of the college community from university administrators or (2) giving students similar gifts without university insignia from the research team in the first semester increased a sense of belonging among White students at the end of the second semester but not Black students. There were no effects on other self-report measures (e.g., assessing peer and faculty interactions) or on persistence or GPA, though sense of belonging predicted these outcomes through other factors.
		Motto & Bostrom, 2001	Specific but symbolic	Health	Prompting by altering situations	Receiving a series of caring notes from a hospital following a suicidal or depressive incident (e.g., "Dear___: It has been some time since you were at the hospital, and we hope things are going well for you. If you wish to drop us a note we would be glad to hear from you.") reduced suicide rates over the next two years from 3.52% to 1.80%.
	Am I connected	Boehm et al.,	General	Well-Being	Active	Asking Anglo American adults to convey

					reflection, on a positive aspect of self	gratitude (write letters of appreciation to friends or family members) once a week for 10 minutes reported increased life satisfaction relative to a control condition (list what they had done in the past week) over this period and one month later. Asian American adults showed no such benefits. Similar benefits arose from asking participants to express optimism ("write about their best possible life in the future").
		to others?	2011			
		Brummelman et al., 2014	General	Well-being	Active reflection, on a positive aspect of self	Asking adolescents several weeks before receiving final course grades to write for 15-minutes about times when they had experienced unconditional regard from peers ("who always accept and value you, no matter how you behave or how good you are at something") reduced feelings of shame among students who later received poor grades.
		Dunn et al., 2008	General	Well-being	Prompting by altering situations	Giving people on a college campus $5 or $20 and asking them to spend it on other people increased happiness at the end of the day.
		Fredrickson et al., 2008	General	Health; Well-being	Active reflection, on a positive aspect of self	Teaching people to practice loving-kindness mediation—a contemplative practice designed to increase feelings of warmth and caring for the self and others—in 6 hour-long sessions over 7 weeks caused increases in positive emotions, which mediated an increased sense of purpose in life, increased feelings of social support, and reduced illness symptoms. This in turn predicted increased life satisfaction and fewer depressive symptoms. Fifteen months after the program ended, about one in three participants reported continuing to mediate and those who did continued to report more positive emotions (Cohn & Fredrickson, 2010).
		Haworth et al., 2016	General	Well-Being	Prompting by altering situations; Active reflection, on a positive aspect	Twin pairs were asked to complete two activities per week for 6 weeks. On the first three weeks, the activities were neutral controls (e.g., describe a room in their house). On weeks 4-7, they involved performing acts of kindness and writing gratitude letters. Well-being improved and

				of self	symptoms of anxiety and depression declined over the treatment weeks, and this pattern continued at week 10.
		Lyubomirsky et al., 2004, Study 1, described in Lyubomirsky et al., 2005	General	Well-Being	Prompting by altering situations	Asking college students to perform 5 acts of kindness on a single day each week for 6 weeks increased happiness over this period, as compared to both a no-treatment control group and students asked to perform 5 acts of kindness spread over the week.
		Lyubomirsky et al., 2011	General	Well-Being	Active reflection, on a positive aspect of self	College students were asked to take 15-minutes per week over 8 weeks to make regular expressions of gratitude—to write about "times in their lives when they were grateful for something that another person did for them and then writing a letter about those experiences directly to that person (but not sending it)." In a second treatment, students were to make regular expressions of optimism "to visualize living a life consistent with their ideal self" in terms of romance, educational attainment, family life, etc.. Among students who self-selected into a study on a "happiness intervention," who were presumably motivated to increase their happiness, completing either of these exercises as compared to a randomized control exercise (listing what they had done over the past week to increase "organizational skills") increased reported greater well-being at the end of the 8-week writing period and at a 6-month follow-up. Among students who self-selected into a study on "cognitive exercises" there was no difference by condition.
		Nelson-Coffey et al., 2017	General	Health	Prompting by altering situations	Asking a community sample to perform acts of kindness for specific others weekly for four weeks reduced leukocyte expression of CTRA indicator genes from baseline to week 5, a potential mechanism of reduced disease risk. Isolating the effect of prosocial behavior, this effect was found relative to both a control condition and conditions where people were

						instructed to perform acts of kindness for themselves or for the world.
		Otake et al., 2006	General	Well-being	Active reflection, on a positive aspect of self	Undergraduates asked to reflect on their own kind behavior toward others every day for a week showed significant increases in happiness over this period, while those in a no-treatment control group did not. Randomization was at the class level.
		Schreier et al., 2013	General	Health; Well-being	Prompting by altering situations	High school students were randomized to volunteer at a public elementary school (1-1.5 hours/week) in the fall semester (treatment) or in the spring semester (control). At the end of the term, as compared to a baseline assessment, students in the treatment condition showed lower cholesterol levels and lower body mass index as well as lower interleukin 6 levels and marginally lower C-reactive protein levels (inflammatory markers). The greatest benefits were found among students who increased the most in empathy and altruistic behaviors and who decreased the most in negative mood.
		Taylor et al., 2017	General	Well-Being; Health	Prompting by altering situations; Active reflection, on a positive aspect of self; Active reflection, values-affirmation	[see Table S3]
Facilitating beliefs that sustain belonging in the face of challenges	Can negative relational qualities of people change? (Theories of personality)	Miu & Yeager, 2015	General	Education; Health; Interpersonal relationships and behavior	Increasing commitment through action, saying-is-believing	High school students who completed a 25-minute in-class paper-and-pencil or online reading-and-writing exercise at the beginning of the school year that emphasized how people can change and, thus, that bullies need not always be bullies and victims need not always be victims (Yeager, Johnson, et al., 2014) showed a 40% reduction in clinically significant depressive symptoms at 9 months later, primarily by

						preventing an otherwise normative increase in depression over the school year.
		Yeager, Johnson, et al., 2014 Study 2	General	Education; Health; Interpersonal relationships and behavior	Increasing commitment through action, saying-is-believing	9th-grade students completed a 25-minute in-class reading-and-writing activity: They (a) read a brief article describing how people are not fixed but can change and thus that, if you are excluded or victimized, this is not due to a fixed deficiency on your part and people who excluded or victimize you are not fixed bad people but can improve; (b) read stories from older students about how they used this information to handle peer conflicts, and (c) wrote their own story to share with future 9th-grade students drawing on the materials they read and their own experiences. As compared to an active control condition, this incremental theory of personality intervention reduced negative reactions to a social adversity immediately and, over 8 months, lowered overall stress, reduced physical illness, and improved grades and, at an 8-month follow-up, reduced attributions of hostile intent for a peer's negative actions and desire for vengeance (Yeager, Miu, et al., 2014).
		Yeager, Johnson, et al., 2014 Study 3	General	Education; Health; Interpersonal relationships and behavior	Increasing commitment through action, saying-is-believing	A replication of Yeager, Johnson et al., 2014, Study 2 with 9th-grade students in one of the poorest performing and lowest income schools in California replicated the stress, illness, and achievement benefits, with the later effects concentrated among students who at baseline endorsed a fixed theory of personality.
		Yeager, Trzesniewski, & Dweck, 2013	General	Education; Health; Interpersonal relationships and behavior	Increasing commitment through action, saying-is-believing	9th- and 10th-grade students in the San Francisco Bay Area took part in a 6-session workshop that that used readings, activities, and discussion to show that the brain can develop and, as a result, people's personality can change and, thus, bullies need not always be bullies and victims need not always be victims. Students then described these ideas to "an alien from the planet of the entity theory" and to a future 9th-grade student to help them understand how being left

					out or rejected can change. As compared both to a no-treatment control condition and to a validated coping-skills intervention, this incremental theory of personality intervention reduced aggressive and increased prosocial behavior following peer ostracism one month later. Students who were victimized by peer bullying who received the incremental theory of personality intervention were also showed fewer depressive symptoms 2 weeks later and were more likely to be nominated by teachers as showing reduced conduct problems at the end of the school year three months later.
	Can people "like me" come to belong?	Broda et al., 2018	General	Education	Increasing commitment through action, saying-is-believing	Extending Yeager, Walton et al. (2016 Experiment 2), a randomized social-belonging intervention was delivered to 7,686 incoming college students through an online module in the summer before entering Michigan State University (92% of the incoming class). Analyses excluded international students. There was no effect on first-year GPA, credits attempted or completed, or full-time enrollment overall or for any subgroup. The design also included a growth-mindset treatment, modeled on Yeager, Walton et al. (2016 Experiment 2). Latino/a students who received the growth-mindset intervention earned higher first-year GPAs than Latino/a students in the control condition (3.05 vs. 2.69), reducing the achievement gap with White students by 72%. The gains were greatest for Latino/a students with lower high school GPAs and test scores. There was no significant effect of either treatment for African American or White students, and no effect of either on credits attempted or completed or full-time enrollment for any group.
		Dennehy & Dasgupta, 2017	Specific	Education	Prompting by altering situations	Incoming female undergraduate engineering students were randomized to a male peer mentor, a female peer mentor, or no mentor. Mentors and

						mentees met monthly for a year. Women who had a female mentor, as compared to both comparison conditions, showed sustained rather than declining levels of belonging and self-efficacy in engineering and postcollege engineering aspirations, as well as sustained low rather than rising levels of threat relative to challenge over the first year. At the end of this year, they had higher rates of retention in engineering majors (100% vs. 82% with male mentors and 89% without mentors). At the end of the second year, a year after the mentoring program had ended, women who had had a female mentor during the first year showed sustained levels of belonging and postcollege engineering aspirations, as compared to continuing declines for women who had had male mentors or no mentor. In contrast to these findings, over the two-year period, women with male mentors showed stable engineering GPAs, whereas those with female or no mentor showed declines. However, whereas women's feelings of belonging and self-efficacy predicted retention and career aspirations in engineering, GPA did not.
		Goyer, Cohen, et al., under review	General	Education	Increasing commitment through action, saying-is-believing	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for the transition to middle school was delivered to African American and White students in two class sessions at the outset of middle school (September and October of 6th-grade). In each session 6th-grade students read three stories from 7th-grade students about how worries about belonging and relationships with teachers are normal at first in middle school and improve with time. As compared to a randomized control group, this intervention reduced disciplinary citations among African American boys through the end of high school by 64%, reducing the gap with White boys by 83%. The intervention

						seemed to cut off a cycle of mistrust and negative interactions between African American boys and teachers in 6th and 7th grades as evidenced by an increasing rate of citations for incidents requiring subjective judgment within the school year in the control condition only. Additionally, the intervention reduced uncertainty about belonging over the course of middle school for African American boys, and protected their level of belonging and forestalled the emergence of high levels of stereotype threat at the end of 7th grade and into 8th grade.
		Kizilcec et al., 2017, Experiment 1	General	Education	Increasing commitment through action, saying-is-believing	Students enrolled a massive open online course (MOOC) related to computer science completed a social-belonging intervention modeled on Walton & Cohen, 2011 (or values-affirmation intervention, see Table S3) embedded in the course. Among students from less-developed countries (e.g., India, Pakistan, Egypt), the intervention doubled course persistence (amount of course material studied). There was no effect for students from more developed countries.
		Kizilcec et al., 2017, Experiment 2	General	Education	Increasing commitment through action, saying-is-believing	Students enrolled a massive open online course (MOOC) related to US public policy completed a social-belonging intervention modeled on Walton & Cohen, 2011 (or values-affirmation intervention, see Table S3) embedded in the course. Among students from less-developed countries (e.g., India, Pakistan, Egypt), the intervention increased course persistence (amount of course material studied) and raised the completion rate by 51%. There was no effect for students from more developed countries.
		Murphy et al., under review	General	Education	Increasing commitment through action, saying-is-believing	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for a broad access university was delivered in classes in the second semester of the first year of college. Students read stories from senior students describing how it is normal to worry at first about whether you belong in college and this

						improves with time. The stories were redeveloped from Walton and Cohen (2011) following extensive interviews with senior students. Students read the stories and then wrote an essay about how their experience in college so far reflected the process described. As compared to a randomized control condition, this exercise, increased the percentage of socially disadvantaged students (African Americans, Latinos, and first-generation college students) who maintained enrollment over the next two years by 9 percentage-points, from 60% in the control condition to 69% in the intervention condition. In addition, disadvantaged students earned higher GPAs the next semester in the treatment than control condition, reducing the raw achievement gap by 22%.
		Rozek et al., in prep	General	Education	Increasing commitment through action, saying-is-believing	The middle-school social-belonging intervention (Goyer et al., under review) was delivered to students in 11 public middle schools in a diverse mid-sized city. Students completed materials in two class sessions in September and November of 6th-grade. As compared to a randomized control condition, the intervention raised 6th-grade GPA for all students, reduced the number of D and F grades students received, and reduced disciplinary referrals and absences. It also increased students' trust of school, social belonging, and identification with school and reduced anxiety about evaluation.
		Stephens et al., 2014	General	Education	Prompting with information	A panel discussion that provided first-generation college students information about how students' social-class backgrounds affect their experiences in college, including unique challenges faced by first-generation students and how students overcome these with time, as compared to a panel discussion that did not link college experiences to students' social-class background, reduced the social-class achievement gap in first-year GPA among students at a selective college

					by 63%. A follow-up 2 years later found that the intervention improved anabolic balance, a measure of physiological thriving, while students engaged in stressful tasks (Stephens et al., 2015)
		Walton & Cohen, 2011	General	Education; Health; Well-being	Increasing commitment through action, saying-is-believing	African American and White students in the first year of a selective college read stories from ethnically diverse older students that conveyed that it is normal to worry at first about whether you belong in college and this improves with time. To highlight that doubts about belonging are due to the transition to college and are not specific to racial-minority students, the materials highlighted stories from White students that described significant worries about belonging and how these improved with time. Students then wrote an essay describing how this process was true for them and delivered this as a speech to a video camera to help future students in their transition. This led African American students to engage more in the academic environment (e.g., emailing professors, meeting with study groups) (Walton & Cohen, 2007) and increased their GPA over the next three years through the end of college, reducing the achievement gap with White students by 50%. This gain was mediated by evidence that treated African American students were less likely to infer from negative daily events in the first year of college they did not belong on campus. At the end of college, African American students also reported greater confidence in their belonging, being happier, and being healthier. Follow-up surveys found that the intervention, delivered in the first year of college, improved African American graduates' life and career satisfaction at the age of 25-27, an effect that was mediated by greater reported mentorship in college (Brady et al., in prep B).
		Walton, Logel, et al., 2015	General	Education	Increasing commitment through action,	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for women in engineering was delivered in small-group

					saying-is-believing	sessions in the fall of students' first year in a selective engineering program. Students read stories from male and female senior engineering students describing how it is normal to worry at first about whether you belong in engineering and this improves with time. The stories were redeveloped from Walton and Cohen (2011) following extensive interviews with senior female engineering students. Students watched a slideshow presentation of the stories and heard them read aloud by senior engineering students. They then wrote an essay about their experience in engineering so far reflected the process described, and a letter to a future first-year student describing the transition. As compared to a randomized control condition, this exercise, along with a novel "affirmation-training" intervention, raised women's GPA in male-dominated engineering majors over the first year, eliminating the gender gap in achievement. It also caused women in male-dominated majors to view daily adversities as less threatening over the next two weeks, immediately and in the second semester, improved women's evaluation of their experience in engineering, and, in the second semester, improved their perceived prospects of succeeding in the field. Additionally, the social-belonging intervention led women to develop more friendships with male engineers.
		Yeager, Walton, et al., 2016, Experiment 1	General	Education	Increasing commitment through action, saying-is-believing	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for students exiting high-performance urban charter schools was delivered in an online module in May of students' senior year of high school in high school computer labs. Participants 90%+ of the graduating class of the relevant high schools. They were almost all African American and first-generation college students entering 70+ mostly low-selectivity 2 and 4-year colleges. In

						the treatment condition, stories from older students emphasized that it is normal to worry at first about whether you belong in college and this improves with time. The stories were redeveloped from Walton and Cohen (2011) following an extensive design process with charter school graduates. Students read and heard the stories read aloud by older students. They then wrote an essay about how they anticipated their experience in college would develop along the themes emphasized. As compared to a randomized control condition, this exercise increased the percentage of students who stayed full-time enrolled in college in their first year from 32% to 43%. It also increased the percentage of students who chose to live on campus, who used academic support services, and who joined student groups, a composite of which mediated the effect on college persistence. Simultaneously, a growth-mindset of intelligence intervention delivered in the same context was not effective, perhaps because the charter schools had already taught growth-mindset ideas.
		Yeager, Walton, et al., 2016, Experiment 2	General	Education	Increasing commitment through action, saying-is-believing	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for online delivery prior to matriculation in college was delivered in online modules alongside other entrance forms in the summer before students entered a large public university. Participants were 90%+ of the entering class. In the treatment condition, stories from older students emphasized that it is normal to worry at first about whether you belong in college and this improves with time. The stories were redeveloped from Walton and Cohen (2011) to be appropriate for the prematriculation context. Students read the stories and then wrote an essay about how they anticipated their experience in college would develop along the themes emphasized. As compared to a randomized

					control condition, this exercise, along with a growth-mindset intervention, increased the percentage of negatively stereotyped ethnic-minority and first-generation college students who completed the first year full-time enrolled (i.e., both semesters) by 4%, from 69% to 73%, reducing the gap with nonminority, continuing-generation students by 40%. The interventions also reduced the percentage of students deemed "at-risk" for dropping out on a multidimensional measure assessing various achievement-related behaviors and attitudes. This statistically mediated the effect on college persistence.
		Yeager, Walton, et al., 2016, Experiment 3	General	Education	Increasing commitment through action, saying-is-believing	A version of the social-belonging intervention (Walton & Cohen, 2011) adapted for online delivery prior to matriculation in college was delivered in online modules alongside other entrance forms in the summer before students entered a selective private university. Participants were 90%+ of the entering class. In the treatment condition, stories from older students emphasized that it is normal to worry at first about whether you belong in college and this improves with time. The stories were redeveloped from Walton and Cohen (2011) to be appropriate for the prematriculation context. Students read the stories and then wrote an essay about how they anticipated their experience in college would develop along the themes emphasized. As compared to a randomized control condition, this exercise, along with wise feedback and cultural fit interventions, increased the first-year GPAs of negatively stereotyped ethnic-minority and first-generation White college students, reducing the achievement gap by 31%, and reduced the percentage of these students in the bottom quarter of the class in the first year from 50% to 37%. At the end of the first year, treatment-condition minority and first-generation students also reported making more

					close friends, getting more involved in extracurricular activities, seeking out academic support services more, and being more likely to have developed strong mentor relationships.
		Yeager, Walton, et al., 2016, Experiment 3	General	Education	Increasing commitment through action, saying-is-believing	A cultural-fit intervention was delivered in online modules alongside other entrance forms in the summer before students entered a selective private university. Participants were 90%+ of the entering class. In the treatment condition, stories from older students emphasized that college is a place where people can maintain an interdependent self-concept—maintain interdependent ties with people back home and join new interdependent communities on campus. Students read the stories and then wrote an essay about how they anticipated their experience in college would develop along the themes emphasized. As compared to a randomized control condition, this exercise, along with social-belonging and wise-feedback interventions, increased the first-year GPAs of negatively stereotyped ethnic-minority and first-generation White college students, reducing the achievement gap by 31%, and reduced the percentage of these students in the bottom quarter of the class in the first year from 50% to 37%. At the end of the first year, treatment-condition minority and first-generation students also reported making more close friends, getting more involved in extracurricular activities, seeking out academic support services more, and being more likely to have developed strong mentor relationships.
	Does this event or experience mean I don't belong?	Brady et al., in prep A	Specific	Education	Direct labeling, of a situation	Revising the letter sent to college students to place them on academic probation to mitigate shame and stigma students perceived—by framing probation as a process not a label, communicating "you're not the only one," acknowledging specific, valid reasons students can struggle in college, and offering hope for

						returning to good standing—increased the percentage of students who returned to good standing a year later from 26% to 43% and the percentage who were still enrolled (had not dropped out or been suspended) from 48% to 79%.
Approach to Threat: Link Desired Meanings for Belonging to Motivate Positive Change						
Linking social connections and feelings of belonging to goal pursuits	Am I connected with important people in school or work settings?	Bowen et al., 2013	Specific	Education	Prompting with information	[see Table S2]
		Gehlbach et al. 2016	Specific	Education	Prompting with information	Providing 9th-grade teachers information about values they shared with specific students raised African American and Hispanic students' end-of-term course grades, reducing the achievement gap by 60%.
		Grant & Gino, 2010	Specific	Work	Prompting by altering situations	Having a director of annual giving thank university fundraisers for their work ("I am very grateful for your hard work. We sincerely appreciate your contribution to the university") increased the number of calls fundraisers made over the next week by about 50%, an effect mediated by greater feelings of social worth (e.g., feeling valued as a person).
		Shook & Clay, 2012	General	Education	Prompting by altering situations	Ethnic-minority first-year students at a predominantly White university randomly assigned a White (versus ethnic-minority) roommate reported a greater sense of belonging at the university over the first semester and this mediated higher first-year GPA.
	Am I working together with others to accomplish personal goals together?	Coch & French, 1948	Specific	Work	Prompting by altering situations	Employees of a pajama factory who took part in a group meeting discussing the need to revise the product and endorsing this change showed more rapid improvement in productivity, as compared to workers who took part in a group meeting in which they were told of the necessary changes.
		Prestwich et al., 2005, Study 2	Specific	Health	Prompting with leading questions	[see Table S1]

		Prestwich et al., 2012	Specific	Health	Prompting with leading questions	Adults were asked to form collaborative implementation-intentions to exercise more. They read, "Past research suggests that despite intending to undertake regular physical activity, many people fail to do so. To give yourself the best chances of succeeding, it seems that it can be helpful to make a very specific plan with a partner (e.g., husband, wife, girlfriend, boyfriend, housemate, etc.) about how together you will go about increasing the amount of regular physical activity you do" and then completed "If…then…we" statements. As compared to participants in a control condition, in a personal implementation intentions condition, and in a partner but no implementation intentions condition, those in the collaborative implementation-intentions condition engaged more frequently in physical activity one and six months later and reported losing more weight six months later.
		Spiegel et al., 1989	Specific	Health	Prompting by altering situations	Providing women with metastatic breast cancer a weekly support group including self-hypnosis for pain increased mean survival time from 18.9 months to 36.6 months.
		Wing & Jeffery, 1999	Specific	Health	Prompting by altering situations	People trying to lose weight were randomized to a standard behavioral treatment (weekly group meetings over 16 weeks) or this treatment with social support: 4-person teams in which each person supported the others' efforts to lose weight. All participants lost weight over the 4-month treatment with no difference by condition. However, those who received the social support component were more likely to maintain their weight loss through 10 months than those who did not.
	Will this behavior help me connect with other people?	Fotuhi et al., 2014	Specific	Health	Active reflection, values-affirmation (goal-	With the theory that even as a standard affirmation can open people up to threatening health information it may also remove threat that could otherwise motivate positive behavior change, an exercise was developed that tied a

					contingent)	values-affirmation to quitting. Smokers reflected on a personally important value they shared with a close friend or family member who supported their intention to quit. At a 6-month follow-up, this increased the percentage of smokers who had quit (36%), as compared to both a standard values-affirmation (16%) and a control condition (1%).
	Will this behavior help other people?	Bryan & Hershfield, 2012	Specific	Retirement savings	Prompting with information	University staff members saving less than 10% of their salaries for retirement were encouraged to reflect on either their self-interest ("We urge you to consider your long-term interest and to start saving more now. After all, your long-term well-being is at stake. Your decisions now will determine how much money is available to you when you retire.") or their responsibility to their future self ("We urge you to consider the responsibility you have to yourself in retirement and urge you to start saving more now…your 'future self' is completely dependent on you…"). For people who felt psychologically close to their retirement-age self, the social responsibility message increased savings rates greater than the self-interest message (0.97 percentage points vs. 0.12 percentage points). For participants who felt distant from their retirement-age self, there was no difference in effectiveness.
		Grant, 2008, Experiment 1	Specific	Work	Prompting with information	University fundraisers provided stories from scholarship recipients about how scholarships had made a difference in their lives earned more pledges and raised more money over the next week. This effect was observed above and beyond stories that emphasized the personal benefits of the job (e.g., skills and knowledge acquired).
		Grant, 2008, Experiment 2	Specific	Work	Prompting with information	Lifeguards provided stories about lifeguards saving swimmers volunteered to work more hours and were rated by supervisors as more helpful of guests over the following month. This effect was observed above and beyond stories

					that emphasized the personal benefits of the job (e.g., skills and knowledge acquired).
		Grant, 2008, Experiment 3	Specific	Work	Prompting with information	People training to be university fundraisers provided stories from scholarship recipients about how scholarships had made a difference in their lives earned more pledges over the next week, especially if they were low in conscientiousness and had strong prosocial values.
		Grant et al., 2007	Specific	Work	Prompting by altering situations	University fundraisers given the opportunity to meet and have a respectful 5-minute interaction with a scholarship beneficiary raised 171% more money over the next month. This effect was observed above and beyond both a no-treatment control condition and a condition in which participants read and discussed a one-page letter from a beneficiary about how the scholarship had made a difference in their life. It was mediated by a greater perceived impact of their work and greater persistence.
		Grant & Hofmann, 2011	Specific	Health	Direct labeling, of a situation	Placing signs on hospital soap dispensers to encourage medical professionals to wash their hands to protect their patients' health, instead of signs that emphasized protecting their own health, increased soap use over a 2-week period.
		Paunesku et al., 2015	General	Education	Increasing commitment through action, saying-is-believing	High school students completed an online module in which they first wrote briefly about ways they wished the world could be a better place, learned how many students want to work hard and learn in school so they can make a difference in the world, and the wrote about how learning and working hard in school can help them achieve their prosocial goals. Together with students in a growth-mindset intervention condition and as compared to those for whom the module focused on control content (e.g., how their lives were different in high school than before high school), this sense-of-purpose message raised core academic GPA the next semester for students at risk for dropping out of

						high school, and increased the likelihood students earned satisfactory grades (A, B, or C) in core academic classes.
		Yeager, Henderson, et al., 2014, Study 2	General	Education	Increasing commitment through action, saying-is-believing	High school students (1) identified a social problem important to them, (2) reviewed stories from other adolescents describing how an awareness of social problems and a desire to contribute positively to the world motivated them to work harder in school, and (3) wrote their own story for future high school students about their purposes for learning. As compared to an active placebo control condition, this raised GPA in math and science classes the next academic term with the greatest effect for initially low-performing students. Extension studies showed that the sense-of-purpose intervention also promoted sustained self-regulation on boring but important foundational learning tasks.
Changing beliefs about social norms to motivate positive behaviors	What is typical or valued in my social community? (Descriptive and prescriptive norms)	Allcott, 2011	Specific	Sustainability	Direct labeling, of social norms	Social-norm information provided in home utility bills, including comparisons with average and efficient neighbors, reduced home energy use by 2% across nearly 600,000 households, with the greatest reductions among high users.
		Bilali et al. 2017	Specific	Civic behavior; Intergroup relationships	Prompting with information	Congolese participants listened to four scenes in a radio drama in which ethnically diverse characters discussed community grievances (e.g., corruption, poverty, exploitation and child labor, scapegoating of outgroups) and planned collective action to address them (e.g., writing petitions, organizing protest marches). As compared to a control condition in which the video represented the same grievances but focused on their severity and did not plan a collective response, participants in the treatment condition later expressed more collective efficacy to make changes and greater readiness to participate in collective action but less

					tolerance of different perspectives and more negative intergroup attitudes (Experiment 1). In a second study, the radio drama was followed by a group discussion. Those in the collective action condition focused less on grievances, less on a lack of agency, and more on action and efficacy for social change and on positive injunctive norms. Following the group discussion, there were not strong effects on individual level outcomes.
		Bond et al., 2012	Specific	Civic behavior	Prompting with information	Incorporating references to friends who have voted on an election day get-out-the-vote message on a social-media website (Facebook) seen by an estimated 61 million people raised turnout in US Congressional elections by an estimated 340,000.
		Gerber et al., 2008	Specific	Civic behavior	Prompting with information	180,002 households in Michigan received one of four mailers, or no mailer, 11 days before the August 2006 Michigan primary election. The first mailer, and all others, emphasized only the recipient's civic duty to vote ("DO YOUR CIVIC DUTY—VOTE!"). The second added that the recipient was being studied ("YOU ARE BEING STUDIED!"—Hawthorne condition). The third informed recipients that who votes is public information, listed the recent voting record of each registered voter in the household, and indicated that the sender would "mail an updated chart" after the election (self condition). The fourth also informed recipients that who votes is public information and listed the recent voting record of each registered voter in the household, and also listed neighbors and their voting records and indicated that the sender would "mail an updated chart" after the primary (neighbors condition). As compared to turnout in the no-mailer control condition (29.7%), turnout was higher in the civic duty condition (31.5%), Hawthrone condition (32.2%), self condition (34.5%), and especially in the neighbors

					condition (37.8%). The results did not vary much with the degree to which the recipient voted often or rarely.
		Hallsworth et al., 2014	Specific	Civic behavior	Direct labeling, of social norms	In a trial of letters sent to more than 100,000 citizens delinquent in their tax payments, the letter containing the strongest norm statement ("Nine out of ten people in the UK pay their taxes on time. You are currently in the very small minority of people who have not paid us yet") produced an additional £1.9 million (≈$2.73) in tax revenue among 16,515 recipients over 23 days.
		Hallsworth et al., 2016	Specific	Health	Direct labeling, of social norms	A letter from England's Chief Medical Officer informing General Practitioners that prescribed antibiotics at a higher rate than 80% of the practices in their area that they did so and suggesting ways to reduce unnecessary prescriptions reduced prescriptions for antibiotics over the next 6 months (during flu season) from 131.25 to 126.98 per 1000 people. Across the 1581 practices randomized to condition, the treatment was estimated to reduce the number of antibiotic prescriptions by 73,406, a savings of £92,356 in direct prescription costs.
		LaBrie et al., 2016	Specific	Health	Direct labeling, of social norms; Prompting with information; Active reflection, on goals	[see Table 1]
		Lewin, 1958, Study 1	Specific	Civic behavior	Prompting by altering situations	Middle class, Midwestern housewives during World War II either listened to a lecture providing substantive information on the virtues of "ethnic" organ meats and recipes or took part in a small-group discussion that emphasized how "housewives like you" can serve such meats. Facilitating the perception of group decision making, the discussion ended with a show of hands to serve organ meats. The small-group

					discussion increased the percentage of housewives who served organ meats to their families over the next week from 3% to 32%.
		Nolan et al., 2008, Experiment 2	Specific	Sustainability	Direct labeling, of social norms	Several hundred households in California received four door hangers over a month representing four different conservation behaviors and one of several reasons to conserve. As compared to households that received one of several control hangers (which emphasized financial savings, environmental protection, responsibility to future generations, or mere information), households that received door hangers that emphasized social norms ("Join Your Neighbors in Conserving Energy. Summer is here and most people in your community are finding ways to conserve energy at home. How are San Marcos residents like you conserving this summer?...") used less energy over the month of the intervention. However, the treatment effect eroded over the subsequent month.
		Paluck, 2009	Specific	Intergroup relationships	Prompting with information	Providing villages in post-genocidal Rwanda access to a radio soap opera that described positive norms of intergroup relationships led villages to be less likely to require that their children marry within their group, to be more willing to speak out in dissent, and to report more empathy for other Rwandans.
		Paluck & Shepherd, 2012	Specific	Education; Interpersonal relationships and behavior	Prompting by altering situations	High school students identified through social network analyses as social referents (nominated by many peers as high status and as friends) were randomized to an anti-bullying intervention in which they identified roles students can play in harassment, wrote essays and discussed experiences of harassment. They then read their essays at a school assembly, performed a skit illustrating common types of harassment and ways to speak out against it, and created posters of themselves wearing anti-harassment slogans. A week later students who were more socially

						connected to social referents randomized to the treatment versus a control condition reported seeing conflict as normal less and greater efforts to deescalate conflicts and to stand up for peers subject to harassment. Toward the end of the year they were more likely to be nominated by teachers as defending other students from harassment and received fewer disciplinary citations for harassment-related infractions.
		Paluck et al., 2016	Specific	Education; Interpersonal relationships and behavior	Increasing commitment through action, saying-is-believing; Prompting by altering situations (for indirect recipients)	Fifty-six middle schools were randomized to an intervention in which 15% of students at each treated school were randomized to receive an anti-conflict norm intervention or not. The intervention comprised every-other-week meetings to encourage students to identify common conflict behaviors, to oppose those behaviors publicly, to create hashtag slogans and online and physical posters including their own photographs, and to distribute distinctive wristbands to students seen mitigating conflict. A total of 728 students received the intervention. This reduced disciplinary problems among the 11,938 students in the treated schools over a year by 30%. The greatest effects were observed in schools in which more of the participating students were influential within the school peer network and thus positioned to alter school norms.
		Radke & Klisurich, 1947, Study 1	Specific	Health behavior	Prompting by altering situations	New mothers of low-income backgrounds either received individual instruction from a nutritionist at the hospital prior to discharge about the composition of formula and the importance of including orange juice and cod liver oil supplements for their baby or took part in a small group discussion that addressed these themes, asked mothers to suggest better methods of getting mothers in general to follow the guidelines and then asked mothers if they would be willing to carry out the instructions, which they indicated unanimously. Two and four weeks

					later, those in the group discussion condition were more likely to report having completely followed the nutrition advice. At 4 weeks, 100% and 88% of those in the group discussion condition followed the recommendations for orange juice and cod liver oil, respectively, versus 53% for each in the lecture condition.
		Radke & Klisurich, 1947, Study 2	Specific	Health behavior	Prompting by altering situations	Housewives of low socioeconomic status either listened to a lecture providing substantive information on the virtues of increasing consumption of milk or took part in a group discussion that addressed these themes, emphasized "what housewives in general might do," and closed by asking mothers if they would use more milk in their family diets, which mothers indicated unanimously. Two and four weeks later, those in the group discussion condition were more likely to report having increased the consumption of milk. At 4 weeks, 50% of those in the group discussion condition reported increased consumption of fresh milk, versus 14% in the lecture condition.
		Rogers et al., 2017	Specific	Civic behavior	Prompting with information	Extending Gerber et al., 2008, 664,020 registered voters in Wisconsin identified as likely supporters of the Democratic candidate Tony Barrett in the June 2012 recall election of Governor Scott Walker in Wisconsin (a high-profile election) received a mailer in the final week of the campaign (1) urging them to vote, (2) emphasizing that voting records are public (e.g., "After the June 5th election, public records will tell everyone who voted and who didn't"), (3) presenting voters their own turnout record in the previous two federal elections, (4) presenting the turnout records for a dozen neighbors assigned to the treatment group, and (5) including a blank entry for the upcoming election. A small random sample received no mailer. Among those receiving mailers, there was a 2x2 between-subjects design: Mailers were

					either nonpartisan or partisan (opposing Scott Walker) and either did or did not encourage people to ask their neighbors to vote. As compared to the no-mailer control, all four treatments increased turnout (66.42% versus 65.38%), with no difference among the mailer conditions. The greatest treatment effect was observed among voters with low to medium propensity to vote (0-20% propensity: 0.91% effect; 20-40% propensity: 3.28% effect and 40-60% propensity: 3.63% effect versus 60-80% and 80-100% propensity: <0.5% effect). The mailer treatment also raised turnout in the November general election by 0.41%.
		Rogers & Feller, 2017	Specific	Education	Prompting with information	[See Table 1]
		Schultz, 1999	Specific	Sustainability	Direct labeling, of social norms	605 homes in La Verne, California were randomized to a control condition or one of four treatments, delivered, via weekly green door hangers, over 5 weeks to promote recycling: (1) information that their home would be included in a study of recycling and a plea to recycle ("please try to recycle as much as possible") (plea condition); (2) the same content as (1) plus information about recycling, including what materials are recyclable, contaminants (information condition); (3) the same content as (1) plus individual feedback about how much material had been collected at their home the previous week and in the current week and the total amount collected for the duration of the study (individual feedback condition); or (4) the same content as (1) and (3) plus information about their residential area, including the amount of material collected in this area the previous week and in the current week, the total amount collected for the duration of the study, and the percentage of households participating that week, provided in the form of average participant behavior (average amount of material

						per week and average participation rate per week) (group feedback condition). As compared to a baseline observation period 2 months earlier, observations over the 4 intervention weeks and the subsequent 4 weeks (no contact) showed that participants in the individual and group feedback conditions were most likely to recycle and recycled the most materials. There was no effect of condition on the level of contamination. The benefits of the feedback conditions were concentrated in households that, at baseline, were less likely to recycle (bottom 33%), increasing from 6% participation rate (control) to 24% (individual feedback) and 13% (group feedback).
		Schultz et al., 2007	Specific	Sustainability	Direct labeling, of social norms	Residents received handwritten information about (1) energy use in their home in the previous week and (2) information about how much energy the average household in their neighborhood had used. Some residents also received (3) a happy face if they were using less energy than average or a sad face if they were using more. Among those residents who were using less energy than others, the addition of the happy face reduced energy use over the subsequent three weeks.
		Van de Vyver & John, 2017	Specific	Civic behavior	Direct labeling, of social norms	Parish councils in England were sent (1) no email, (2) an email urging them to nominate a local building or land as "an asset of community value" ("Protect a community asset—it is quick and easy"), or (3) a similar email but one that also referenced a social norm ("Parishes and local groups all over the country are nominating community assets. Over 1,000 assets have already been listed."). There was no difference by condition in the percentage of recipients who click on the link for more information within 3 weeks of sending or in whether or the number of community assets listed within 4 months of the email.

		White & Simpson, 2013, Study 2	Specific	Sustainability	Direct labeling, of social norms	Fliers left on doors encouraged 676 homeowners to leave grass clippings on lawns (to "grasscycle"). Among homeowners primed with a collective sense of self (e.g., "Why should we grasscycle"), those exposed to a descriptive norm ("Think about how we can all join in and grasscycle" or an injunctive norm ("Our neighbors want us to grasscycle") reduced the amount of grass left for garbage collection relative to a condition that emphasized benefits ("Think about the benefits for our community if we grasscycle"). Among homeowners primed with an individual sense of self (e.g., "Why should you grasscycle"), exposure to the descriptive norm and to the benefits reduced grass clippings left for garbage collection compared to the injunctive norm.
		Yoshida et al., 2012	Specific	Intergroup relationships	Prompting by altering situations	Exposing people to a video depicting a racist joke but withholding the audience's laughter improved implicit normative evaluations of that group (the association between the group and "most people like") and reduced discrimination against the group on a laboratory task.
	What is typical or valued here?	Ai et al., 2016	Specific	Civic behavior	Direct labeling, of social norms	64,800 people on Kiva, an online platform to solicit zero-interest loans to help micro and small businesses in developing countries were randomized to different emails encouraging them to join lending teams. Although all the emails were effective relative to a no-contact control condition, the most effective email emphasized local social norms ("Other lenders who live near you enjoy being a part of these teams"). In turn, joining a team was associated with significantly higher contributions over the next week.
		Braga & Bond, 2008	Specific	Crime	Prompting by altering situations	Cleaning up signs of physical and social disorder in crime hotspots in Lowell, MA (e.g., clean up graffiti, more aggressive responses to social disorder) reduced citizen 911 calls by 20% over 6 months, as compared to crime hot spots randomized to standard policing.

		Braga et al., 1999	Specific	Crime	Prompting by altering situations	Problem-oriented policing of crime hotspots in Jersey City, NJ (e.g., "cleaning up the environment through aggressive order maintenance and making physical improvements, such as securing vacant lots or removing trash") reduced criminal incidents and citizen calls for service over 6 months, as compared to a 6-month baseline period and to crime hot spots randomized to standard policing over the same period.
		Goldstein et al., 2008, Experiment 1	Specific	Sustainability	Direct labeling, of social norms	Signs in hotel bathrooms that conveyed that most guests reused their towels at least once increased the towel reuse rate, as compared to a standard environmental appeal, from 35% to 44%.
		Goldstein et al., 2008, Experiment 2	Specific	Sustainability	Direct labeling, of social norms	Signs in hotel bathrooms that conveyed that most guests who stayed in that specific room reused their towels at least once increased the towel reuse rate to 49%, from 37% in response to a standard environmental appeal, and 41-44% in response to response to normative appeals based on citizenship identity, gender-identity, and hotel guest identity.
		Weisburd et al., 2011	Specific	Crime	Prompting by altering situations	City streets in three mid-sized cities in southern California were randomized to normal policing or "broken windows" policing over 7 months. The latter included (1) a 1-day training encouraged police officers (a) to address incidents of disorder (e.g., public drinking, loitering), encouraging warnings for first offenders, and (b) to report physical problems (e.g., graffiti or litter) for clean up and to follow through if the problem was not dealt with in a timely manner and (2) three extra hours of police presence per week focused on addressing social and physical disorder. A telephone survey of residents and business owners/managers residing in these neighborhoods before and after the intervention showed no significant effect of condition on change in participants' fear of crime, police legitimacy, perceived crime, or

					perceived disorder.
How is what is typical or valued changing? (Dynamic norms)	Sparkman & Walton, 2017 Experiment 4	Specific	Sustainability	Direct labeling, of social norms	Lunch goers who learned that the number of people who make an effort to limit their meat consumption is rising (a "dynamic norm") were twice as likely to order lunch without meat as compared to either those who learned that some people make an effort to limit their meat consumption or those in a control condition (34% versus 17%).
	Sparkman & Walton, 2017 Experiment 5	Specific	Sustainability	Direct labeling, of social norms	Laundry machines in a room labeled with a dynamic norm about water conservation ("Stanford residents are changing: Now most use full loads. Help Stanford conserve water!") showed a 28.5% reduction in usage over 3 weeks, as compared to the prior 3 weeks. By contrast, machines in a room labeled with a static norm ("Most Stanford residents use full loads. Help Stanford conserve water!") showed a reduction of just 9.73% and those in a no-treatment control room showed a reduction of 2.5%.
Are people working together to accomplish collective goals? (Working together norms)	Howe et al., under review, Study 3	Specific	Sustainability	Direct labeling, of social norms	Campus bathrooms randomized to include signs indicating that most people on campus had reduced their paper towel use and, in addition, that invited people to "join in" and "do it together" showed reduced paper-towel use over two weeks and 14% less use than bathrooms with signs that conveyed the same norm but without this working together element.
Are social norms that contribute to negative behaviors	DeJong et al., 2006	Specific	Health	Prompting with information	Extending Schroeder & Prentice (1998), a trial in 18 institutions of higher education found that students at institutions randomized to a social-norms marketing condition perceived less drinking on campus and reported less alcohol

	accurate or valid?					consumption.
		DeJong et al., 2009	Specific	Health	Prompting with information	Extending Dejong et al., 2006), a trial in 14 institutions of higher education found that students at institutions randomized to a social-norms marketing condition did not have lower perceptions of student drinking levels or less self-reported alcohol consumption.
		Halliwell & Diedrichs, 2014	Specific	Health	Increasing commitment through action, saying-is-believing	Adolescent girls took part in weekly 20-minute small-group sessions for 4 weeks that described the thin ideal for women, the costs of this, writing a letter to a teenage girl struggling with her body image to persuade her not to, critiquing beauty ideals and myths (e.g., "Most models and actresses are a healthy weight") and role-playing efforts to encourage a person (the proctor) to resist severe dieting. As compared to girls in a no-treatment control condition, those in the treatment condition were less dissatisfied with their bodies and less likely to internalize a thin body ideal a week later. A month later, their body satisfaction was more resilient to thin ideals represented in advertisements in teen magazines.
		Schroeder & Prentice, 1998	Specific	Health	Prompting with information	First-year undergraduates who took part in a dorm discussion in which they learned how students can be less comfortable with drinking than they seem, as compared to students who took part in a discussion focused on making responsible decisions ("just say no"), reported drinking less 4-6 months later, with the greatest effects for students who were less comfortable drinking than they perceived others to be and yet feared negative evaluations from others. Thus, the intervention seemed to sever a perceived link between drinking and social acceptance.
		Strahan et al., 2008	Specific	Health	Increasing commitment through action, saying-is-	Adolescent girls took part in two 80-minute sessions over two weeks to critique thin body ideals, including the source of these norms in popular media, how unrealistic they are, and how

					believing	they have changed over time, including creating posters challenging sociocultural norms. As compared to girls in a control condition, those in the treatment condition were less likely a week later to base their self-worth on their appearance, reported being more satisfied with their bodies, and reported less concern about others' perceptions of their bodies.
		Turetsky & Sanderson, 2017	Specific	Health; Well-being	Prompting with information	Trained student health educators delivered 15-minute workshops in undergraduate dorms focused on (1) social norms: the high prevalence of mental health issues on campus, low rates of health seeking, and how misperceiving mental health norms (underestimating prevalence of mental health issues and help-seeking, overestimating social stigma) can harm mental health and reduce help-seeking; (2) general mental health information: common mental health myths, several disorders, and common concerns among students who sought therapy at the campus counseling center; or (3) an active control focused on the recognition and management of stress as a basis of mental health. The social-norm treatment led to more accurate perceptions of mental health norms and reduced perceived social stigma immediately, as compared to both other conditions. Both treatments, as compared to the control, improved attitudes toward help seeking two months later. There were no effects on help-seeking behavior in this period.