# **CHAPTER 2**

# The Social-Belonging Intervention

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All students travel a social distance in coming to school. They leave behind families and communities to enter new social spaces where they strive to build new friendships and relationships with instructors while taking on challenging learning and achievement tasks. In entering a new social space, people can readily wonder whether they will belong, but particularly so when their social group is negatively stereotyped or underrepresented in that space. In this state of belonging uncertainty, everyday challenges can seem to threaten one's belonging in the setting as a whole. To protect this sense of belonging, the socialbelonging intervention represents the general truth that common challenges and worries about belonging are normal in an academic transition and improve with time. Across a dozen randomized field trials, the intervention, delivered as an interactive exercise lasting an hour or less, has improved students' integration into secondary and postsecondary school communities and raised academic performance years into the future. Typically the greatest benefits are observed for students from groups that are negatively stereotyped or underrepresented in the context. Here we review the origins of the social-belonging intervention in basic research; discuss its relationship to other psychologically "wise" interventions; review outcome effects; discuss heterogeneity and processes over time; share materials to promote effective use; and discuss implications for psychological theory, education, and policy.

# **BACKGROUND**

The roots of the social-belonging intervention lie in both the sociocultural history of the United States and the intellectual tradition of social psychology, especially research on the experience of students who contend with negative stereotypes in school.

For African Americans, other people of color, and people from lower social class backgrounds, too often the history of the United States has been a fight for acceptance.

In school, this battle has been waged in court battles for desegregation (e.g., *Brown v. Board of Education*), in national law (e.g., the Civil Rights Act of 1964), in school district (e.g., school busing) and university policy (e.g., affirmative action), in civil protests, and in individual students' and families' lives (see Figure 2.1).

Simultaneously, students of color have had to contend with stereotypes that allege the intellectual inferiority of their group. The early psychologist Lewis Terman (1916), a prominent eugenicist, introduced IQ to America as a fixed constraint that justified the exclusion of children from mainstream education: "Children of [low IQ] should be segregated in special classes and be given instruction which is concrete and practical. They cannot master, but they can often be made efficient workers, able to look out for themselves" (p. 92). Moreover, Terman identified this inability with race: "It is interesting to note that M. P. and C. P. [children with low IQ scores] represent the level of intelligence which is very, very common among Spanish-Indian and Mexican families of the Southwest and also among negroes. Their dullness seems to be racial, or at least inherent in the family stocks from which they come. . . . These boys are uneducable beyond the merest rudiments of training" (p. 91).

As legal, social, and political pressure to integrate schools mounted, the formal rejection of children of color has, to some extent, receded. Yet the legacy of exclusion and negative stereotypes remains (e.g., Herrnstein & Murray, 1994). What is it like to enter a school setting in which your group has been excluded, is stereotyped as less able and less worthy, and may still be underrepresented? Could concerns about belonging that arise from this circumstance contribute to educational inequality today? By understanding the psychological consequences wrought by this legacy of injustice, can we develop theory-based ways to mitigate inequality and better support today's diverse students?



**FIGURE 2.1.** The 1957 desegregation of Little Rock Central High School. Reprinted from the Will Counts Collection, Indiana University Archives.

# **PSYCHOLOGICAL PROCESSES**

# Stereotype Threat

An important early observation in the development of the belonging intervention was that inequalities in school achievement do not simply reflect differences in ability. Instead, inequality reproduces at successive levels of education, even among students with the same preparation (Steele, 1997; see also Walton & Spencer, 2009). For instance, even with identical SAT scores and high school grades, Black college students earn worse grades on average than White students, and women earn worse grades in math and science than men. This "underperformance" is so common as to be termed "lawful" (Steele, 1997, p. 615). What in the college environment prevents equally well-prepared Black students and women from achieving at the same rates as Whites and men?

Claude Steele and colleagues (Steele, Spencer, & Aronson, 2002; Steele, 1997, 2010) pointed to a psychological burden imposed by negative stereotypes. Specifically, Steele and colleagues theorized that when a negative stereotype is on the table people can worry that others could view them through the lens of that stereotype: "If I do poorly, people could think the stereotype is true." For a student invested in school, this extra pressure, termed *stereotype threat*, can cause distraction and anxiety that undermines performance, ironically seeming to confirm the stereotype. In seminal studies, high-performing Black college students scored worse than Whites on a test composed of items from the Graduate Record Exam (GRE). But when the same items were represented as a laboratory puzzle-solving exercise—and thus as nonevaluative and irrelevant to racial stereotypes—Black students did as well as Whites, controlling for baseline SAT scores (Steele & Aronson, 1995). Similar patterns emerged among women in math (Spencer, Steele, & Quinn, 1999), and in hundreds of studies (Steele, 2010). Moreover, research has identified key mechanisms of this process, including distraction and a drain on executive functioning and cognitive resources, which lowers performance (Schmader, Johns, & Forbes, 2008).

# **Belonging Uncertainty**

The fear in a testing situation that one could be seen in light of a negative stereotype may be the tip of the iceberg. Students who face negative stereotypes or underrepresentation may harbor a broader concern: "Can people like me belong here?" (Walton & Cohen, 2007; see also Goffman, 1963; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002). It is this broader concern that is addressed by the social-belonging intervention.

Worries about belonging in school are evident in stories told by many racial-minority and first-generation college students. Former first lady Michelle Obama wrote in her senior thesis, "I sometimes feel like a visitor on campus; as if I really don't belong. . . . It often seems as if . . . I will always be Black first and a student second" (Robinson, 1985, p. 2). Supreme Court Justice Sonia Sotomayor said she felt like "a visitor landing in an alien country [in college] . . . I have spent my years since, while at law school, and in my various professional jobs, not feeling completely a part of the worlds I inhabit" (in Ludden & Weeks, 2009).

We define a sense of belonging as a person's perception of the quality of his or her relationship with a valued school, work, or community context as a whole. This relationship goes beyond personal ties to individuals in the setting. Instead, it is fundamentally symbolic. It arises from events and experiences that represent to the person his or her relationship with the setting itself (Walton & Brady, 2017).

Belonging uncertainty is distinct from a person's level of belonging. A student can generally believe that he or she belongs at his or her school yet still question this belonging—that is, still worry or feel unsettled about it (Walton & Cohen, 2007; see also Mallett et al., 2011). The student may agree with both "I belong in my school" (belonging) and "When something bad happens, I feel that maybe I don't belong at [school name]" (belonging uncertainty).

Uncertainty about belonging itself, often informed by an awareness of negative stereotypes and underrepresentation, creates an important form of disadvantage: It shapes the perspective from which people make sense of everyday experiences in a setting. When people question their belonging, daily adversities can seem to mean that they, or people like them, do not belong in general in the setting (Walton & Cohen, 2007).

The idea that uncertainty about belonging might shape the interpretation of social events draws on classic research on hypothesis-confirming processes, which finds that evidence consistent with a person's expectations stands out in perception to shape judgments (Darley & Gross, 1983). Consistent with this theorizing, an early laboratory study exposed Black and White college students to a subtle social cue: difficulty listing friends who would fit in well in a field of study, in this case computer science. For White students this experience had little effect. But it caused Black students' sense of belonging and potential in the field to drop precipitously (Walton & Cohen, 2007, Experiment 1). Moreover, the event carried a racial meaning. When asked to advise peers interested in pursuing computer science or another field, difficulty listing friends led Black students to discourage a Black peer, but not White peers, from pursuing computer science. It was as if they had inferred that "people like me" might not belong there.

Pointing to a similar conclusion, daily diary studies show that everyday challenges can give rise to feelings of nonbelonging more so for Black than for White students at predominately White colleges (Walton & Cohen, 2007, 2011; see also Aronson & Inzlicht, 2004; Mendoza-Denton et al., 2002; Murphy et al., 2020) and more so for women than for men in male-dominated quantitative fields (Walton, Logel, Peach, Spencer, & Zanna, 2015). Thus, if a first-year college student from a socially disadvantaged background fails a midterm, fights with a roommate, feels homesick, or has her work criticized, she may risk inferring that she does not belong in college in general. Crucially, the events that signify a lack of belonging need not appear significant to a third party. In 2014, Michelle Obama recalled her experience coming to college:

When I first arrived at school as a first-generation college student, I didn't know anyone on campus except my brother. I didn't know how to pick the right classes or find the right buildings. I didn't even bring the right size sheets for my dorm room bed. I didn't realize those beds were so long. So I was a little overwhelmed and a little isolated.

Despite decades of professional success, Obama still recalls her reaction to bringing the wrong sheets to college. To her at that time, they were more than just ill-fitting sheets, an inconvenience to be remedied with a trip to the store. The event implied that the answer to the implicit question she held—"Does a person like me belong here?"—might be "no."

The need to belong is fundamental (Baumeister & Leary, 1995) and closely linked to health, well-being, achievement, and identity (Walton & Brady, 2017). If a student infers that he or she does not belong in school, it can be exceedingly difficult to stay motivated and engaged and build relationships in school. Thus, inferences of nonbelonging can become self-fulfilling. They can deprive students of the supports needed to succeed in a

challenging academic environment. When doubts about belonging arise from disadvantage, this process can perpetuate inequality.

# How the Social-Belonging Intervention Bolsters Belonging

One way to remedy inequality, then, is to provide students a legitimate and nonpejorative narrative for understanding common adversities and challenges to belonging. Drawing on classic attributional retraining interventions (Wilson, Damiani, & Shelton, 2002), the social-belonging intervention uses carefully written stories from diverse older students to convey the truth that worries about belonging in a new school are normal or common at first for students from all backgrounds and that these worries generally lessen with time as students reach out to others and come to feel at home. That lens can forestall global, threatening interpretations of negative experiences.

Typically, these stories are shared in written form. To drive home the key message, the intervention uses powerful persuasive techniques. First, it leverages social norms: Challenges and feelings of nonbelonging are represented as typical and as typically improving. Second, it uses social proof: Students are exposed to individual exemplars who illustrate the treatment message through personal experience. Third, the exercise is interactive. Students are asked to complete a *saying-is-believing* exercise in which they describe how the process of change portrayed has played out in their own experience so far and how they anticipate it will play out going forward (Aronson, 1999). For instance, they might write a letter to help future students with their transition. That way participating students (1) actively engage with the ideas about belonging presented, deepening learning; (2) apply abstract ideas to their own experience, increasing relevance; (3) advocate for these ideas to others, a powerful means of persuasion; and (4) understand themselves as helping others, not as receiving help, taking on an empowering rather than a potentially stigmatizing role.

As a whole, the intervention aims to help students appreciate belonging as a *process* that develops over time, in which challenges are normal and to be expected, and one they can facilitate, rather than as a quality that a person simply has or does not have.

# **EMPIRICAL EVIDENCE**

### **Outcomes**

The social-belonging intervention has been evaluated in at least a dozen rigorous, randomized controlled field experiments testing effects on core academic outcomes. Improvements are observed most often for students who face negative stereotypes and underrepresentation in a school setting.

The seminal study delivered the intervention or active control materials to a small sample of Black and White students in the first year at a selective, predominately White university (N = 92). Delivery took place in hour-long one-on-one sessions. The intervention raised Black students' grades over 3 years, through senior year, with no change for White students, halving the racial achievement gap over this period. It also improved Black students' confidence in their belonging, well-being, and self-reported health at the end of college (Walton & Cohen, 2007, 2011).

A second study adapted the intervention for women in engineering. Students in the first semester of a selective engineering program (N = 228) took part in 45- to 60-minute small-group sessions. In majors with a critical mass of female students, which averaged 33% women, there was no gender inequality in first-year grades and no treatment effect. But in male-dominated majors, which averaged just 10% women, the belonging intervention raised women's first-year grades, eliminating a large gender inequality. It also improved women's reported experience and confidence in their prospects of success over the first year (Walton et al., 2015).

Later studies have examined ways to reach larger populations, including online through college and university systems that incoming students complete before beginning college. Yeager and colleagues (2016) created intervention modules, lasting ≅30-minute each, and tested these in three different institutionwide samples (i.e., ≥90% of each population). In the first, students graduating from urban charter school networks (N = 584) almost all Black and the first in their families to attend college—completed online materials in May of their senior year of high school. The social-belonging intervention, adapted for this population, raised the percentage of students who stayed full-time enrolled in college over the next year from 32 to 43%. In the second, students entering a large public university (N = 7,418) completed online social-belonging, growth-mindset, or control materials in the summer before matriculation. Receiving either intervention increased the percentage of negatively stereotyped minority and first-generation college students who completed the first year full-time enrolled from 69 to 73%, reducing the gap with nonminority, continuing-generation students by 40%. In the third, students entering a selective private university (N = 1,596) completed either the social-belonging intervention, an intervention focused on critical feedback (see Yeager et al., 2014), one focused on cultural fit, or control materials in the summer before matriculation. Receiving any of the interventions raised first-year grades among negatively stereotyped minority students and first-generation White students, reducing the achievement gap with more advantaged students by 31%. (In the latter two cases, the various treatments were equally effective.) Not all trials have been effective, however, as another online, prematriculation trial did not affect first-year academic outcomes (Broda et al., 2018).

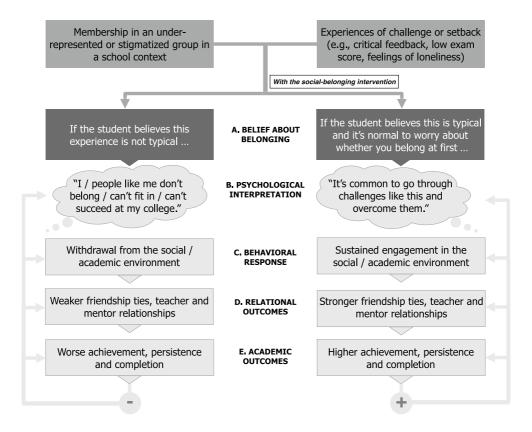
The belonging intervention has also been scaled through first-year classes. Murphy and colleagues (2020) adapted the intervention for a highly diverse urban broad-access institution and implemented it as a personal reading-and-writing exercise in an hour-long session in first-year writing classes (N = 1,063). The intervention raised the percentage of negatively stereotyped minority and first-generation students who stayed enrolled over the next 2 years from 64 to 73%. Binning and colleagues (2020), having observed gender disparities in an introductory physics course and racial disparities in a biology course, adapted the intervention for these classes and implemented it in class through story sharing, personal reflection, and small-group conversation. The intervention eliminated each disparity, raising course grades for women in physics and for non-White students in biology.

Another study adapted the intervention for the transition to middle school and delivered it to Black and White students early in sixth grade over two 30-minute class sessions (N = 137; Goyer et al., 2019, Experiment 2). The intervention reduced disciplinary citations among Black boys through the end of high school by 65%, reducing the disparity with White boys by 75%, and supported higher levels of belonging and fewer worries about negative stereotypes through middle school. Another study tested the same

materials with diverse sixth-grade students in 11 public middle schools across a district (N=1,304). Here all students benefited in sixth grade, including reductions in disciplinary referrals, higher grades, reduced absences, and improved school attitudes (Borman, Rozek, Pyne, & Hanselman, 2019). A third study adapted the intervention for the transition to high school and found improvements in attendance, course passage rates, and reduced discipline citations, especially for racial-minoritized students (Williams, Hirschi, Sublett, Hulleman, & Wilson, 2020). A final study, conducted in a German university, found improvements in first-semester grades for students with a migration background (Marksteiner, Janke, & Dickhäuser, 2019).

### **Mechanisms**

How does the belonging intervention foster lasting gains? Figure 2.2 depicts a process model. Most proximally, the intervention aims to forestall global inferences of nonbelonging due to commonplace, everyday experiences in school (see Figure 2.2B). Consistent with this, an early study found that, in the first week after delivery, the intervention did not alter the kinds of challenges students reported on a daily basis. But it seemed to prevent Black students from inferring on the basis of daily challenges that they did not belong in school in general, thereby sustaining students' sense of belonging on more adverse days (Walton & Cohen, 2007). To illustrate, one day a Black student reported,



**FIGURE 2.2.** How beliefs about belonging can affect students' behavior and academic outcomes in the transition to college. Adapted from Yeager et al. (2016) with permission from the authors.

"Everyone is going out without me, and they didn't consider me when making their plans. At times like this I feel like I don't belong here and that I'm alienated." The intervention did not prevent adversities (the first sentence) but it mitigated the global inference (the second sentence). Over this week-long period, a tight relationship was found in the control condition between how much adversity Black students reported each day (how good or bad their day was) and their level of belonging that night and the next afternoon: Following worse days Black students reported lower levels of belonging. That relationship was not present for White students. And it was severed for Black students by the intervention. This change in the construal of daily events statistically mediated the gain in grades for Black students over the next 3 years, through graduation (Walton & Cohen, 2011; see also Murphy et al., 2020; Walton et al., 2015).

### **Effects over Time**

By protecting students' sense of belonging in the face of adversity, the intervention helps students stay engaged in school (see Figure 2.2C). Over the first week following treatment in the original study, the intervention increased students' reports of the extent to which they e-mailed professors, attended office hours, met with study groups, participated in class, and studied (Walton & Cohen, 2007). Later studies found the intervention increased students' likelihood to live on campus and seek out academic support services during their first year of college (Yeager et al., 2016, Experiments 1 and 3). These behaviors help students integrate into the campus community (see Figure 2.2D). Indeed, the intervention has been shown to help students develop close friendships on campus, to become more involved in student groups, and to develop mentor relationships (Walton et al., 2015; Yeager et al., 2016, Experiment 3). Similarly, in middle school, it can improve cycles of interaction between Black boys and their classroom teachers (Goyer et al., 2019).

A follow-up of the original belonging intervention illustrates the lasting benefits that mentor relationships can confer to students. As noted earlier, students received the intervention in the first year of college with no subsequent treatment. Seven to 11 years later, at an average age of 27, Black participants who had received the intervention reported greater life and career satisfaction (Brady, Cohen, Jarvis, & Walton, 2020). Statistically, these effects were mediated by reports of greater mentorship during and after college. Consider this report (Black, treatment condition):

"The first semester of my freshman year was very difficult for me. I was struggling academically, didn't feel like I fit in, and was unhappy with my major. . . . I began to spend more time speaking with my freshman counselor. We really bonded, and she helped me to realize that I did belong at [school]. Thanks to her, I was able to connect better with my peers and perform better academically. We've kept in touch ever since."

These results are consistent with a model in which the intervention mitigated early worries about belonging to help students reach out and build mentor relationships, which then empowered adult success (cf. Leitner, Ayduk, Boykin, & Mendoza-Denton, 2018). Thus, the intervention unlocks the potential of both students and school contexts.

Notably, this role of the intervention can be opaque to recipients. In the same sample, participants could not recall at the end of college what they had learned in the intervention and credited none of their success in college to it (Walton & Cohen, 2011). The

intervention does not work through the salience of its central message. Instead, it helps students make sense of their ongoing stream of social experience in more productive ways, helping students build relationships of lasting benefit.

# Heterogeneity

The social-belonging intervention addresses a specific circumstance: People who want to belong in a setting but who worry that they might not. The intervention is not designed to promote a sense of belonging in general, for instance among people who have no desire to belong in a setting. It will not help an artist with no interest in investment banking feel that she fits in on Wall Street.

However, most people care about the school and work settings that define their lives at least to some degree and want to belong and succeed in them. In such settings, the intervention is generally most effective for people who face group disadvantage, such as negative stereotypes or underrepresentation (e.g., Walton & Cohen, 2007, 2011; Yeager et al., 2016; cf. Borman et al., 2019). Benefits may also be greatest in specific circumstances that give rise to greater levels of group-based threat, such as science, technology, engineering, and math (STEM) settings in which women are grossly underrepresented (Walton et al., 2015) or where performance disparities are large (Binning et al., 2020).

To achieve lasting gains, the intervention further depends on affordance of the school environment in which it is delivered, especially the degree to which the environment affords genuine opportunities for belonging (Walton & Yeager, 2020). If, instead, group-based threats make belonging unrealistic (see Figure 2.1), the intervention may be ineffective and inappropriate. Further, if students do not have access to adequate learning opportunities, financial aid, or other objective supports, no psychological exercise is likely to improve long-term outcomes.

Thus, the intervention should be most effective for students who have reason to question their belonging in a setting they care about but which nonetheless offers opportunities for belonging for them, including opportunities to develop positive relationships that support lasting gains. Additionally, the intervention will be effective only when its central message is not already present in the setting in impactful, genuine ways.

# COUSINS

The belonging intervention is related to a number of other psychologically "wise" interventions, each of which addresses how students make sense of important aspects of the school environment to improve relevant education outcomes.

First, it draws directly on classic attributional retraining interventions (Perry & Hamm, 2017; Wilson et al., 2002), which likewise aim to change students' attributions for the causes of setbacks in academic transitions. Yet such interventions have focused on academic struggles, discouraging stable, internal attributions (e.g., "I'm dumb") in favor of unstable, external ones (e.g., "It takes time to learn how to study in college"). These interventions can raise achievement, especially for struggling students, but they focus less on the belonging-related doubts that arise from stereotypes and a history of disadvantage and thus on mitigating group-based inequality.

*Growth-mindset-of-intelligence interventions* also provide a hopeful narrative in the face of setbacks. They communicate to students that intelligence is not fixed but can

grow with hard work, good strategies, and the help of others (Dweck & Yeager, Chapter 1, this volume), thus implying that, if you fail a math test, you are not "dumb at math" but can improve with effort and a new approach. Like attributional retraining interventions, growth-mindset interventions focus less on social-relational worries that arise from negative stereotypes and thus on this source of group-based inequality.

Like belonging interventions, theory-of-personality interventions focus on students' social experience in school and the possibility of improvement in the face of challeges. However, they emphasize not belonging but the potential for individuals to change and, in particular, the idea that bullies need not always be bullies and victims need not always be victims (Yeager & Lee, Chapter 13, this volume). Among adolescents, this can reduce aggression and increase prosocial behavior following ostracism, improve mental and physical health, and raise academic achievement.

Value-affirmation interventions share a common origin with belonging interventions in research on stereotype threat. But rather than providing an adaptive narrative for understanding adversities, affirmation interventions aim to protect people's sense of inherent worth and value to help them cope (Sherman, Lokhande, Müller, & Cohen, Chapter 3, this volume; see also Garcia & Cohen, 2013). They do so by asking students to reflect on values of enduring personal importance, which serve as unconditional sources of worth and helps people confront threats more effectively. The processes initiated by affirmation interventions can be both similar to and different from those initiated by belonging interventions (see Cook, Purdie-Vaughns, Garcia, & Cohen, 2012; Sherman et al., 2013; Walton & Brady, 2017). In the only direct empirical comparison, both the belonging intervention and an affirmation-training intervention (inspired by classic affirmation interventions) improved women's psychological response to daily events (e.g., confidence in handling daily adversities) and raised first-year grades in male-dominated engineering fields (Walton et al., 2015). Yet other processes differed. Whereas the belonging intervention helped women develop greater friendships with male peers, affirmation increased women's identification with their gender group and promoted friendships with other women. It was as though the former helped women experience a warmer climate in engineering while the latter helped women develop personal resources to weather a chilly climate.

Difference-education interventions also address social challenges faced by students from marginalized backgrounds coming to college but whereas the belonging intervention emphasizes everyday challenges experienced by all students, difference-education interventions emphasize group-specific challenges, such as those faced uniquely by first-generation college students (Stephens, Hamedani, & Townsend, Chapter 5, this volume). However, both approaches convey that challenges are not specific to the self but normal across a group of people and improve with time, and thus not evidence of a general lack of belonging.

### INTERVENTION CONTENT AND IMPLEMENTATION

# **Belonging Guide**

Complete materials from all published studies through 2017 we have coauthored, along with annotations and guidance on customization, are available in the Belonging Guide (Walton, Murphy, Logel, Yeager, & the College Transition Collaborative, 2017; see Appendix 2.1 for annotated materials from Walton and Cohen [2011]).

### When and How Is the Intervention Delivered?

There are many opportunities to convey the basic idea in the belonging intervention, that belonging is a normal process that develops over time. In college contexts, this can be done from prior to the first year to during that year, from one-on-one sessions (Walton & Cohen, 2007, 2011) to small-group sessions (Walton et al., 2015) to first-year classes (Binning et al., 2020; Murphy et al., 2020) to online modules (Broda et al., 2018; Yeager et al., 2016; see also Devers et al., 2016). These sessions generally last 30–60 minutes. In middle school, the intervention has been delivered over two 30-minute class sessions early in sixth and seventh grades (Borman et al., 2019; Goyer et al., 2019).

# How Is the Intervention Represented?

Generally, the intervention is represented as an effort to learn from students about their experience in the academic transition to benefit future students. Students are told they will review conclusions and stories from older students and share their own experience and expertise with future students to give them a better sense of what the transition will be like. Thus, participants are represented as benefactors and co-creators of an exercise to help others, not as beneficiaries of an intervention or recipients of a persuasive message.

### Nuts and Bolts: Of What Does the Intervention Consist?

The intervention includes (1) summary information about the experiences of students in the academic transition, which directly conveys the intervention message; (2) stories from older students that illustrate this message from diverse perspectives; and (3) interactive components that allow students to connect this message to their own experience and articulate it for themselves. These materials convey two broad themes:

- 1. That it is normal to worry at first about whether you belong in a new school.
- 2. That these difficulties do not mean that you do not belong; rather, with time and effort, most students typically come to feel at home in the school.

### Stories

Most studies of college students have included six to nine stories (~100–150 words per story); those of middle-school students, three stories in each of two sessions (~85 words per story). The stories are represented as typical of diverse students' experience in the transition at hand. They are best understood as parables. Each describes an individual student's trajectory, drawing on past materials and students' experiences gathered in interviews and focus groups with careful editing to address critical themes effectively. As parables, they do not give advice, which could feel prescriptive, presumptuous, or inapplicable (cf. Eskreis-Winkler, Fischbach, & Duckworth, 2018). Instead, they offer multiple models for how a person's experience could develop over time (Lockwood & Kunda, 1997). While they all convey the same theme, they also include some range to increase the likelihood participating students find models who experienced challenges that relate to their own circumstance and see diverse trajectories of growth from these challenges.

### DESCRIBING CHALLENGES TO BELONGING

First, the stories articulate specific common worries and everyday negative experiences many students have in an academic transition. Further, they voice the negative thoughts and feelings a student can have in response to these challenges, including feelings of nonbelonging (e.g., "I thought professors were scary," Appendix 2.1, B, Story 3). They thus represent experiences, thoughts, and feelings of nonbelonging as normal. These challenges can be attributed explicitly to the difficulty of the transition (e.g., "Still, I think the transition to college is difficult, and it was for me . . . ," Appendix 2.1, B, Story 2). They are not attributed to the school itself. Instead, negative content is placed within a positive overall representation of the school appropriate for the setting (e.g., "I love [school name] and I wouldn't trade my experiences here for anything. . . . Still . . . ," Appendix 2,1, B, Story 2). Thus, the materials validate the pride students often feel in their school, even as they acknowledge normative challenges and doubts.

The challenges described are appropriate to the context. In college, they may include interactions with instructors (e.g., feeling intimidated, receiving critical feedback) and peers in academic contexts (e.g., joining study groups), academic setbacks (a poor grade), challenges making friends, and missing home or older friends. Importantly, the stories do not raise negative experiences or doubts without resolving their implications for belonging; the reader is not left to wonder whether the protagonist in fact does belong. They also do not reify negative norms (e.g., "Everyone is depressed," "Everyone gets drunk all the time") or attribute difficulties to enduring negative qualities of the school (e.g., "There's a lot of pressure here").

The stories are attributed to upper-year students whose seniority affords them a sufficiently long vantage point on the transition, usually through a "tag" at the end of the story that represents his or her identity (see Appendix 2.1). The students are diverse, including both students who are more and less advantaged in the setting. To counter the stereotype that only disadvantaged students question their belonging, the strongest characterization of feelings of nonbelonging (e.g., feeling intimidated in class) are attributed to more advantaged students, such as to Whites in a predominately White college (Walton & Cohen, 2011) or to men in engineering (Walton et al., 2015). These "counterstereotypical" stories render the intervention distinct from approaches that emphasize role models, in which in-group members illustrate a path of growth for the self (cf. Lockwood & Kunda, 1997; Stephens et al., Chapter 5, this volume). Instead, the emphasis is on feelings of nonbelonging that arise from difficulties in the academic transition experienced by all students.

### DESCRIBING IMPROVEMENT IN BELONGING WITH TIME

Second, the stories describe trajectories of improvement: How negative experiences and doubts lessen with time, as students find communities and come to feel at home in the school. This improvement is characterized by (1) behaviors that support belonging, such as initiative a student takes to connect with others (e.g., attending office hours) or specific activities or communities he or she joins (e.g., a student organization); (2) the development of relationships that support belonging, such as with instructors or peers; and (3) psychological change that supports belonging. This psychological change includes both new, more adaptive attributions for specific common challenges (e.g., "I had to remind myself that making close friends takes time," Appendix 2.1, B, Story 6; "And I saw that even when

professors are critical, or their grading harsh, it didn't mean they looked down on me or that I didn't belong. It was just their way of motivating high-achieving [school name] students," Appendix 2.1, B, Story 3) and the broad belief system targeted by the intervention ("Everybody feels they are different freshman year from everybody else, when really in at least some ways we are all pretty similar. Since I realized that, my experience has been almost one-hundred percent positive," Appendix 2.1, B, Story 1). Thus, the exemplars model new behaviors, new relationships, and new ways of thinking that support belonging.

Improvement is attributed both to the passage of time and to students' efforts, resourcefulness, and resilience. The role of time is significant, as belonging can improve with time as a person gets used to a new place and is receptive to efforts initiated by others. Stories should not emphasize fixed qualities of individuals (e.g., "You have to be outgoing to succeed here") or atypical help, luck, or specific formal resources that may be unavailable to or inappropriate for other students. For example, in a story about feeling intimidated by professors, it would not be helpful to say, "Then I met Professor X and he made all the difference." The stories should not depict saviors but the patience, effective strategies, and persistence all students can use to build belonging (e.g., "I began to take more initiative in going to office hours and meeting with professors. When I made the effort, I found that my professors became quite warm and were invested in me and in my doing well," Appendix 2.1, B, Story 4).

The timeline for improvement should be represented vaguely (e.g., "With time . . . "); otherwise students could worry that they have "missed the boat" if they lack a sense of belonging at a specific future point in time. It could also be problematic to represent improvement in a specific distant future—then challenges may seem insurmountable or not worth waiting out. The stories may also validate challenges or doubts that are ongoing but represent these as not a fundamental threat to belonging (e.g., "Though I still have doubts about myself sometimes they're the kinds of things everybody feels on occasion," Appendix 2.1, B, Story 8).

Although the stories emphasize challenges experienced by all students, they may also acknowledge group-specific challenges (Stephens et al., Chapter 5, this volume). For instance, interviews with upper-year students in engineering revealed that women sometimes felt excluded from male peer groups. A corresponding intervention story validated this experience but curtailed its negative implications for belonging (Walton et al., 2015, Story 7):

"... I remember once in my first term having lunch with some other civil engineers. They spent 90% of the time talking about hockey, about which I know next to nothing. I felt like I didn't belong. It was discouraging. But over time I got to know my classmates better, individually and as a group. Once I remember talking about the TV show *Monster Machines*, which I have to admit I love. We had a great time sharing stories about the different episodes. Even though I don't share their love of hockey, I realized that we do have a lot in common—an interest in how things work—and that's why we're all engineers..."

### **DETAILS AND COHERENCE**

As parables, the stories use specific details in symbolic or illustrative ways to highlight both challenges (e.g., conversation about hockey) and improvement (e.g., Monster

*Machines*; "I realized that...."). These details should be ones that diverse participating students can relate to, not individuating or specific to one person's experience. Details and language style should also be appropriate to the context at hand. And taken together, each story should be internally consistent and coherent, and emphasize a clear theme.

### ORDER AND TYPES OF STORIES

The ordering of stories is intentional. For college students, the first story dispels a form of "pluralistic ignorance"—the perception that worries about belonging are specific to oneself (see Prentice & Miller, 1993). Attributed to a member of the group the materials are most designed to reach, such as a Black student at a predominantly White college, the story simply describes a student learning the core idea in the intervention: that early worries and challenges to belonging, which had seemed unique to oneself, are in fact common for all students (Appendix 2.1, B, Story 1). The story does not describe these challenges in any detail. It just implies that whatever difficulties a student experiences are likely to be more common than it might seem.

The next story or two feature counterstereotypical exemplars: students from more advantaged groups, who might seem least likely to worry about belonging, but who describe strong, specific experiences of nonbelonging and how these improved with time (Appendix 2.1, B, Stories 2 and 3). These stories counter the assumption that only members of disadvantaged groups face significant worries about belonging. Later stories address other comon themes in a context, such as teacher–student relationships, friendships, imposter syndrome, and common goals (Appendix 2.1, B, Stories 4–9).

For middle school students, the themes are simplified and interwoven (Goyer et al., 2019). Stories also may not be attributed to a student with a given social identity but presented alongside an array of images of students representing the diversity of the student body, thus implying that the stories reflect the experiences of students in that community as a whole.

### Saying Is Believing

After reading the intervention summary and stories, students are asked to describe how their own experience in the transition so far, and/or what they expect in the future, reflects the experiences of the students they read about. These materials, students are told, may be shared with future students to help them better understand what to expect in the transition. In the original study, students wrote an essay describing their experiences of belonging, rewrote this essay into a speech, and then delivered this speech to a video camera to create footage that could be shared in first-year orientation the next year (Walton & Cohen, 2011). In other studies, students have written a personal letter to a future incoming student (Walton et al., 2015; Yeager et al., 2016). As noted earlier, saying-is-believing exercises can promote learning and personalization (see Aronson, 1999; Walton & Wilson, 2018).

### **Control Conditions**

Multiple active control conditions have been tested. These feature the same structure of activities—summary information, student stories, and saying-is-believing task—but lack the critical focus on belonging. They have addressed instead how students (1) get used to

the physical environment of a new school (e.g., generic information about the weather, campus, and city; Walton & Cohen, 2011; Yeager et al., 2016), (2) develop study skills (Murphy et al., 2020; Walton et al., 2015), or (3) become used to the school lunchroom and interested in state politics (Goyer et al., 2019). Some studies have also included notreatment control conditions (Walton et al., 2015). Others supplement randomized control groups with nonrandomized campuswide comparisons (Murphy et al., 2020; Walton & Cohen, 2011; Yeager et al., 2016).

# **NUANCES AND MISCONCEPTIONS**

# **Not Mostly about Friendships**

One misconception is that the intervention focuses on purely social experiences, such as close friendships or feelings of homesickness. To the contrary, the emphasis is on experiences of belonging and nonbelonging within the core academic context of school—in classrooms, study groups, lab settings, and in interactions with classmates or instructors. The stories thus address worries about ability, about showing work to others, about being evaluated, and about receiving critical feedback or poor grades. This focus arises from the fact that it is the intellectual abilities and merit of racial-minority students and women in math and science that is most directly impugned by negative stereotypes, not their likability (e.g., Glick & Fiske, 2001). In so doing, the materials seek to convey that worries about belonging and being valued and respected within the core academic contexts of school are normal (experienced by many students) and improve with time.

### **Not Just Role Models**

A second misconception is that the intervention is primarily a role model exercise and, thus, that the most important materials are stories told by ingroup members whose experiences are most relevant to participating students (see Lockwood & Kunda, 1997). To the contrary, an important aspect of the intervention are counterstereotypical stories, which show how majority-group members also worry about belonging.

# **Acknowledgment of Difference**

A third misconception is that the stories ignore group-based differences in students' experience. They do not. They simply emphasize everyday worries about belonging that arise from the difficulty of the transition for all students and how this improves with time. Some variants also highlight group-specific challenges (e.g., the hockey story described above). The saying-is-believing exercise also provides participating students an opportunity to describe challenges they have experienced, including experiences of difference involving one or more of their social identities.

# **IMPLICATIONS FOR PRACTICE**

There are many ways that institutions can convey adaptive ways of thinking about belonging and build a culture that supports this. Here we focus on implementation in school contexts, where most research has been conducted, but similar efforts can and have been undertaken in work contexts. We describe ways schools have found to convey and embody the specific themes of the belonging intervention. These efforts complement broader efforts to promote belonging and inclusion, such as to promote diversity among students, staff, and faculty; to represent and value this diversity; to counter bias, prejudice, and sexual harassment; and to structure communities so people have genuine opportunities to build relationships of value (see Murphy, Kroeper, & Ozier, 2018).

As with any psychological exercise, no implementation of the belonging intervention will be effective if the materials are not delivered in an impactful way, such that recipients pay attention, engage, and connect the material with their lives (see Weiss, Bloom, & Brock, 2014). Psychological interventions are not "a worksheet to be handed out or a lesson to 'get through'" (Yeager & Walton, 2011, p. 289) but a tool to engage people substantively in thinking about themselves or their experience in a new way.

It is also essential to maintain the integrity of the critical message (see Dweck, 2016). Simply handing out school swag or assuring students, "You belong!" does not help students see that everyday challenges are normal and improve with time. Additionally, although it may be helpful to hear adaptive messages about belonging multiple times from multiple sources, the message should always feel authentic, not false or manipulative.

# Online Materials: Reflection Modules and Belonging Videos

Online modules can reach thousands of students with high-fidelity materials at low cost (Yeager et al., 2016; see also Devers et al., 2016). As with other psychological interventions, a challenge is to achieve impact at scale (Paunesku et al., 2015). There are two basic risks. First, the content of the materials may be less relevant for larger and more diverse populations. To address this, we discuss the customization of content below. Second, students may engage with materials less seriously when they are delivered online rather than in person. Thus, online sessions should be as attractive and interactive as possible. For instance, all past studies include saying-is-believing components, which engage students and invite them to reflect on how the intervention message is true for them. Some also complement written materials with audio recordings of upper-year students reading the critical intervention stories (Walton et al., 2015; Yeager et al., 2016, Experiment 1).

Another scalable way to convey adaptive ideas about belonging is through online videos. For the past few years, Stanford University has empowered outgoing senior students to create a welcome video for incoming first-year students highlighting key themes about belonging; new students receive this video in the summer before they enter college (see <a href="http://tinyurl.com/pringle2017">http://tinyurl.com/pringle2017</a>). Although this approach has not been formally evaluated, it provides an authentic and impactful means to establish adaptive norms about belonging from the start for an entire cohort of students.

### **In-Person Experiences**

Institutions can also implement in-person experiences to help students contend with challenges to belonging early on. This may involve structured reflections and small-group discussion or specific assignments in first-year classes, each of which has been shown to improve core academic outcomes (e.g., Binning et al., 2020; Murphy et al., 2020). Residential programming offers another opportunity. Stanford created a credit-bearing, discussion-based course, Frosh 101, to extend lessons introduced during new student

orientation, including about belonging, into the first year. In a first session, facilitators (more senior students) share challenges to and growth in belonging they experienced in coming to college. First-year students then write anonymously about their own experience, describing why and how it is normal to worry at first about belonging in this transition and how this gets better with time. These writings are then collected and are read aloud without identifying their authors. The group then discusses common themes. The next week, students create mementos that reflect their discussion, such as a poem, a flier, a painting, digital art, or a sculpture, to be displayed in the dorm.

Organizing such in-person experiences may require greater coordination and be more costly per student. There can also be challenges to maintaining the fidelity of the intervention message. Yet they may help shift a school culture.

### Customization

Past research testing the social-belonging intervention has incorporated customized content among standard belonging stories in new contexts, under the assumption that distinct challenges to belonging arise in specific contexts.

The aim of the customization process is to understand the challenges to belonging students experience in a particular environment and to identify adaptive and realistic ways students can understand and respond to these challenges in that context. This process generally involves user-centered pilot research, including surveys, interviews, and focus groups with the target population. For women in engineering, it led to the incorporation of new stories addressing feelings of exclusion from male peer groups (the hockey story above) and experiences of sexist disrespect on campus (Walton et al., 2015). For graduates of urban charter schools, pilot research identified a passivity in building belonging in college among students leaving highly structured urban charter school contexts. Story revisions reemphasized the active steps students need to take to build relationships with peers and faculty in college (Yeager et al., 2016). For middle school students, customization led to stories addressing worries about getting lost in a larger school, forgetting a locker combination, how one's stomach hurt the first few months, and a fear of talking to teachers (Goyer et al., 2019).

This customization has typically been carried out within the structure of the intervention outlined above, including the first story emphasizing pluralistic ignorance followed by counterstereotypical exemplar stories. The Belonging Guide mentioned earlier discusses why and how to include customized content (Walton et al., 2017). Doing so may make materials more relevant, authentic, and impactful for a context. However, the customization and writing process requires significant expertise and should not be carried out casually. Effective belonging stories are deceptively complex and difficult to write well. Moreover, basic themes and threats to belonging are often common across diverse contexts—thus, stories addressing core themes may be largely retained across settings. Customizing *some* content does not imply that *all* content should be customized.

# **PRACTITIONER EXPERIENCES**

Appendix 2.2 shares reflections from two practitioners who implemented the social-belonging intervention at their institution through the College Transition Collaborative (http://collegetransitioncollaborative.org).

# **IMPLICATIONS FOR THEORY**

First, the belonging intervention illustrates how social-psychological factors can perpetuate inequality (see Steele, 1997, 2010; Sherman et al., Chapter 3, this volume). The intervention does not expand learning opportunities. Nor does it increase students' basic capability (e.g., intelligence, self-control) or motivation to learn, factors commonly cited as causes of inequality (e.g., Herrnstein & Murray, 1994). Instead, it shows that potent social-psychological processes follow from societal disadvantage in the form of pervasive worries about belonging and how these reproduce inequality in school success.

Second, for theories of education, the belonging intervention highlights the untapped capacity for better outcomes present in both many students from socially disadvantaged backgrounds and many school contexts, yet how this potential can go hidden and unrealized as a consequence of unaddressed feelings of nonbelonging (Walton & Spencer, 2009).

Third, the intervention highlights the causal role of social-psychological processes for lifespan development. Social psychology is often identified with the "power of the situation," which can seem to imply that people simply bend with the wind of every new context (Ross & Nisbett, 1991). If so, social-psychological processes would not affect life outcomes. Yet worries about belonging can become embedded in the structure of people's lives, forestalling the development of social resources that pay dividends over the life course.

Fourth, for "wise" interventions, the belonging intervention provides a paradigmatic example of how a brief psychological exercise at a key point in time can produce recursive and, thus, lasting change. Here, the intervention, delivered early in college or in middle school improved major life and school outcomes 7–11 and 7 years later, respectively (Brady et al., 2020; Goyer et al., 2019). In each case it did so, it seems, by helping students make sense of and respond to daily experiences more adaptively, improving patterns of social interaction and helping students develop stronger and more trusting relationships, reinforcing feelings of belonging (see Walton & Wilson, 2018).

Fifth, for psychology, the intervention highlights the centrality of belonging for both sustained motivation and achievement (Carr & Walton, 2014; Walton, Cohen, Cwir, & Spencer, 2012) and functioning generally. Although we have focused on academic outcomes, the belonging intervention has also been shown to improve health, happiness, and daily functioning (e.g., higher and more stable self-esteem; Walton & Cohen, 2011; Walton et al., 2015). Such findings suggest that belonging may serve as a psychological "hub" for the self, essential to diverse outcomes (see Baumeister & Leary, 1995). Finally, the intervention illustrates the close relationship between cognitive (attributional) and affective (belonging) processes, and how an attributional approach can help people make sense of their experiences in ways that support better affective outcomes (cf. Marigold, Chapter 17, this volume).

# **FUTURE DIRECTIONS**

An important direction for future research involves better understanding heterogeneity in the effects of the belonging intervention. In some cases, it has not produced significant gains where gains might be expected (Broda et al., 2018). With what kinds of students and in what kinds of school contexts is the intervention most likely to improve outcomes? What contexts provoke latent worries about belonging but nonetheless afford

opportunities for belonging that students could pursue? We speculate that benefits will be limited in contexts that are too toxic for students to reasonably belong or where genuine opportunity for learning is limited. Such research will inform and potentially integrate psychological and sociological theories of societal inequality.

As we noted, the belonging intervention can also improve health (Walton & Cohen, 2011). Where, for whom, and how do health benefits arise? Future research should include specific health-relevant physiological objective indicators, including measures of both acute stress responses (e.g., cortisol) and functioning over time (e.g., the conserved transcriptional response to adversity). Health and physiological outcomes may or may not track with psychological and academic outcomes (cf. Miller, Cohen, Janicki-Deverts, Brody, & Chen, 2016)—or with each other (see Destin, 2018).

Another important question involves the best way to think about customization and new contexts, both in school contexts and elsewhere. We do not yet understand as well as we need to the contexts in which more or less standard belonging materials will be effective, the contexts in which customization is helpful or necessary, and how to determine this. In many cases, it may be most effective to design high-quality and engaging but standard materials that can be presented to many people in a given kind of context (e.g., the transition to college), and to which recipients can flexibly respond by describing their own experiences (through saying-is-believing prompts or group discussions; à la Walton & Cohen, 2011; Walton et al., 2015; Yeager et al., 2016). In other cases, standard materials may be modified or even replaced by a bottom-up process in which participating students begin by articulating, sharing, and discussing in safe ways their own challenges to and growth in belonging (see Binning et al., 2020).

Finally, even as most research on the belonging intervention to date has focused on school contexts, people also strive to belong in other achievement-related settings, such as work contexts, where doubts about belonging may also undermine outcomes (e.g., Fassiotto et al., 2016). Future research should examine the role of belonging uncertainty and belonging interventions in such settings and how the intervention can improve outcomes and reduce inequalities there.

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# APPENDIX 2.1. Social-Belonging Intervention Materials from Walton and Cohen (2011)

(A) Prelude and summary. (B) Annotated student stories. (C) Saying-is-believing essay prompt. See Walton, Murphy, Logel, Yeager, and the College Transition Collaborative (2017) for experimenter script and more examples of materials.

Α Junior/Senior Survey: A Summary of Results

Department of Psychology, [school name]

[date]

Survey Procedure

504 [school name] Juniors and Seniors completed survey materials in [date]. Participants were randomly sampled from the population of all [school name] Juniors and Seniors. Percentages are accurate within +/- 4 percentage points for the [school name] upperclassmen student body as a whole

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

### **Ouantitative Summary**

During their freshman year, many if not most students worry about whether other people at [school name] accept them. 73% - 86% of upperclassmen reported that, during their freshman year, they:

- "sometimes" or "frequently" worried whether other students would accept them in the context of classes and coursework.
- "sometimes" or "frequently" worried that other students at [school name] viewed their abilities negatively.
- · were "some" or "a lot" more comfortable working alone rather than working with other students.
- experienced "some" or "a lot" of discomfort forming study groups or finding partners in science and language laboratories. experienced "some" or "a lot" of discomfort speaking in class.
- "sometimes" or "frequently" worried that professors at [school name] viewed their abilities negatively
   "sometimes" or "frequently" felt intimidated by [school name] professors.

But after their freshman year, most students come to feel confident that other people at [school name] accept them. 82% - 97% of upperclassmen reported that, since their freshman year

- · their comfort in the academic environment at [school name] has improved "some" or "a lot." they are "confident" or "certain" that most other students accept them in the context of classes and coursework.
- they are "confident" or "certain" that other students at [school name] view their abilities positively.
- they "rarely" or "never" experience discomfort working with other students.
- they "rarely" or "never" experience discomfort forming study groups or finding partners in science and language laboratories.
- they "rarely" or "never" experience discomfort speaking in class.
- they are "confident" or "certain" that professors at [school name] view their abilities positively
- · they are "confident" or "certain" that professors at [school name] accept them.

### Illustrative Sample of Free-Response Reports

The quotations below have been selected because they are illustrative of the major finding of the survey. These quotations are representative of the responses of participating students to questions asking them to describe their experience at [school name], and how this experience had changed since their freshman year.

# Story

- (1) "When I first got to [school name], I worried that I was different from other [students at school name]. Everyone else seemed so certain that they were right for [school name], I wasn't sure I fit in. Sometime after my first year, I came to realize that many people come to [school name] uncertain whether they fit in or not. Now it seems ironic - everybody feels they are different freshman year from everybody else, when really in at least some ways we are all pretty similar. Since I realized that, my experience at [school name] has been almost one-hundred percent positive."
- Participant #17, [dorm name] senior, African-American female

### **Annotation**

Pluralistic ignorance: Many difficulties in the transition to college are normal, even if they don't seem that way at first.

- A story that unfolds over time; vague timeline of improvement;
- First-person perspective, development of personal thoughts and feelings, not advice-giving
- Does not deny differences in students' experience, even as it
- Attribution to the group of greatest concern, implying that challenges people in this group face may be more normative than they may seem

(continued)

(2) "I love [school name] and I wouldn't trade my experiences here for anything. I've met some close friends, I've had some fantastic experiences, and I've certainly learned a lot. Still, I think the transition to college is difficult, and it was for me. My freshman year I really didn't know what I was doing - I made a lot of casual friends at parties and other social settings and I avoided interacting with professors in class and office hours, I think because I was intimidated by them. It got a lot better once I chose a major I was excited about. I began to make close friends through classes and labs, and I started to get involved in research with one of my professors. Now I am happier than I have ever been at [school name]. It is really rewarding for me to feel like I belong in the intellectual community here." - Participant #103, [dorm name] senior, White female

(3) "I didn't go to a very good high school, and I worried that my high school courses had not prepared me well for college. Honestly, when I got here, I thought professors were scary. I thought they were critical and hard in their grading, and I worried a lot about how they and other students would evaluate me. I was nervous about speaking in class and I didn't like other people to read my papers. Around my sophomore year I felt more comfortable - I began to enjoy my classes more and I found some close friends who I trusted. I also became more comfortable speaking in class, and sometimes I asked my friends to edit my papers for me. And I saw that even when professors are critical, or their grading harsh, it didn't mean they looked down on me or that I didn't belong. It was just their way of motivating high-achieving [school name] students.
- Participant #19, [dorm name] junior, White male

(4) "I had small, close knit classrooms in high school, and so it was hard for me to adjust to the large, impersonal lectures at [school name]. It's easy to lose the entire teacher-student relationship. It took me a long time to get used to it, and to understand that, just because there were more students, the professors didn't care less about me or think of me as just another number. Once I figured this out I began to take more initiative in going to office hours and meeting with professors. When I made the effort I found that my professors became guite warm and were invested in me and in my doing well. My junior year I became a research assistant with a professor in my major, and I have just loved working with her and her graduate students outside the formal classroom. It is great to actually participate in cutting edge research!"

- Participant #32, [dorm name] junior, African-American male

(5) "Initially my transition to [school name] was pretty easy. Going out on [campus location] was easy and fun, and I met a lot of people early on. After Winter Break, things got harder because I realized that all my really good friends were at home and I didn't have friends like that at school. However, I decided that instead of searching for friends, I should pursue my interests and let things fall into place. I got involved in extra-curriculars, and I met people who had common interests and unique perspectives. I also got to know people in class as study partners who became close friends. I found a comfort zone by exploring my interests and taking the leap into an active life at [school name]. But this took time and before I found my niche at school name there were times when I felt quite lonely. - Participant # 77, [dorm name] senior, White female

(6) "The most difficult transition from high school to [school name] was coming from a situation in which I knew every student for the past seven years into a new situation in which I did not know one student before I arrived. Freshman year even though I met large numbers of people, I didn't have a small group of close friends. I had to work to find lab partners and people to be in study groups with. I was pretty homesick, and I had to remind myself that making close friends takes time. Since then in classes, clubs, and social activities, I have met people, some of who are now just as close as my friends in high school were.

- Participant #84, [dorm name] junior, Asian-American male

Counterstereotypical 1: Counters the stereotype that only members of minority groups question their belonging, featuring strong, specific examples

Places negative experiences in a positive overall context; Attributes difficulties to the challenge of the transition to college

Focus on belonging in the core academic context of college

Vague timeline of improvement; Describes processes of building belonging and student's active role; Illustrative examples

Attribution to a majority group member, who might not otherwise be thought to experience significant worries about belonging

### Counterstereotypical 2

Focus on belonging in the core academic context of college

Vague timeline of improvement: Role of the passage of time

Describes processes of building belonging and student's active role

Models developing a new, more adaptive interpretation, here of critical feedback

- Attribution to a majority group member

Teacher-Student Relationships: Addresses worries about belonging in the core academic context for a minority student without confirming stereotypes.

Attributes difficulties to the challenge of the transition to college

Focus on belonging in the core academic context of college

Illustrative example

Attribution to a minority-group member, following two stories attributed to majority-group members

Close Friendships 1: Addresses challenges developing close friendships in college

Conveys that belonging challenges need not arise immediately in college but can come up later; there is no one set process

Validates the common comparison of college to high school friends

Describes processes of building belonging and student's active role

Emphasizes the essential role of time; Validates negative feelings

Attribution to a majority-group member, primarily so the set as a whole is broadly representative of the school student body

<u>Close Friendships 2</u>

Conveys the essential role of time in developing close friends; "Seven years" is intended, an awkward but realistic way a student might refer to both high school and middle school

- Focus on belonging concerns in the core academic context of college

Describes growth in belonging in college while validating high school ties, thus not pitting one against the other

Attribution to an Asian American primarily so the set as a whole is broadly representative of the school student body

(continued)

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(7) "Freshman year was a learning experience for me. I was unprepared for the workload and differences in grading at [school name], and I had to learn to budget my time wisely, so I wouldn't have extreme blocks of time studying and of not studying. After getting burned grade-wise several times and feeling stressed out in the process I worried that I wasn't smart enough. Fortunately, a conversation with an upperclassman helped me see that I needed to change my study habits. I learned to study and do my work more effectively than before. Although my start was somewhat rocky, it has felt good to learn from my mistakes, and I am proud of the success I have had."

- Participant #55, [dorm name] junior, White male

(8) "As excited as I was to come to [school name], I must admit that part of me thought I had been accepted due to a stroke of luck, and would not be able to measure up to the other students. It wasn't until late in my second year that I started to feel comfortable in my own shoes, and to believe that I really was up to par and could totally hold my own. After that, [school name] started to feel a bit like home, and though I still have doubts about myself sometimes they're the kinds of things everybody feels on occasion."

- Participant #60, [dorm name] senior, Hispanic female

(9) "Walking into classes for the first time freshman year was uncomfortable to say the least. Particularly when shopping seminars, the only thing more intimidating than the other students (some of whom were upperclassmen), were the professors, who were all so highly regarded in their fields. Now I feel much more relaxed participating in discussions and asserting my opinions. I think everybody here has a common goal - to share knowledge and to achieve together – and for the most part everyone is respectful and supportive of each others' ideas."

- Participant #8, [dorm name] senior, White female

### Counterstereotypical 3

- Focus on belonging in the core academic context of college
- ← Models entertaining then rejecting a fixed and pejorative interpretation
- Describes processes of building belonging and student's active role
- Focus on growth and learning, not mere success
- Attribution to a majority group member

Imposter Syndrome: Acknowledges the feeling of being an imposter, normalizes this and represents growth

- Focus on belonging in the core academic context of college; Vague (and late) timeline of improvement
- Acknowledges that doubts can persist but represents these as immaterial to actual belonging
- Attribution to a minority group member, following three majority-group members

### Counterstereotypical 4/Common Goals

- Focus on belonging in the core academic context of college; Vague timeline of improvement
- Emphasizes common goals around learning; Validates that some
  individuals may be less than respectful but represents this as not a
  threat to belonging
- Attribution to a majority group member

C The results of the Junior/Senior Survey suggest that, during freshman year students often worry about whether or not professors and other students at [school name] accept them. However, the survey results also suggest that most students eventually become comfortable at [school name] and find a family of people at [school name] with whom they are close and feel they belong.

In an effort to further understand how the transition to college takes place, we would like to ask you to describe why you think this would be so—that is, why students might feel initially unsure about their acceptance but ultimately overcome these fears. Please be sure to illustrate your essay with examples from your own experiences in classes, seminars, lectures, study groups, and labs. Please take as much time as you like.

Note - your essay may be provided, anonymously, to incoming [school name] freshmen next fall.

[5 lined pages]

Feel free to continue your essay on the opposite sides of these pages

# APPENDIX 2.2. Two Practitioners' Experiences Implementing the Social-Belonging Intervention

We asked two practitioners who implemented the social-belonging intervention on their college campus in partnership with the College Transition Collaborative (CTC; www. collegetransitioncollaborative.org) to describe their experience.

### Kurt A. Boniecki, PhD

Associate Provost for Instructional Support Associate Professor of Psychology University of Central Arkansas

As a social psychologist by training, I have been excited to be involved in the application of my discipline to solving the problems that I now face as an academic administrator. At my institution, we've traditionally approached student success by providing academic support services, such as tutoring, corequisite remediation, and supplemental instruction. Although these services are effective, we were still losing nearly 30% of our incoming freshmen within the first year. Understanding why and what we could do about it led us to explore mindset approaches, such as the belonging intervention, that seek to address students' self doubts and their interpretations of the challenges they face in college. In 2014, we joined the College Transition Collaborative and implemented the belonging intervention to two cohorts of incoming freshmen. While it is still too early to determine the long-term effects of the intervention, preliminary results so far are promising and show that disadvantaged students are more likely to complete a full-time load of courses in their first term and first year. Of course, we don't expect the intervention to be a silver bullet that supplants our academic support services, but compared to those services that involve significant training and personnel costs, the belonging intervention is relatively easy to administer and requires very little in terms of resources. That's a selling feature to university administrators on a tight budget. Thus, we will continue to study the long-term effects of the intervention and explore ways to improve it.

One area for improvement is the delivery of the intervention. Though easy to administer online, we struggled with low response rates when using e-mail invitations. As a result, we shifted from students being invited to complete the intervention on their own time to requiring participation as part of students' on-campus summer orientation. That approach has its potential drawbacks though, because students may not have the time or personal space during a summer orientation program to genuinely reflect on and write about their own doubts and how they might overcome them, which is a key component of the intervention. Thus, we are exploring other means of delivery, such as embedding the intervention in online orientation modules and early classroom assignments.

A side benefit of our participation in the CTC has been the awareness it has created among academic support staff of students' mindsets and how these affect their interpretation of academic struggle. We are questioning the idea that "tough love" messages really motivate students to succeed and are recognizing that they are more likely to motivate them to quit. As a result, we are changing how we communicate with students. From advising sessions to probation letters, we are now more cognizant of what we say and how it can help a student overcome a maladaptive mindset. Also, just like the intervention is changing students' mindsets, I believe our participation in the CTC is beginning to change the mindsets that our staff and faculty have of our students. Many staff and faculty are abandoning the belief that some students are not "meant" to go to college for the notion that all students

can succeed under the right conditions. A key tenet of the CTC approach is that student success is a process and that academic struggle is a normal part of college life. This idea has influenced the development of other student success initiatives beyond the intervention. For example, our university promotes a campuswide Fail Forward Week in which students, staff, and faculty are encouraged to share their failures publicly. The hope is that students will see their academic struggles as typical and will seek the help they need.

### Jerusha Detweiler-Bedell, PhD

Professor of Psychology Director, Teaching Excellence Program Lewis & Clark College

Lewis & Clark was the first liberal arts college to implement the CTC's belonging intervention. When the CTC team approached our college with this opportunity, a focus on students' sense of "belonging" was not yet part of the institutional fabric. Yes, we were eager to understand better what kinds of students succeed at Lewis & Clark College, and yes, we were attentive to the importance of growing the diversity of our student body. Yet at that time we hadn't considered the role we needed to play in discussing and normalizing the challenges all undergraduates face in order to help our students not only persist but thrive.

Presenting the CTC's plan to the community required bringing together a large number of stakeholders, ranging from the dean's office to student life staff to faculty to the advising office and more. Initially, there was support for the basic idea, but a great deal of skepticism about using an experimental design for the intervention. "If something like this seems promising, why not provide it to all students right away?" What was harder to understand was the fact that this intervention had never been tested at a primarily undergraduate institution, and even if it had been, our students may be different from those at other schools. We needed to tailor the intervention to our own students and assess its effectiveness before putting the resources into providing it to everyone. These early conversations not only helped members of our institution to understand the wisdom of assessment prior to widespread implementation but also to spread the concept of belongingness throughout our campus community.

Early data demonstrated that our entering first-year students were being affected by the belonging intervention. As one student described, "Through reading about other students' experiences of coming to Lewis & Clark and becoming more comfortable over time, I have recognized that all students are experiencing the same stresses that I am now. There is no easy way to get around the discomfort of starting all over. The best thing to do is embrace the opportunities Lewis & Clark offers and be outgoing. By doing this, I will find myself at home in no time." As data collection progressed and results for the tailored belongingness intervention continued to be promising, Lewis & Clark was able to make an informed choice to implement the intervention for all entering students.

Although there is somewhat of a chicken-and-the-egg problem here, campuswide changes began to be put in place on the heels of the CTC's intervention. For example, a new, required first-year experience called the "Pioneer Success Institute" was initiated the year after the CTC intervention began. At the same time, faculty began to focus more explicitly on inclusive pedagogy and the ways students' struggles in those first few semesters could be normalized in order to make their classrooms more inviting places to be. And perhaps most striking, our institution recently unveiled a new strategic plan, where one of the six key goals echoes the CTC's intervention. As Lewis & Clark's president, Wim Wiewel, said in his inaugural address (October 5, 2018), "The overarching goal is to create an institutional culture of belonging, where all community members can fully participate."