BANDWIDTH RECOVERY

Helping Students Reclaim Cognitive Resources Lost to Poverty, Racism, and Social Marginalization

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Foreword by

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Published in association with

Association of American Colleges and Universities

Stylus

STERLING, VIRGINIA

(2017)

PART ONE

THE COSTS OF RACISM, POVERTY, AND SOCIAL MARGINALIZATION

Like a lot of white people, I had envisioned racism as a series of distinct, objectionable, even violent acts . . . and had not really grasped that it was also, perhaps primarily, a relentless, wearying drone of negativity from which there is no escape.

—Christina Thompson (2008, p. 193)

If it's obvious to you from your knowledge or your lived experience that being poor or existing in a social environment thick with negativity and disrespect leaves a person short on available cognitive resources, then skip to Part Two. Part One of this book is meant to make the case that persistent worry about money, including lack of regular access to adequate food, shelter, health care, safety, and so on, takes up parts of the brain that are then not available for thinking, learning, and making good choices. In addition, members of certain racial or ethnic groups in the United States—for instance, Black, Hispanic, and Native American, and some other minority groups—on their worst days exist within a dusty cloud of fear, worry, isolation, and frustration that robs them of available cognitive resources.

Although many people will still deny it, and more of us wish it were not true, there is ample evidence that racism and poverty make people sick, waste human capital, and diminish cognitive resources. There are many reasons that some of us, maybe especially those of us who have a relatively privileged life, would rather not face up to the facts. Perhaps most important and discomfiting to acknowledge is that the systems of discrimination, hostility, and inequality that are the manifestations of racism and unfettered capitalism

seem to have benefited us at the expense of others. In addition, it is particularly disturbing, if one faces facts, that we could do something about these phenomena if there were the political and popular will to do so. Thus, we have a situation in which we live in one of the wealthiest and most resource-rich countries in the world, and yet we allow social and economic conditions to strangle the potential of well over half our citizens. It is an upsetting realization, and it is no surprise that most of us, especially those of us who are not subject to such deprivations, would rather not think about it.

The costs of racism and poverty cannot be denied. When I talk about racism, I am referring not only to subtle and very unsubtle discrimination, hostility, and violence but also to the "relentless, wearying drone of negativity" (C. Thompson, 2008) that is the reality of life in the United States for many Blacks, Hispanics, Native Americans, and other people who do not fit into someone's idea of the mainstream. Camara Jones (2016), the president of the American Public Health Association, defined *racism* as

> a system of structuring opportunity and assigning value based on race . . . the social interpretation of how we look that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources.

In the documentary series *Unnatural Causes . . . Is Inequality Making Us Sick?* (California Newsreel, 2008), physicians and social scientists painted a sobering picture of the health costs of racism and poverty. In the United States, health and wealth are in nearly perfect alignment; poor people are sicker, and rich people are healthier. Nonmajority people are sicker than majority people, even taking into account income and wealth. Beyond the economic realities of paying for both preventative and time-of-illness health care, what other factors can explain these health disparities? The researchers concluded that racism and poverty make people sick (California Newsreel, 2008).

In addition, there are sociopsychological phenomena that result in serious impairment in mind, spirit, and cognitive resources. These phenomena are about the way racial and ethnic minority people are treated. These include microaggressions, stereotype threat, belongingness uncertainty, and other sociopsychological *underminers*, so named because when they are part of lived reality, they act to undermine and diminish cognitive capacity. When people live with persistent racism, their cognitive resources are limited because they are devoting so much psychic energy to keeping their heads up against this constant barrage. These sociopsychological phenomena will be the focus of Part Two.

Economic insecurity, like racism, can have a negative effect on cognitive resources, what Mullainathan and Shafir (2013) called "mental bandwidth" (p. 41). In their 2013 book *Scarcity: The New Science of Having Less and How It Defines Our Lives*, Mullainathan and Shafir demonstrated with their own research and that of many other social scientists that the condition of scarcity depletes mental capacity; in their terms, *bandwidth*. The authors told us that poverty comes with a "bandwidth tax" (p. 39). To help us understand the effects of scarcity, Mullainathan wrote about how he made mistakes when he got overcommitted, like missing deadlines and double booking meetings. He used himself as an example of how scarcity—in his case, a scarcity of time—taxed his mental bandwidth so much that it affected his work performance.

What we usually mean by the term *poverty* is people who are economically insecure, who live in a persistent condition of scarcity. Mullainathan and Shafir (2013) conducted social experiments in which they simulated a situation of scarcity by having adult participants imagine that they need to make a decision about whether to have $300 worth of repairs on their car or risk it breaking down, after which they gave the participants a short IQ test. They found no significant difference between the scores of rich people and poor people. In a follow-up study, however, the researchers raised the cost of the repairs from $300 to $3,000. Under this condition, they found that the scores of rich people were not affected, but the scores of the poor people fell the equivalent of 14 IQ points. This is a worse erosion of cognitive performance than being sleep deprived by staying awake for 24 hours before the test. The stress and the mental strain for a poor person faced with this unexpected extra cost "depletes the amount of mental bandwidth available for everything else" (Feinberg, 2015, p. 40).

We often hear that poor people make bad decisions that result in their staying poor. Poor students are less likely to go to college, and those who go are less likely to finish than wealthier students. Poor people take out loans before payday; then, when they can't pay them back on time, they end up paying ridiculous amounts of interest, making them even poorer. From the perspective that scarcity diminishes bandwidth, it's not that poor people make bad decisions as much as that the condition of being poor constrains the ability to make good decisions in an environment that promotes bad decisions. This understanding should make us take a step back when we blame our financially strapped students when they seem to *choose* not to study or come to class and appear to lack the motivation to succeed. They may be highly motivated but are just out of bandwidth because of many hours of paid work or worry over not having enough money or other resources.

And what about those students who will arrive at college over the next decade? In the United States in 2013, there were 72 million children younger

than 18 years. Of those, 45% (32 million) lived in low-income families (200% of the federal poverty threshold), and half of those lived in poor families (at or below the *federal poverty threshold*, defined as $23,624 for a family of four in 2013); both groups of children are being raised in conditions of persistent scarcity (Jiang, Ekono, & Skinner, 2015). Children growing up in economically insecure families have a difficult time succeeding at school and in other areas of their life. They are, like their parents, operating with diminished bandwidth for learning and for making good choices, resulting in low rates of high school completion, college attendance, persistence, and graduation. In the United States, lifetime outcomes for college graduates are so much more positive in terms of health, wealth, and economic and intellectual contribution that we can no longer afford to have well over half of the population left out of the opportunity.

In regard to the negative health outcomes of chronic stress, information from the documentary *Unnatural Causes . . . Is Inequality Making Us Sick?* (California Newsreel, 2008, "Chronic Stress," para. 7) tells us the following:

> People who are lower on the socioeconomic pyramid tend to be exposed to more formidable and ongoing stressors, e.g., job insecurity, unpaid bills, inadequate childcare, underperforming schools, and dangerous or toxic living conditions, crowded homes, even noisy streets. They are also less likely to have access to the money, power, status, knowledge, social connections and other resources they need to gain control over these many tempests that threaten to upset their lives. (Chronic Stress, para. 7)

Racism and poverty rob people of mental bandwidth, leaving them with limited cognitive resources to learn and perform to their potential and resulting in the national tragedy of blighted hope and squandered human capacity for creativity and problem-solving.

4

LOSS OF COGNITIVE RESOURCES AND BANDWIDTH

Scarcity

At every moment, about 11 million bits per second of processing are active in our brain. We have conscious control of fewer than 100 of them. As in Figure 4.1, just the few white connections are what we can control. (This diagram is not to scale, of course, but you get the idea.)

Our students come to college with varying amounts of mental bandwidth available for learning. As I mentioned earlier, when I went to college, I went with most of my brain ready to learn. I went to a large university 30 miles from my hometown, where my older brother and sister were also students. All of my paternal aunts and uncles had gone there as well. My parents had saved some money, so my tuition was covered. I worked 20 or so hours a week to pay for rent and other living expenses. I was a White student who received an adequate education in a Catholic elementary school and a small-town high school. I was healthy, safe, and loved. All of my mental bandwidth was intact; I had full access to all of my cognitive resources.

Many college students are not so lucky. Many grew up in economic insecurity and are still in that reality. As Mullainathan and Shafir (2013) stated, poverty robs mental bandwidth. So, many students routinely have to "spend" some of their bandwidth on working to make money as well as worrying about not having enough. Because of poverty, some of their bandwidth is now "X'ed out," no longer available for learning. In the illustration shown in Figure 4.2, the area in black is still available (again, representative, not scientific).

Figure 4.1. Our brain with full function.

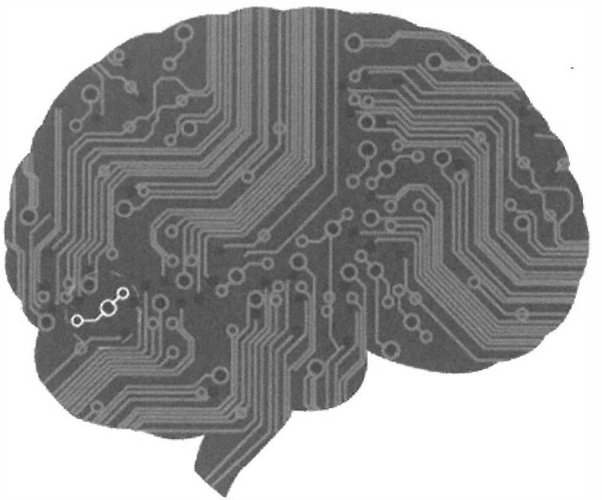
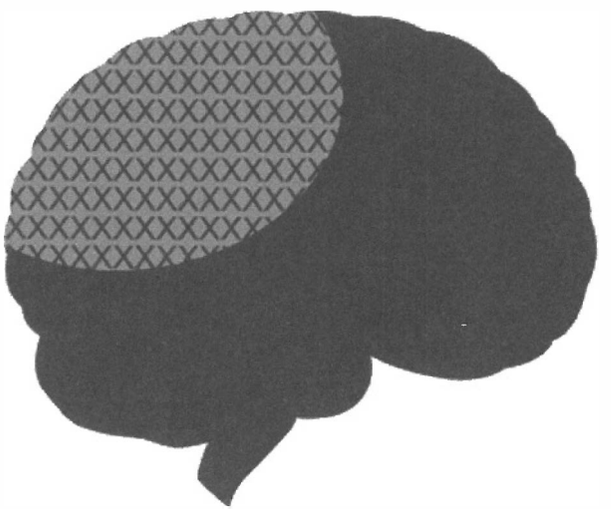
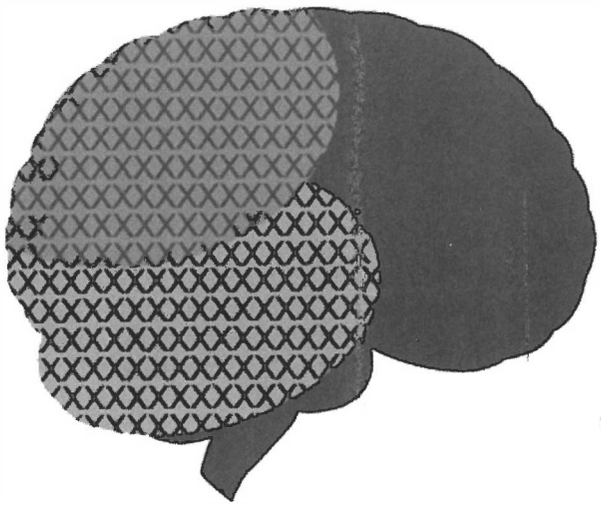


Figure 4.2. The poverty tax to mental bandwidth.



Now, think about what happens if those poor students are also Black; Hispanic; Native American; Asian; or gay, lesbian, or transgender. And what if they live in a city and go to a school where they experience racism or homophobia or some other "differentism" and so live in the negative soup of stereotyping and discrimination? (*Differentism* is defined as the negative attitude or behavior of a person toward another person who does not conform

Figure 4.3. Bandwidth lost to exclusion and hostility based on race.



to his or her conceptualization of "normal.") Remember Mullainathan and Shafir's (2013) assertion that "scarcity robs mental bandwidth"? This is, in essence, another kind of scarcity. These students experience scarcity of respect, esteem, safety, and acceptance. In Figure 4.3, we see that even more mental bandwidth is X'ed out by the experience of social exclusion and hostility.

For Black students, we could probably cross out a bit more because they often have to maintain what W.E.B. Du Bois called *double consciousness*. Black students, because of the long history of racism in the United States, have to have two identities—their true one and another one that takes into account the way they are seen by White people—and adapt behavior accordingly. Discussing the related concept of "code-switching," which originally referred to bilingual language usage, Gene Demby stated,

> We're looking at code-switching a little more broadly: many of us subtly, reflexively change the way we express ourselves all the time. We're hop-scotching between different cultural and linguistic spaces and different parts of our own identities—sometimes within a single interaction. (R.L.G., 2013, para. 1)

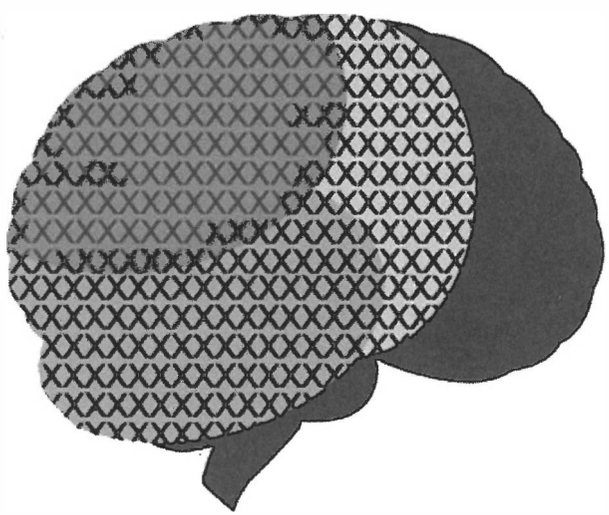
It sounds exhausting! Some researchers have suggested that this pressure may contribute to mental health problems for Black students (Green, 2016). The same is true for LGBT students, which I will address specifically in chapter 9.

Students who don't have adequate financial resources or have to work too many hours are constantly preoccupied with money concerns. They worry about how they will pay their bills and, for many who have families to support, how they will keep their children (or their parents or siblings) fed and healthy. This kind of persistent worry can make you sick (American Public Health Association, 2015). Add to that the ill health that is associated with racism and we have to subtract yet more bandwidth (see Figure 4.4) because now the student must also think about and suffer from physical illness, yet another kind of scarcity, the scarcity of physical well-being.

Now we have students who, on a good day, are operating with much less than half of their brainpower. Imagine sitting in a college classroom with one ear and one eye closed and music playing so loudly that it is hard to hear the professor. No matter how hard you try, you miss out on too much and your concentration is shot. That's just a simple picture of the situation related to cognitive or attentional resources that some students experience every day.

Mullainathan and Shafir (2013) explained that there are two parts of mental bandwidth that affect our ability to learn and to make choices. The first part is *cognitive capacity*, which we usually think about as the part that we need to succeed at school and work. We need to be able to think clearly and to take in new ideas and instructions. The second part is *executive control*, which they said "underlies our ability to manage our cognitive activities, including planning, attention, initiating and inhibiting actions, and controlling impulses" (Mullainathan & Shafir, 2013, p. 47). Students whose

Figure 4.4. More bandwidth lost to chronic illness.



bandwidth is depleted are less able to "keep their head in the game." When they're worried and broke and feel isolated, it's difficult for them to focus on long-term goals enough to give up the video game for an hour of studying or to set an alarm and get up for that 8:00 a.m. class. This can be construed as a lack of self-control, which some people see as an aspect of personal strength or discipline, but this perspective ignores the fact that the actions that we typically call *self-control* require the use of those limited executive control resources. In other words, self-control requires bandwidth that students just don't have. Students' capacity for persistence is diminished, and school might lose out to life's other demands. Even if students somehow find the self-control to focus on academics, they may do half as well with only half of their cognitive resources available for the task. It is easy to understand why they might give up altogether.

With competing demands for attention, what these students are doing is multitasking, which we have come to think about as the ability to do several things simultaneously. However, Doyle and Zakrajsek (2013) asserted that even though we think we are doing two or more things at once, we are really switching back and forth between the separate tasks or thoughts. Each time we do that, it takes a bit of time to refocus. So when a student is in class but is worried about how she will make her paycheck last to the end of the month or is trying to figure out if a snarky comment had racist intent, she is unable, at the same time, to absorb what the teacher is saying. Even when she tries to get her focus back in the classroom, the residual lag time steals even more of her attention. Some of us might be able to identify a bit if we've had competing responsibilities like managing a career and raising small children. When we're at work, we feel like we should be home with the kids, and when we're at home, the demands at work are nagging at our attention. The result can be a sense that we're not doing either task as well as we could and should.

PART THREE

INTERVENTIONS THAT MITIGATE THE NEGATIVE EFFECTS OF POVERTY AND THE UNDERMINERS

They started with the assumption that nothing was wrong with the students.

—Stephanie Fryberg, University of Washington (B. Miller, 2015)

To summarize, poverty and racism (and differentism more generally) rob our students of mental bandwidth so they have limited cognitive resources for learning. Poor people are physically and mentally less healthy than people who have adequate resources; they suffer the physical consequences of chronic stress. People who experience racism every day experience similar stress and negative health outcomes. Physical and mental illness take up mental bandwidth, leaving less available for everything else, such as making good choices, being effective workers or parents, and learning.

In the United States, at least, if the political will were there, we could eliminate the worst economic inequality within current structures of taxation, commerce, and labor. We could change the way we fund public schools so that every child would have the opportunity for high-quality primary and secondary education. Every child could have an adequate diet as well as exercise and intellectual stimulation. Ending racism, classism, homophobia, and other underminers may be a bit more difficult, considering how deeply they are embedded in the culture. But for now, poverty and racism diminish the life chances of the majority of children and adolescents in the United States, many of whom will arrive at institutions of higher education in the near

future. Acknowledging the fact that many of them will have depleted mental bandwidth, we must develop strategies to help them recover cognitive resources for learning.

Research has demonstrated how changing the circumstances of a situation, sometimes through seemingly minor interventions, can have dramatic effects on the academic performance of students in nonmajority groups. Cohen and Garcia (2014) reminded us that the original Latin meaning of "to educate" is "to draw out." When we apply interventions to help students, we're not adding anything to their intelligence or giving them some kind of advantage; rather, we are trying to draw out what is already inside them that has been inhibited by exposure to sociopsychological underminers. David Yeager said, "Ultimately a person has within themselves some kind of capital, some kind of asset, like knowledge or confidence. And if we can help bring that out, they then carry that asset with them to the next difficulty in life" (Tough, 2014, para. 61). In the following chapters, I present some interventions that have shown promise in helping students recover their mental bandwidth and increase their level of learning and persistence in higher education.

II

BELONGING

Values Affirmation

First-generation students, students from negatively stereotyped groups, and students who grew up in economic insecurity often feel like they don't belong in college and that their input is not needed or even noticed. Recognition that they do have personal values and that those values matter has been shown to have significant positive effects on grades and persistence. Such values-affirming activities are especially effective when they are done at strategic times, such as during transitions (e.g., high school to college), shortly before a major exam, or before a student gives her first speech in a communication class. Values-affirmation interventions, although often lasting for only half an hour or so, have resulted in increased grades in a semester, higher retention to the next semester, and positive feelings of health and well-being up to three years later. G. L. Cohen and Garcia (2014) asserted, "Changing how students think and feel about the classroom can improve their performance and long-term trajectory" (p. 13).

When students in stereotyped groups were asked to choose from a list of values the ones that were most important to them and then to write about why they are important, they attained significantly higher grades than students in a control group over the next two years, resulting in a significant reduction (40%) of the achievement gap between Black and White students (G. L. Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009).

In two studies with middle school students, Sherman and his colleagues (2013) had groups of students do writing exercises at various intervals that were focused on the values of individual students. In one study, students in the treatment group wrote the exercises four or five times over the period of the study, whereas the control group did not write. The achievement gap, measured by grades, between Latino and White students widened in the control group (as had been the consistent pattern in the past) but not in the experimental group. The positive effects persisted for three years, improving

the outlook for these Latino students; the intervention had no effect on the grades of White students. In another study, one group of students wrote daily affirmations, whereas the control group wrote only twice over the school year. As in the first study, the achievement gap for students in the experimental group did not widen, whereas it did for the control group. For the treatment group, the historical downward trend in GPA was eliminated. Sherman and colleagues (2013) explained that the affirmation "prompts students to tell a different story to themselves about their experience and to take a broader view of events in their lives . . . the experience of threat is less likely to set the tone for the rest of their academic tenure" (p. 614).

The effects of these seemingly small interventions have been shown to last up to three years. According to G. L. Cohen, Garcia, Apful, and Master (2006), this is because such interventions can interrupt and potentially reverse what they called the "negative recursive cycle" that occurs when psychological threat, such as stereotype threat, and poor performance act together to create a downward spiral of worsening performance. Interventions such as the values-affirmation writing can stop the cycle and, often, set off a positive recursive cycle when a slight improvement in performance lessens identity threat, freeing up cognitive resources to support future improvements. The results of Cohen and colleagues' (2006) studies have shown that the interventions do interrupt the negative cycle, reversing, for instance, a downward trend in grades. In addition, in their intervention group, an experience of failure did not worsen performance afterward, indicating that the upward cycle was still active in spite of a setback. The researchers pointed out that even if the intervention was small and even if the result is simply minor improvements on several assignments, the cumulative positive effect on the final grade can still be significant.

In addition to the psychological effect of a broadened self-concept and more resiliency in the face of stereotype threat, there is evidence that values-affirmation processes can affect the sympathetic nervous system response to stress. Undergraduate students provided urine samples 14 days before their most stressful exam, to establish a baseline, and on the morning of the exam. Students in the treatment condition wrote two essays on important values during the two weeks preceding the exam, whereas students in a control group did not write. Students in the control condition showed an increase in epinephrine levels, an indicator of sympathetic nervous system activation, from baseline to exam day. Epinephrine levels in the students who had done the affirmation writings did not change from baseline to exam day (Sherman, Bunyan, Creswell, & Jaremka, 2009). Creswell and colleagues (2005) conducted a similar study in a laboratory setting. Participants completed either a values-affirmation task or a control task before encountering a laboratory

stress challenge. Compared with the control group, those who had completed the values-affirmation task had significantly lower cortisol responses to stress.

Figure 11.1 is the list of values and instructions I use when I do the affirmation exercise in my classes and in other settings with students. I want students to write about how their top values have influenced their life and choices so the values seem real in a concrete way. Of course, the specifics of the instructions and the list of values can be revised to fit the situation. When I first put together the list, I started with lists that I found on the Internet and distributed a draft list to 10 or so of my colleagues. I asked them to add or subtract any items to fit the context of our university and community; I incorporated their suggestions, resulting in the list for the exercise shown in Figure 11.1.

Figure 11.1. Personal values affirmation exercise.

Wisdom	Reliability	Integrity	Enthusiasm
Winning	Productivity	Inspiration	Efficiency
Well-being	Power	Initiative	Dignity
Wealth	Personal growth	Independence	Dependence
Volunteering	Perseverance	Humor	Curiosity
Truth	Peace	Humility	Creativity
Trust	Patriotism	Hope	Courtesy
Tradition	Patience	Honesty	Courage
Teamwork	Orderliness	Heritage	Cooperation
Success	Optimism	Health	Conflict resolution
Spirituality	Openness	Harmony	Confidence
Simplicity	Open communication	Generosity	Competitiveness
Service	Nature	Fun	Competence
Self-reliance	Mercy	Friendship	Compassion
Self-esteem	Making a difference	Freedom	Community
Self-discipline	Loyalty	Forgiveness	Commitment
Safety	Love	Flexibility	Collaboration
Sacrifice	Listening	Fitness	Civility
Romance	Learning	Financial stability	Caring
Risk-taking	Leadership	Family	Boldness
Responsibility	Kindness	Fame	Beauty
Respect	Justice	Faith	Ambition
Resilience	Joy	Fairness	Adaptability
Reputation	Job security	Excellence	Achievement
Religion	Intuition	Ethical behavior	Accountability

(Continues)

Figure 11.1. (*Continued*)

1. From the list, circle the 10 values that you consider to be the most important in your life.
2. Think for a bit about each of those 10 values. Put a second circle around the 3 that are the most important of all of them.
3. Write a letter explaining to another student in your class why these values are important to you and what difference they have made in your life. Give some examples of things you have done or choices you have made in your life based on these 3 values.

Although this affirmation exercise is fairly straightforward, a few cautions are in order. The list of values needs to include those to which students can relate. A good practice is to instruct students during the intervention that if there is something that they value that's not on the list, then they may add it. The point is to affirm each student's perspective, so the specific list of values is not material to the exercise. The person doing the exercise must be sincere; if not, students will realize it. For example, an instructor who has shown hostility to students in a certain group who then asks them to write about their values may be seen as insincere, and students might not take the exercise seriously. If the exercise is done in an effort to remedy a negative situation in a class or group, it might be a good idea to have an outside person work through it with the students. In addition, Yeager and Walton (2011) suggested that a values-affirmation exercise given by an instructor who has been told to do it, with little understanding or commitment to the purpose, could become a farce, possibly doing more harm than good.

Connecting the Known to the Unknown

There may be many reasons to explain the powerful effect of asking students to write about their values. One might be acknowledging that all students bring something valuable to the learning environment. Both Gonzales, Moll, and Amanti (1995) and Glisczinski (2011) told us that students learn better when their own experiences are linked to what goes on in the classroom. When we have students who come from disadvantaged educational environments or who grew up in economic insecurity, we often focus on their deficits, what they *don't* bring to the classroom. Sugarman (2010) suggested that we reframe our view of these students and try to see their strengths. She cited the explanation from Gonzales and colleagues (1995) to describe what educators call *funds of knowledge*:

> The understanding that students, families, and communities are comprised not only of struggles, but also of strength. In other words, students and families possess funds of knowledge, or bodies of knowledge and skills derived from household and community life, that when incorporated into the classroom may support and enhance students' educational experiences. (Sugarman, 2010, p. 97)

Glisczinski (2011), in mapping how learning happens, related what Medina (2008) told us, that our "brains favor and retain the lessons learned through concrete experiences with emotionally cogent and relevant stimuli" (para. 1). That means the subject needs to be connected somehow to past experience and that there has to be meaning to the connection. When we start with students' funds of knowledge, their brains will light up, as Glisczincki (2011) said, and grow in response to the stimuli of new information. When students give Life Reports (described on p. 86 in "Pecha Kucha Life Reports"), they learn about themselves and others through "emotionally cogent" content. Another way that I connect experience and students' funds of knowledge with sociology course content is in the discussion questions from the reading for which students come prepared every week. The following is from my syllabus:

> For each class session, read the assigned chapter and come prepared with one or more of the following:
>
> - An example from your life or from the life of someone you know that illustrates a concept (or the opposite) from the reading.
> - Questions you have about something in the reading that you'd like to have addressed by the class.
> - Something from news or other media that relates to the reading.
> - Sharing of a book, article, film, experience, etc. that might help others in the class understand a concept in the reading.
> - Related to the readings, something that you don't yet understand or that you need help with and about which others in the class might have some wisdom to share with you.

Because the students represent diversity in age, gender, race/ethnicity, life experience, and socioeconomic status, the variety of the offerings enriches the entire class. More importantly, students feel that their ideas and their views about what they're reading are valued and contribute positively to the learning of everyone in the class. (There is time for only a few people to actually share their question or example during a class meeting—I draw their names randomly each session—but I collect their notes and read them, following up in the next class on student questions or insights that I want to share with the class.)

G. L. Cohen and Garcia (2014) cited a study by Hulleman and Harackiewicz (2009) in which high school science students were encouraged to connect what they were learning to their everyday life. In this way, students saw the content as personally relevant, not something academic and removed. The intervention resulted in higher grades for students for whom there had been low expectations for success.

When we see students' values and life experiences as funds of knowledge that contribute to their learning, we affirm each of the students, and by connecting new material to what they already know, we cooperate with the way their brain prefers to function. In this way, we increase the likelihood that students will feel a sense of belonging and that their learning will be enhanced. J. Carlson (2015–2016) described the ideal interaction with students as whole beings in the following:

> So as a teacher, I'm not just teaching "the material." I'm teaching "the students," which means that I'm inviting them, each of them, with their particular present blends of connectedness to past realities, to interact with the "stuff" of our course and with each other. (p. 61)

Given that the system of public primary and secondary education in the United States operates in the same sociocultural environment as does higher education, many students arrive at college unprepared academically for college work. No amount of psychological or social intervention can create knowledge and skill that is not there. However, with a growth mind-set, persistence, and our help and support, students can build on their nonacademic funds of knowledge to catch up on the basics. Once they have built their self-efficacy from small learning achievements, they can apply those funds of knowledge to college-level work.

Yeager and Walton (2011) cautioned that seemingly valid interventions can be derailed when they are delivered in such a way that a different message reaches the students. They referenced the Hulleman and Harackiewicz (2009) study about high school science students who had low expectations for success. Those students' grades improved when they generated and wrote about ways in which the lessons were relevant to their life. When the instructor *told* students why the lessons were important, the intervention actually had a negative effect on grades for low-expectation students.

Identification With Academic Self

In light of the values-affirmation exercises and thinking back to the discussion of disidentification with academics, we can now effectively use these concepts to support students in taking on academic success as part of their self-concept. If a Black male student chooses, for instance, *competitive*, *loyal*, and *reliable* as his top values and then writes an essay in which he describes his reasoning, those values are affirmed in this new, academic setting. Maybe he will begin adding academics as a domain in which his self-concept could survive and even flourish. Other interventions might also help students add an academic aspect to their existing self-concept.

It's not exactly an intervention like the others, but having the faculty of an institution more closely reflect the racial/ethnic population of students could contribute to students' ability to see themselves as "college material." One of the downsides of the racial mismatch between students and teachers is that non-Black teachers may have much lower expectations of Black students than do Black teachers (Gershenson, 2015). Analyzing data from a national study of U.S. 10th graders, Gershenson (2015) found significant differences in teachers' estimates of whether a student would, in the future, earn a four-year college degree. In the case of Black students, non-Black teachers were about 30% less likely to predict college graduation than were Black teachers. We know that students are very sensitive to teachers' expectations and that low expectations can result in a self-fulfilling prophecy of actual low performance. Instructors must communicate high expectations of all students and offer them the support they need to meet them.

Steele (1997) emphasized the importance of "potential-affirming adult relationships" (p. 624). This relates back to Dweck's "not yet" feedback. G. L. Cohen, Steele, and Ross (1999) found that Black students were strongly motivated by critical feedback when it was given with messages of optimism about the students' potential. Some researchers have pointed out the potential damage of placing students in remedial classes, as they can be perceived through the "lens of an ability-demeaning stereotype" (Steele, 1997, p. 625), whereas high academic challenge conveys respect for students' potential to learn. Remedial placement can, by increasing stereotype threat, undermine performance, thus causing the opposite of the intended effect.

Oyserman, Bybee, and Terry (2006) took on the task of helping eighth-grade low-income Black (72% of group), Hispanic (17%), and White (11%) students imagine their future self as academically successful. In 10 workshop sessions, students completed exercises to bring out the funds of knowledge each of them would be taking to high school with them, to make their future academic self seem more attainable, and to see that "difficulties are normative and not self-defining" (p. 191). Two years later, these students, compared to those in the control group, had higher grades, better attendance, less disruptive behavior, less depression, and were less likely to have repeated eighth grade. A Black male college senior said in an interview (study described in

chapter 12), "Being smart was not cool in high school. People want to be cool. I suppressed my gifted and talented mentality." He had not developed what Oyserman, Bybee, and Terry (2006) called his "academic possible self" (p. 189); maybe he couldn't imagine himself as a successful student *and* a young man with a strong Black identity.

This next bit could as easily fit under growth mind-set, but I put it here because it seems relevant to helping students shift their expectations of themselves and to encourage self-identification based on academic ability. Yeager and colleagues (2014) worked with seventh graders from a middle-class, racially diverse middle school. They asked each student to write an essay about a personal hero, and the teachers marked the essays, typically with feedback such as "unclear," "give examples," and "wrong word." Then they randomly attached one of two sticky notes to each essay. Half the students received a bland message such as "I'm giving you these comments so that you'll have feedback on your paper." For the other half of the students, the note said, "I'm giving you these comments because I have very high expectations and I know you can reach them." The teachers then gave the students an opportunity to revise their essay. Eighty-seven percent of White students who received the encouraging message turned in revised essays, compared to 62% who got the bland note. Among Black students, the rates were 72% compared to 17%, a much greater effect. Yeager and colleagues (2014) concluded that the Black students were more motivated to try to improve their work when the teacher both reminded them of high performance expectations and assured them that the teacher believed the students could meet the high standards. I suspect that these students, most of whom decided to revise their essay, at least in this situation, felt the message that it was safe to connect with their academic self.

Pecha Kucha Life Reports

In classes at first-year and senior/graduate levels, I ask students to give a Life Report. They use a presentation style called Pecha Kucha (Klein Dytham Architecture, 2003), in which they create 20 PowerPoint slides (primarily pictures), and each slide is shown for 20 seconds. I started using this presentation method because it's a way to share an idea or tell a story that's not completely focused on the written word and, thus, respects cultural norms that value the spoken word. Students in my senior/graduate sociology course (human behavior over the lifespan) share with the class a brief story of their life in which they tell about the circumstances of their birth, their parents and siblings, where they lived and went to school, and positive and negative

milestones. As a way to introduce myself, I give my own Life Report on the first day of class, demonstrating the presentation method and, more importantly, role-modeling openness about my life and willingness to take risk. Students discover that some of their classmates have very different backgrounds than they do, and in the process, everyone's experiences are affirmed and respected. The students show great empathy toward one another and realize that, in spite of their backgrounds, they are all now together in this class with the same goal of getting a college education.

For first-year students, the Life Report can be focused on a brief reflection of family and high school, plans for college major, and plans and hopes for career and life after college. The process helps students with the development (or creation) of their self-identification as college students. They can see that some students come from relative privilege and others from relative disadvantage but that they are all together in this classroom at this moment, all with the potential of belonging. As in the other class, if the instructor gives her own Life Report, students get a sense of safety and are encouraged to be open and honest.

During the last several semesters, I asked students to reflect on what they learned from the Life Report process, both giving and listening. The major themes and some illustrative responses are shown in Table 11.1.

Relationship-Building in Classes

In 1972, Donald Bligh wrote a comprehensive book about teaching in higher education called *What's the Use of Lectures?* in which he suggested strongly that an instructor who only lectures is using a teaching method that, by itself, is a very ineffective way for students to learn. We have known for several decades that lecture alone is not ideal, especially for getting students to think critically or to change perspectives. But, apparently, it is a method still in frequent use. D. J. Smith and Valentine (2012) looked at the practices of 744 instructors at 8 technical colleges and found that almost all of them (93%) reported lecturing for more than half of the class sessions, and 53% reported lecturing in all of the sessions. A study by S. Freeman and colleagues (2014) in the STEM (science, technology, engineering, and mathematics) disciplines showed that students in lecture-only classes were 1.5 times more likely to fail than students in classes where active learning strategies were used. They found that in classes in which students were active participants instead of passive learners, failure rates were reduced, and scores on exams increased by almost half a standard deviation.

TABLE 11.1
Learning From Life Reports in Two Classes

Themes	Student Statements
Success Central (First-Year Experience Class), *n* = 25	
Classmates, differences, and commonalities	• Some people have had things happen in their lives that have also happened in my life. • So many of us came from different backgrounds, yet we're so similar and all ended up at the same university, in the same class. • I've learned that each of us is here to contribute something important to the world. • Really never judge a book by its cover—we all have so many layers. • I learned about some of the hardships that many of my classmates have faced. I also learned a lot about their background and families.
Insights about self	• I learned that where you come from and where you've been can shape who you are, but it doesn't have to. • It seemed to make it more concrete for myself why I am here and what I am working toward and goals that I definitely plan on achieving before I die. • I had to really think about what I want in my future, which I've never thought about too deeply. • People do care what I have to say. • I realized how much I have accomplished in high school, how much my friends and family have impacted my life, and my drive toward my life goals. • It makes me and my classmates closer when we share important stuff about ourselves.
Self-concept as college student	• Everyone is starting out at the bottom, and everyone is struggling to make friends, find certain places, and people are scared to ask questions. This understanding helped me because I know not to be scared about things. • As much as I love my friends and enjoy spending time with them, I can survive and thrive on my own. • High school was too easy. I need to study harder in college. • It helped me to better understand that all of these people in my class are freshmen just like me, and that they are new here and working toward a career as well.
	• Everyone is from a different background. Learn to make new friends and learn about them and their life and drive because it will help me grow as an individual. • Everything that has happened in my life has gotten me where I am, so I'm glad everything happened. • I need to take advantage of the position I'm in and work to the best of my ability every day.
Human Behavior and the Social Environment, *n* = 59	
Different backgrounds but all fundamentally the same	• All of my classmates have hopes, dreams, failures, disappointments, and successes in their lives. • There is something empowering about verbally owning your life's events. It kinda kills the shame. • I learned how diverse a classroom can be. People have experienced very different lives yet we all ended up in the same classroom. • Family comes in many forms. • The huge disparity between students on campus. Some students come from families who could give them anything. They are so humble when you meet them. • In the classroom we are equal. • As distant as I sometimes feel from other's actual experiences, the emotions and empathy we share makes *[sic]* us a lot more similar than we are different. • How we handle a situation has almost everything to do with what happens next. • People's stories are important, and I believe it's good to let each person have the authority to say it for herself or himself • The most important thing that I thought was useful in life is that all of us have problems and that it is not just me. This was crucial for me to understand, which made me feel not alone in my quest for being a better human being. • Knowing that each of us is human and has problems is what unites us all. • I realized the struggles in my family are universal and that made me feel less alone.
Insights about self	• My view of the world is very much through my lens based on my own life experience. • I am proud of myself. It wasn't easy getting here, and I should give myself credit for doing the best I can despite everything telling me to give up. • I should thank my parents more.

(*Continues*)

TABLE 11.1 (*Continued*)

Themes	Student Statements
Insights about self	• After walking through everything that has happened in my life—even the minor things—and then laying out my goals in what I want to accomplish next, I am encouraged to work hard to achieve those goals. • I realized how young I am, and it's okay to not have it all together. • I know I continue to grow through my life experiences and learn every day something from those around me. • My adversities have been what have made me and influenced who I will become after college. • People come from all walks of life, and it does not matter where you come from, only where you end up. • No matter what, I can learn from my past and make better decisions in the future.
We're resilient	• Each person in our class has experienced great adversity and come through it stronger. • Many classmates had a very rough life and some big obstacles to get to where they are now. • People, given time and a little help, can overcome major setbacks. • No matter the %^$@ I had been through, my pain was not without growth. • Listening to my classmates' life reports makes me realize that I am sitting around strong people.
Don't judge a book by its cover	• People contain so much more substance than I could ever imagine just from looking at them. • All of us (my classmates and all humans) have universal themes that connect our lives (i.e., we all have families or long to have families, we all crave a sense of belonging, we all want to be successful, and we all share a uniquely human experience). • Not one of us is alike, and therefore we should not compare ourselves. No family is completely normal. • I also learned that everyone has stories you don't know about so don't be so quick to judge. • Every person is doing their best, no matter the circumstances. • It helps me with my career by looking at the whole picture of a person and not just their problem. • I need to learn to understand people's history and story before I jump to conclusions. • People are not what they appear to be on the outside. We all have a unique, deep, and rich experience that makes us who we are. • I learned that people may look good and happy on the outside but may be going through adversity both personally and in their families.

Even given the evidence that lectures do not produce desirable student learning, there is another reason that lecture alone is not a helpful teaching strategy, especially in the first year and especially for nonmajority and first-generation students. If the instructor is just talking to a group of students, no relationships are being formed. If the lecturer has an engaging speaking style and presents interesting information, individual students might feel a relationship with the instructor, but the instructor may or may not feel a reciprocal relationship. More important, however, if all that happens in a class period is that the instructor lectures and the students listen and take notes, no relationships are being formed between and among students in the class. For students, it's an experience of what early-learning educators call *parallel play*. This is when, at around two years old, children are in the same space and playing, but they're not playing with each other; there's no interaction and no relationship. College students may co e to the same lecture twice a week for 15 weeks, and even though they are "sharing" the same experience, no relationships are formed. The classroom may look like the one shown in Figure 11.2, with the possibility of a relationship between individual students and the instructor but little chance for connections between students.

Given that a sense of belonging seems to be a critical factor in student success, it makes sense to use the opportunity in every class to connect students with each other. There are many methods to accomplish this, such as

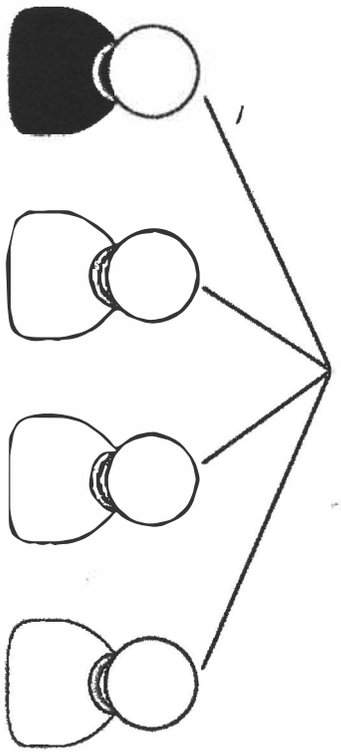


Figure 11.2. Student relates to lecturer only.

having students work out a problem as a group, "teach" each other a concept, take quizzes in groups, and exchange ideas in pairs or triads. In large class sections, facilitating this kind of interactive learning environment often results in an enhanced relationship between students and instructor as well. Hoffman, Richmond, Morrow, and Salomone (2002), in a study of first-year college students found that a

> "sense of belonging" to the institution stems from perceptions of "valued involvement" in the collegiate environment. . . . This perception of "valued involvement" appears predicated on: 1) establishing functionally supportive peer relationships—"functional," in terms of the ability of the relationship(s) to directly aid students in meeting the challenges and changes of their new environment; and 2) the belief that faculty are compassionate and that the student is more than just another face in the crowd. (pp. 249, 251)

From surveys of 238 university first-year students, T. M. Freeman, Anderman, and Jensen (2007) found that certain instructor actions and characteristics were associated with students' sense of belonging. The most important was encouraging student participation and interaction. This, along with instructor warmth and organization, was associated with student motivation and achievement.

First-year general education classes could be excellent settings in which to help students get connected to other students and form relationships with faculty. In my classes, I encourage students to appreciate both the diversity among them and the ways in which they have shared experiences. In sociology, I have students stand in groups in different parts of the room based on the size of the town where they grew up, how many siblings they have, whether they have children or grandchildren, or whether they have traveled outside of the United States. Then we divide into groups of five with the goal of maximizing diversity. Those are the groups they will be in for the semester. I distribute papers on which they record their names, e-mail addresses, and phone numbers; they make six copies, one for each of them and one for me. Each class period, they take a quiz over the assigned reading, first individually and then as a group; the scores on the individual quiz and the group quiz contribute equally to the final grade. The group members are the students' contacts for the class and often become important support systems for each other.

In large lecture sections, especially in first-year courses, an instructor could form students into triads on the first day and have the students exchange contact information. If that triad talked together even once during a class session about course content, relationships would begin to form. Students might begin to be accountable to one another—someone would notice if one of the three were not in class. This could make a significant difference for a beginning student—the fact that someone cared if he or she showed up. If a student had five classes and formed the beginnings of a relationship with two people in each, she would have 10 students she could contact if she felt the need. We know that active learning techniques increase learning, and they can also create situations in which students could feel a sense of belonging by forging new relationships with fellow students and the instructor, therefore increasing the likelihood of persistence.

Helping Relationships: Mattering

Straumanis (2012) advocated that instructors provide plenty of social interaction and the use of active learning approaches to ensure engagement. She suggested that the following techniques are much better than passive listening and are best used alternately or in combination:

> - short writing breaks during lectures, labs, or other activities;
> - peer explanation and self-explanation (requiring *all* learners to repeat what they have learned in their own words);
> - discussion or problem solving with others in teams or pairs ("buddy system"); [and]
> - "guided inquiry"—structured lesson delivery in which the material to be learned is divided into graduated increments and presented by means of carefully designed problems to be solved collectively by small groups of students. (p. 10)

Eric Mazur, a Harvard physics professor and a strong advocate and model of teaching to help students learn, has found that peer instruction is often a more effective way for students to learn a new concept than a lecture about it. In an interview (Lambert, 2012), he explained how it works:

> Here's what happened. . . . First, when one student has the right answer and the other doesn't, the first one is more likely to convince the second—it's hard to talk someone into the wrong answer when they have the right one. More important, a fellow student is *more likely* to reach them than Professor Mazur—and this is the crux of the method. You're a student and you've only recently learned this, so you still know where you got hung up, because it's not that long ago that *you* were hung up on that very same thing. Whereas Professor Mazur got hung up on this point when he was

> 17, and he no longer remembers how difficult it was back then. He has lost the ability to understand what a beginning learner faces. (para. 7)

Mazur has observed that this kind of instruction has tripled students' gains in knowledge and eliminated the gender gap between male and female undergraduates. Both males and females gain, but females gain disproportionally more, and the gap closes.

Within groups that are intentionally formed to maximize diversity, everyone has something about which he or she is an expert; everyone brings something to the table. With guidance, students see that diversity of knowledge, background, and perspective is a strength in a group learning situation.

Outside of the classroom, students can be trained as peer advisers and, for reasons much like those given by Mazur for the success of peers in explaining physics concepts, can introduce first-year students to what they really need to know to succeed. As pointed out by Heidi Koring (2005) at NACADA (The Global Community for Academic Advising), students advise students every day, in the library, on the bus, in the Union, in the pub, and elsewhere: "Formal peer advising programs direct and channel peer advising to ensure that students are given advice by peers trained to impart accurate information and to make appropriate referrals" (para. 1). According to Koring,

> Peer advising offers several advantages, including versatility, compatibility with pre-existing academic advising programs, sensitivity to student needs, and the ability to extend the range and scope of advising to times and venues when advising is not usually available. Additionally, those serving as peer advisors benefit from the leadership development included in such programs. (para. 3)

At American University, peer advisers offered socioemotional support and information about support services by providing a friendly ear for the expression of concerns and requests for help. The first outreach was through e-mail, and researchers found that when the adviser was a male, male students were 26.5 percentage points more likely to engage with the adviser than if the adviser was female (Ellis & Gershenson, 2016). At American University, the majority of students are female, so that might explain why male students might want to connect with another male. This finding reminds us to pay attention to identity contingencies that might affect a student's comfort with a peer adviser.

Duke University gives this explanation about its peer advising program:

> Each year, experienced students volunteer to serve as peer advisors to first- and second-year students, offering the perspective of someone who has been where you are now. Peer advisors can share with you how they formed meaningful mentoring relationships with faculty, assist you in navigating online registration and help you learn to distinguish what is merely popular from what is individually meaningful to you. (advising.duke.edu/peer)

This description highlights one of the strongest assets of a peer adviser, which is that he has, very recently, been in the shoes of a first-year student. He can still remember what it was like to be new on campus and the questions that he wished someone would have answered for him. With training, peer advisers can combine their empathy and natural connectedness to an age-mate with accurate information about resources on campus to lend beginning students the support they need and, it is hoped, also help them feel that essential sense of belonging.

Academic and Social Counter-Spaces

In 1997, Beverly Tatum wrote the book *"Why Are All the Black Kids Sitting Together in the Cafeteria?" and Other Conversations About Race*. With the title, she was making the point that the reason we don't know why the Black kids are sitting together is that we can't even ask the question. When I recently read about academic and social counter-spaces, I immediately thought of the kids in the cafeteria. They, along with groups of Hispanic students, Asian students, Native American students, skateboarders, gamers, and others, were trying to establish what Solórzano, Ceja, and Yosso (2000) called "counter-spaces," places where they can feel safe and relax in their own skin.

In their study of racial climate on college campuses, Solórzano and colleagues (2000) held focus groups with 38 Black male and female students who were attending three elite, predominantly White, Research I institutions:

> In response to the daily barrage of racial microaggressions that they endure both in and outside of their classes . . . students . . . indicated that they are creating academic and social "counter-spaces" on and off their campuses. These counter-spaces serve as sites where deficit notions of people of

> color can be challenged and where a positive collegiate racial climate can be established. (p. 70)

Māori are the indigenous people of New Zealand, and as a result of colonization and loss of traditional lands and livelihoods, they are disproportionately poorer, less educated, sicker, and underemployed compared to White New Zealanders. Pasifika students, who come from or whose ancestors came from islands in the South Pacific—Sāmoa, Cook Islands, Tonga, Niue, Fiji, Tokelau, and Tuvalu—share many of the negative health and social indicators with Māori (Marriott & Sim, 2014). At Victoria University in Wellington (VUW), New Zealand, I visited the *Te Herenga Waka Marae*, a traditional Māori cultural center where students and staff can welcome visitors and gather for academic and social occasions. In the Māori culture, a *marae* is the center of the community, a meeting place for ceremonies and social gatherings. The VUW *marae* is both a gathering space and a teaching space, a safe place where Māori students can come for lunch and to study. Students are involved in the *marae* in many ways, including cooking, cleaning, and participating in various ritual activities.

Writing about the VUW *marae* and others at New Zealand colleges and universities, Adds, Hall, Higgins, and Higgins (2011) stated, "Often they inspire a personal and emotive learning experience, with students studying the Māori language, culture and identity in ways that extend beyond vocational training to learning for self-discovery" (p. 541). As a setting where students can recover bandwidth, Adds and his colleagues related a statement about the "role that *marae* play in providing a space for Māori student to 'rejuvenate their souls, to reaffirm their identity . . . to network as Māori in a pan-tribal context and so support each other in their studies' (Ka'ai, 2008, p. 194)" (p. 545). There is also an area for Pasifika students at VUW where they can study, individually or in groups, where they feel safe and nurtured. These are intentional counter-spaces created by the institution as part of its commitment to the success of Māori and Pasifika students.

At San Jose State University, facing persistently low graduation rates, Pizarro and his colleagues called hundreds of students who had dropped out to ask them why they left the university. The students identified some institutional barriers and said that they never felt like they were part of the campus community. Pizarro decided that they needed to give students a sense of community so they would be better able to weather the inevitable crises that happen to students who are balancing school, work, family, and, for many, cultural values that sometimes run counter to their educational goals. He started having activities to engage students and families, such as Pozole Night in the Student Union, where they serve traditional Mexican soup, and

students study, meet with tutors, and talk with counselors and other professionals. Similar culture-relevant events are held for Black students as well. The hope is that these will become effective counter-spaces where students can feel safe and comfortable, where they can get back a bit of their mental bandwidth that is depleted by daily pressures (Emanuel, 2016).

The Office of Diversity and Inclusion (ODI) at the University of Central Oklahoma is a small space on the main floor of the university center that houses three staff members and a couple of student workers. At most times during the week, you'll find many students of color; lesbian, gay, bisexual, and transgender students and their allies; and various other students who have come to this counter-space, knowing they'll be welcomed and accepted for who they are. This is an evolved counter-space, not designed for a gathering place, but the students have made it one anyway.

The spaces mentioned here are examples of ones at least partially set up by the institution, sometimes, as in the case of ODI, redefined a bit by students in a way not expected by staff. Other counter-spaces just evolve, such as when a study group for a class morphs into a social support group that lasts beyond the semester. For students of color at predominantly White institutions, spaces where they can get educational, emotional, and cultural support are necessary. Solórzano and colleagues (2000) found that counter-spaces were critical for Black students as a way to help inoculate them against the adverse effects of racism:

> Marginalized students are often familiar with the groups' voices being silenced in the classroom discourse or with having their personal and/or group experiences and beliefs discounted. These negative experiences occur in addition to the pervasiveness of the cultural-deficit discourse in the academy (Valencia & Solórzano, 1997). Perhaps as a response to their position of marginality on their campuses, the students in our study seemed to create academic and social counter-spaces along racial or gender lines. Nonetheless, in separating themselves from racially or gender-uncomfortable situations, this group of African American college students appeared to be utilizing their counter-spaces on their own terms. This confirms that the creation of such counter-spaces is an important strategy for minority students' academic survival (Solórzano & Villalpando, 1998). (p. 71)

When students create their own counter-spaces, we are sometimes lucky as faculty and professional staff when students choose a place near us and invite us to be part of it. We can, in our institutions, make sure that there are spaces where students can "hang out" in safety and peace. Especially on campuses where most of the students are commuters, thought should be given to providing "setting down" spaces where students can relax for a few

minutes and feel that they're part of the community even though they come and go and have many other demands on their time and attention. These students, especially, need a safe space to take a deep breath and gather a bit of mental bandwidth as they transition from their work and family to their academic life.