

# UNCOMFORTABLE EMOTION IN A JUSTICE-ORIENTED SERVICE-LEARNING COURSE

## Anger Predicts Civic Engagement

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### Abstract

*Though uncomfortable emotion in the classroom has become politically controversial, scholarship has established its importance. In transformational learning in particular, scholars have theorized that far from being an undesirable side effect, student emotion is inherent in shifting beliefs and motivating action. In the “pedagogy of discomfort” central to critical service learning, such a shift in beliefs and action is the goal, but little quantitative work explores the complexities of emotion in this process. This paper describes a longitudinal study of a justice-oriented service-learning class that focused on the system-level causes of poverty. Results underscore the importance of uncomfortable emotion in this context and reveal nuance. Students who took the course experienced increased guilt, anger, and overwhelm when thinking about the social problem of poverty, but students’ gender, race, and financial stress predicted variance in these emotions at baseline and the semester’s end. Students who experienced more financial stress in their families of origin reported more anger at the end of the course while those with privileged racial or gendered identities reported less guilt than other students after completing the class. Emotion predicted the desired shifts in students’ deficit versus system-oriented thinking: all three emotions were associated with less blame of individuals, but only anger and guilt were associated with system blame. At the multivariate level, anger emerged as the most influential predictor of decreased blame of individuals and of both community and political engagement a year after the course ended. Implications include the need to integrate emotion as a source of reflection and learning for students, both about their own positionality and their shifting perspectives on the world, the wisdom of exploring differences between guilt and shared responsibility, and the important role of anger in transformational learning and social change.*

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## Introduction

Emotion is intertwined in every aspect of learning: from what students attend to, to how much effort they expend in wrestling with complexity, to what they absorb and how it reverberates, to whether and how they apply new understandings. Beyond their internal response to course material, emotion is part of students' interactions with the social world within and around the classroom (Zembylas, 2016). In *The Spark of Learning*, Cavanagh (2016) draws on a large body of research to detail the ways in which the science of emotion can inform pedagogy in the college classroom, noting that scholarship long ago debunked notions that cognition and emotion are separable. Instead, emotion is intrinsic to processes once considered reason-based, “likely guiding your hand in every decision you make—from which three plums to select from a basket of fruit to whether to leave your spouse” (Cavanagh, 2016, p. 5). Emotion is similarly infused throughout the process of learning, and it is incumbent on those interested in maximizing the impact of higher education to explore and embrace the implications of that fact.

If student emotion is infused in the process of learning biology or calculus, it is certainly inherent in learning about societal injustice. Its salience is particularly clear in critical service learning, in which instructors purposely link social experience with scholarship and reflection to promote the questioning of preexisting beliefs and to facilitate prosocial action (Grain & Lund, 2016; Mitchell, 2008). These processes are uncomfortable. Indeed, a “pedagogy of discomfort” has been described as essential to students' learning in such contexts (Boler, 2014). Consequently, in considering how best to harness the potential of these classrooms, multiple scholars have exhorted the field to bring student and instructor emotion to center stage (e.g., Felten et al., 2006; Langstraat & Bowdon, 2011; Larsen, 2017).

Bringing emotion to center stage requires exploration of its complexity. In particular, the fact that discomfort is essential—even transformative—does not mean it is risk-free (Zembylas, 2019; Zembylas & McGlynn, 2012). As Holmes (2015) notes,

Without risk, students may not have the opportunity to address tough issues or face dilemmas that would prompt a transformation in their worldview. However, without some degree of safety, support, and care, students may shut down—unable to deal with the overwhelming dissonances, let alone move towards any meaningful learning. (p. 51)

Scholars have documented the emotional nature of the transformational learning that can occur in critical service learning, both theoretically and with qualitative data (e.g., Holmes, 2015; Kiely, 2005; Larsen, 2017), but there has been limited quantitative exploration of how particular emotions influence key student outcomes. Such information has the potential to inform pedagogy in this rich and challenging domain.

This study explored the role of uncomfortable student emotions in a justice-oriented service-learning class, including the way emotion relates to deficit and system-oriented thinking and civic behavior. Before describing the study, we highlight foundational understandings in the scholarship of emotion in the classroom in general,

the pedagogy of discomfort at the heart of critical service learning in particular, and the rationale for focusing on a specific set of students' emotions and outcomes in the course.

## Literature Review

### The Classroom Is Infused with Emotion

Students' emotional response to material influences their engagement with it, their retention of it, and their motivation to wrestle with it through obstacles and complexities. In her book on the relevance of science of emotion for the college classroom, Cavanagh (2016) synthesizes research connecting students' emotions and key aspects of learning and makes recommendations for teaching strategies that capitalize on those connections. At a basic level, emotion signals the importance of information to the brain and its worthiness for the expenditure of limited resources. For example, students' capacity to engage with course material is limited by the number of competing demands on their attention; content that is emotionally engaging wins a share of this precious resource. Similarly, such content is more likely to be encoded and retained in memory. Conversely, affective science shows ways in which emotion can steer attention away from classroom material. Student confusion, for example, promotes attention when it is "optimal" but otherwise may leave students demoralized and disengaged (D'Mello et al., 2014). In order for confusion to promote engagement, students must have a sense of control and possible success or be supported in gaining it. Overall, Cavanagh (2016) describes overwhelming evidence that the way course material resonates for students emotionally has great significance for learning outcomes.

Beyond the emotion individual students may feel in response to curriculum, the relational nature of emotion has import for pedagogy. The classroom is itself a social milieu, located within societal context. Affective science is clear that emotion contagion is visceral and real (Cavanagh, 2016), with greater sharing of emotional response among those who perceive themselves to be connected (e.g., Beckes et al., 2013). As succinctly described by Majzler (2016), "Not only is affect the bridge between our own minds and bodies, but also between our body and others' bodies" (p. 26). In the classroom, these observations translate into an imperative to not only engage students' individual emotional lives but to be attuned to the emotional landscape of the group. In his review of the ways in which emotion scholarship should influence pedagogy, Zembylas (2016) stresses the importance of understanding the political nature of emotion. Specifically, cultural norms and power relations impact how emotion is labeled and understood and even who is allowed to express emotion and under what conditions. How emotion is labeled and understood, and who is allowed to express it under what conditions, is influenced by cultural norms and power relations. Shining a light on these complexities is not only important for an instructor who is interested in engaging their students but can be an essential component of what students learn.

Scholarship makes clear that affective science is thus broadly relevant to learning in any subject. However, justice-oriented learning further complicates this picture. First, the content is not only emotionally evocative but

can be personally painful and may generate challenging dynamics among students and instructors (Boler, 1999; Holmes, 2015; Zembylas, 2016, 2019). Second, conceptualization of student success extends beyond mastery of material to transformative learning—shifting one’s understanding of the world—and translating that transformed perspective into action. Transformational learning is specifically aiming at the personal development of students as people who are engaged (or might be) in the world around them. Less scholarship has detailed the ways emotion plays a role in the process of justice-oriented transformational learning.

## Affect Aliens and Killjoy Pedagogy: Emotional Discomfort in Justice-Oriented Learning

In their description of the ways academics incorporate activism in their work, Cann and DeMeulenaere (2020) describe “killjoy pedagogy” (2020, p. 95). Building on Ahmed’s (2010) scholarship related to the performance of happiness, they describe the important function of pulling back the curtain of normalcy that obscures oppression, problematizing things that students may have seen as unproblematic—or even enjoyed. Exposing the cultural narratives in popular media, for example, threatens students’ ability to be entertained by it. Ahmed further describes the role of the “affect alien.” In the interest of critical social analysis, the instructor deprives students of good feelings (Zembylas, 2020). Resistance to these actions shows up in the stereotyping of those who would pull back the curtain, framing them as bitter or angry (Ahmed, 2010; Cann & DeMeulenaere, 2020). Beyond entertainment, dominant cultural values inform our worldviews, increasing the impact of their disruption. In her description of the “pedagogy of discomfort” essential to transformational learning, Boler (2014) notes that we internalize values that serve the interests of those in power “as unconsciously as the air we breathe” (p. 29). These values shape our sense of ourselves in addition to the world around us—to question them can feel deeply threatening. In sum, profound negative emotion is intrinsic to the process of critical social analysis, and guiding students in navigating those experiences is essential to their learning.

Extending this analysis to the specific case of critical analysis through service learning again highlights the ways in which emotion spans both the internal and social realms. Indeed, in his foundational paper articulating the process of transformational learning in a service-learning course, Kiely (2005) details the important role of “affective learning” and contends that its power is one of the differentiating factors between service learning and the regular classroom. Transformational learning facilitates disorienting dilemmas, in which students’ preexisting beliefs are shaken. In Kiely’s model, that dilemma is followed by emotional processes, both “personalizing,” potentially involving feelings like guilt, shame, confusion, and “connecting,” in which students learn to “affectively understand” others. As suggested by Zembylas (2016), these emotions are not side effects or inconveniences but are the substance of transformation. It is less clear what the impact of these emotions are on particular outcomes and how instructors might incorporate them into their pedagogy. Referring back to the notion of optimal confusion, students may respond to strong emotion by retreating

to previous beliefs, exerting less effort, or directing their frustration at the “affect alien” who caused this discomfort. Compassion for students’ emotional experiences, at a minimum, is warranted. As Boler (2014) articulates:

To shatter worldviews—specifically, to suggest that some unfairly benefit from (white, or male, or heterosexual) privilege—can be emotionally translated into feeling one has no place of belonging. Often, angry protestations are the cries of someone trying to save him or herself from annihilation. (p. 27).

In sum, the literature on transformational learning in general and service learning in particular is clear that emotion is in the room is a central aspect of student development, and that it is both an opportunity and a challenge for instructors. Research has not explored in detail how student emotions might vary across students and how they might relate to the outcomes that justice-oriented service-learning courses might pursue. Such information is important to add to instructors’ repertoire of knowledge, both for course design and for class management.

## Key Student Emotions and Outcomes in a Justice-Oriented Service-Learning Course

We have described the course that is the focus of this study in detail elsewhere (Cattaneo, Shor, et al., 2019). We overview it briefly here for context. Community Engagement for Social Change (hereafter CESC) is a one-semester class earning the typical number of credits for our university, and meets twice a week for 75 minutes per class. Students each volunteer for a total of 20 hours in placements designed by the instructor, in organizations serving clients who are experiencing poverty. The primary aim of the course is for students to learn that social problems are indeed social, requiring not only individual-level but also systemic intervention. Consistent with the emphasis described in Mitchell (2008), the course begins by defining and exploring the difference between deficit-oriented (the person is broken) and systemic (the system is broken) attributions. Students learn to investigate social problems through the use of a “multi-level model,” specifying the individual, interpersonal, and system levels of analysis. The class guides students in applying this analysis in depth to the social problem of poverty, integrating their experiences at their placement. In a final project, students work in groups to apply the multi-level model to a social problem other than poverty.

As is clear from the review above, a wide range of emotion is possible in a classroom such as this one. Students come into both direct (in placements) and indirect (in course material) contact with people who are in great distress, and who are struggling in the face of immense challenges; students come to understand that these challenges are even bigger than they appear, imbedded as they are in structural inequities. Students’ own experiences of marginalization or advantage surface in class discussions and reflections, and the biases and stereotypes that exacerbate marginalization often become starkly clear. In this rich and challenging milieu, scholarship and the

experience of the course instructors (Cattaneo, Shor, et al., 2019) suggest several uncomfortable emotions that might play a particularly powerful role: anger, guilt, and a sense of being overwhelmed.

Students learning about societal injustice experience anger for many reasons (Boler, 1999; Hardiman & Jackson, 1997; Smalling, 2020). In CESC, students who themselves are economically marginalized might recognize their own experiences in the material, and they may react to a lack of awareness from others in the classroom or at placements—for example, hearing negative comments from staff about clients seeking services. Students may feel outraged by the lack of fairness they encounter—for example, learning through course material about the difficulty of living on minimum wage or having to turn away potential clients at their placement because of a lack of space. Students who have not experienced economic marginalization, or whose families have experienced upward social mobility, may feel angry if they are resistant to the idea that they experience privilege—for example, noting that their family’s success is earned through hard work. Such anger might be related to student outcomes in a variety of ways the literature has yet to explore.

In addition to anger, Hardiman and Jackson’s (1997) model of identity development identifies guilt as an aspect of the experience of learning about one’s own privilege. In describing White students’ process of learning about racial privilege, Smalling (2020) cites the concept of White fragility (DiAngelo, 2018), postulating that guilt might interfere with these students’ ability to engage productively with the material. Growing awareness of one’s economic advantage might have similar impact, but this possibility has not been explored. Finally, a sense of being overwhelmed has arisen repeatedly in our work with students in justice-oriented courses. Similar to “optimal confusion,” this sense of being overwhelmed might be motivating or could stymie engagement.

In addition to exploring the impact of student emotion on attitudes toward social problems, investigating student behavior is key to the critical service-learning paradigm. A “call to action” is a component of the pedagogy of discomfort (Boler, 1999), as students come to understand themselves as part of a larger whole and theoretically are motivated to act on that basis. Thus, in measuring student success in justice-oriented courses, perspective shifts are not enough: the discomfort in such classes should drive engagement with the world outside the classroom after the semester’s end. However, as detailed above, discomfort can prompt many responses other than engagement; we explore these possibilities here by focusing on students’ self-reported behavior a year after the course.

Prior work on the impact of the CESC course showed that compared to a group that did not take the course, over the semester and one year later, students increased their systemic attributions for poverty, decreased their deficit attributions, and increased their self-reported behavioral civic engagement (Cattaneo et al., 2021). Scholars have been clear, however, that while service learning has positive impact in the aggregate, variance among students is important to explore in order to inform pedagogy. In CESC, where the focus is on economic marginalization, it seems particularly likely that students’ personal experiences of marginalization based on their identities might influence their emotional response to the course and perhaps the way in which affect relates to action.



## Current Study

The study builds on scholarship in affective science and critical service learning to explore the nuance in students' emotional response to a justice-oriented course. Specifically, we surveyed students at the beginning, end, and one year after the CESC course to investigate:

**Research question 1:** How do student emotions shift over the course of the semester?

- 1a. Compared to students who did not take the course, we expected that CESC students' emotion related to poverty (anger, guilt, and overwhelm) would intensify.
- 1b. We hypothesized that among students who took the class, marginalized identity would be related to a more intense experience of anger, as the class details causes and consequences of marginalization. We also hypothesized that dominant identities would predict guilt. Finally, we explored whether marginalized or dominant identities related to experiences of overwhelm.

**Research question 2:** Does stronger emotion predict student perspectives on social problems?

Among students who took CESC, we explored the connection between each emotion and the targeted attitudes in the class (deficit and systemic attributions for poverty), over and above demographic variables and self-report of general affect not related to the course.

**Research question 3:** Does emotion predict increased behavioral civic engagement?

- 3a. We explored whether each emotion, as reported at the end of the semester, predicted the civic behavior influenced by the course one year later, over and above demographics and general affect.
- 3b. We hypothesized that the connections between emotion and behavior would be stronger for students who took the CESC course.

## Methods

### Participants and Procedures

This study was conducted at a large, public university with a diverse, majority-minority student body, where more than a third of attendees report being first-generation college students. The CESC course fulfills a graduation requirement for all students in "synthesis" and a requirement for psychology majors in "applied psychology," which contributes to its popularity. All participants were psychology majors in their junior or senior year of college. As incentives, they were offered both pay and research credit. Recruitment of students not enrolled in the course occurred through the Psychology Department listserv via announcements and direct emails to students in courses that required research participation. Students enrolled in the CESC course were emailed by members of the research team before the course began and within the first two weeks of the class to extend the offer to participate. Participants were offered \$10 for Time 1 completion and \$20 for completion of Time 2 and Time 3. Data were collected between spring 2014 and fall 2017, with three different cohorts of CESC students

participating in the study. All procedures were approved by the Institutional Review Board and followed the American Psychological Association code of ethics with respect to responsible conduct of research.

Table 1 presents the number of students at each time point in the CESC and control groups and their demographic characteristics. At time 1 (beginning of semester), out of 285 total participants, 278 were included in the analysis after removing incomplete or unreliable data. At time 2 (end of semester), 40 students were unable to be reached and eight additional students were removed from the data set due to irregular response patterns (e.g., failing attention checks or repeated patterns of extreme response values). Therefore, analysis at time 2 included 230 participants. At time 3 (one year after the end of the course), responses were received from 193 participants but 16 were removed from the data set for unreliable or incomplete data, leaving 177 students in the data set. Analysis of missing data indicated that there were no significant differences in demographics or baseline scores between students who completed and those who did not complete the entire study.

Participants were representative of the psychology major, with the majority of participants being female (79%), young adult ( $M = 23.28$ ), and born in the United States (72%). Typical for our university, the sample was racially diverse, with the three largest groups identifying as White/European American (35.1%), Hispanic/Latinx (18.6%), or Black/African American (11.8%). Also typical for the general population of students we serve, many participants reported having a job (72.9%) and over a third of participants reported working more than 20 hours weekly. Study participants were predominately full-time students (87.1%), and many of them felt strongly that financial aid and student loans were important to their ability to afford tuition. The only significant demographic difference between the course and control samples was gender, with 86% of the control group identifying as women compared to 74% in the CESC course.

## Measures

### *Emotion Related to Poverty*

The research team, which included multiple course instructors and former students, developed three items indicating student emotion for the purpose of this study. Based on our experience with students and Hardiman and Jackson's (1997) description of the emotions that accompany growing student awareness of privilege and oppression, we focused on anger, guilt, and the sense of being overwhelmed. Students reported on a Likert scale (1 to 5) their level of agreement with each statement: "The social problem of poverty makes me feel angry/guilty/overwhelmed." For the purpose of this study, we focused on participants' responses to each item at baseline (T1) and end of semester (T2).

### *General Affect*

In order to differentiate students' emotion related to poverty from their general affective experience, we used subscales from the brief form of the Comprehensive Inventory of Thriving (Su et al., 2014). Subscales were validated



for independent use. We used the Positive Feelings and Negative Feelings subscales, which elicit students' feelings "most of the time." Each includes three items, with agreement on a 1–5 Likert scale, including "I feel happy most of the time" and "I feel negative most of the time." Reliability in this study was high for Positive Feelings (0.94) and acceptable for Negative Feelings (0.73).

## *Marginalized Identities*

Among the demographic information collected for this study, at baseline, students reported their race, sexual orientation, gender identity, and social class.

### *Race, Sexual Orientation, and Gender Identity*

The class was racially diverse (see Table 1). For the purpose of these analyses, we dichotomized race in two ways: identifying as White (yes/no) and identifying as Black (yes/no). Because we did not include a measure of experience of racial or any other type of marginalization, these two racial identities served as a proxy for these experiences, with White students likely to experience racial privilege and Black students likely to experience racial marginalization. Similarly, for sexual orientation, we dichotomized participants into two groups—exclusively heterosexual versus not—and we divided gender identity into male versus any other gender.

### *Social Class*

The measurement of social class is complex, and the literature is clear that strategies must be matched to research questions and population (Diemer et al., 2013). With respect to the experiences and choices of this population, prior work has established the salience of students' experiences of financial stress and subjective status (Rubin et al., 2014), as opposed to their parents' resources or education.

### *Financial Stress*

The College Financial Stress Scale was created for the purpose of this data collection, and its validation is described in detail elsewhere (Cattaneo, Chan, et al., 2019). It has two subscales: the Current Financial Stress subscale includes seven items such as "Currently, considering all of the financial resources I have available, I have more money coming in than I have going out" and "Whatever happens, I am confident I will be financially secure next year" (responses given on a 1–5 Likert scale). The Historical Financial Stress subscale is made up of three items reflecting the level of financial pressure the participant remembers while growing up (e.g., "Growing up, we had to postpone purchasing a needed household item because of its cost.") The reliability of these two scales in the current data set was 0.78 (current) and 0.85 (historical).

**Table 1**  
***Demographic Statistics for Course and Control Group Students at Baseline***

Variable	Total sample ( <i>N</i> = 278)	Service-learning students ( <i>n</i> = 113)	Control group students ( <i>n</i> = 165)	Significant differences between groups
Age <sup>a</sup>	23.28/21 (21)	23.81/21 (21)	22.91/21 (21)	None
Man <sup>b</sup>	47 (16.9%)	<b>27 (23.9%)</b>	<b>20 (12.1%)</b>	Significant difference
Exclusively Heterosexual <sup>b</sup>	199 (71.3%)	84 (73.0%)	115 (70.1%)	None
Race <sup>b</sup>				None
White	98 (35.1%)	34 (29.6%)	64 (39.0%)	
African American	33 (11.8%)	14 (12.2%)	19 (11.6%)	
Asian American	28 (10.0%)	10 (8.7%)	18 (11.0%)	
Hispanic	52 (18.6%)	27 (23.5%)	25 (15.2%)	
Middle Eastern	3 (1.1%)	1 (0.9%)	2 (1.2%)	
Multiracial	33 (11.8%)	12 (10.4%)	21 (12.8%)	
Other	26 (9.3%)	14 (12.2%)	12 (7.3%)	
Prefer Not to Say	6 (2.2%)	3 (2.6%)	3 (1.8%)	
Employed				None
Unemployed	76 (27.2%)	30 (26.1%)	46 (28.0%)	
1-39 hours/week	174 (62.4%)	73 (63.5%)	101 (61.6%)	
40+ hours/week	29 (10.4%)	12 (10.4%)	17 (10.4%)	
Social Class <sup>c</sup>				None
Current financial stress	3.29 (0.67)	3.30 (.67)	3.24 (.81)	
Historical financial stress	2.78 (1.03)	2.78 (1.02)	2.89 (1.08)	
Current perceived social status	5.27 (2.13)	5.63 (1.64)	5.06 (1.63)	
Historical perceived social status	5.53 (2.24)	5.53 (2.24)	5.23 (2.16)	

*Note.* Unless noted, cells include number (%).

<sup>a</sup> mean/median (mode).

<sup>b</sup> For this study, these variables were dichotomized to compare identities most likely to have experienced social privilege with those most likely to have experienced marginalization.

<sup>c</sup> mean (*SD*).

## *Perceived Social Class Status*

The MacArthur Scale of Subjective Social Status (socioeconomic version; Adler et al., 2000; Adler & Stewart, 2007) consists of a picture of a ladder and the question, “Think of this ladder as representing where people stand in our society. At the top of the ladder are the people who are the best off, those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off, those who have the least money,

least education, and worst jobs or no job. Where would you place yourself on this ladder? Click on the rung where you stand at this time in your life, relative to other people in the United States.” Participants rate themselves on a scale from 1 to 10. For this study, we added a version of this ladder that referred to students’ status while they were growing up.

## *Attitudes toward Poverty*

The Systems and Individual Responsibility for Poverty (SIRP) scale is a 17-item measure developed by a subset of the authors to assess attitudes regarding poverty (Shor et al., 2018). The two subscales measure attributions of poverty to individual-level causes (e.g., “If you are experiencing poverty in the United States, it is the result of your own skills and abilities”) or systemic causes (e.g., “If you are experiencing poverty in the United States, it is the result of problems in our system of education”), respectively. Participants respond on Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Scores from the current study demonstrate good internal consistency (SIRP-I  $\alpha = 0.86$ ; SIRP-S  $\alpha = 0.83$ ).

## *Self-reported Behavior*

Of the many measures available to evaluate civic action, to answer our study questions, we chose two that cover a wide range of engagement, and that prior work has shown this course shifts in the aggregate. Focusing on types of engagement that we know the course increases allows for an investigation of the nuance of emotion.

## *General Civic Engagement*

We used the Civic Engagement Scale’s Behavior subscale (CESB; Doolittle & Faul, 2013) to indicate frequency of community engagement during the year after the end of the CESC course. It contains six items on a 1 (Never) to 7 (Always) Likert scale, such as “I help members of my community” and “I stay informed of events in my community.” Internal consistency for this sample was good ( $\alpha = 0.84$ ).

## *Political Engagement*

To measure political engagement, we used a subscale from the Civic Behavior Survey (CBS; Astin et al., 2006) developed for a longitudinal study of college student service-learning and civic engagement. The Political Activism scale has five items that are answered yes or no (scored 1 and 0), including “participated in protests/demonstrations /rallies” and “expressed your opinion on a community or political issue by contacting or visiting a public official.” Cronbach’s alpha in this sample was acceptable at 0.70.

## Results

### How Do Student Emotions Shift? (RQ1)

In order to test whether CESC students' emotions related to poverty shifted over the course of the semester, we used dependent sample t-tests. We used independent sample t-tests to evaluate whether students who were enrolled in CESC differed from those who were not enrolled at both baseline and the end of the semester. We found support for our hypothesis that the course intensifies emotion related to thinking about poverty as a social problem. At baseline, CESC students were not statistically different from non-CESC students: As detailed in Table 2, on average, all participants reported moderately strong guilt, anger, and overwhelm with respect to poverty, with median scores of 4 (out of a five-point scale), and averages above 3. At the end of the course, non-CESC

**Table 2**  
*Descriptive Statistics for Study Variables*

Variable	Total Sample	Service-learning students	Control group students
		T1 <i>N</i> = 113 T2 <i>n</i> = 99 T3 <i>n</i> = 65	T1 <i>N</i> = 165 T2 <i>n</i> = 139 T3 <i>n</i> = 110
Guilty	3.26 (1.12)	3.38 (1.19)	3.18 (1.08)
Angry	3.69 (.97)	3.73 (1.01)	3.67 (.95)
Overwhelmed	3.47 (1.00)	3.54 (1.03)	3.43 (.98)
Guilty (T2) **	3.67 (1.05)	<b>3.67 (1.05)</b>	<b>3.22 (1.03)</b>
Angry (T2) **	4.07 (.90)	<b>4.07 (.90)</b>	<b>3.53 (.97)</b>
Overwhelmed (T2) **	4.02 (.947)	<b>4.02 (.95)</b>	<b>3.42 (.99)</b>
SIRP-Individual	3.09 (0.72)	3.05 (.74)	3.12 (.71)
SIRP-System	3.47 (.63)	3.54 (.60)	3.41 (.65)
SIRP-Individual (T2)**	2.47 (.72)	<b>2.47 (.72)</b>	<b>3.07 (.69)</b>
SIRP-System (T2)**	4.06 (.61)	<b>4.06 (.61)</b>	<b>3.56 (.60)</b>
Negative Feelings (T2)	3.96 (.82)	3.93 (.93)	3.99 (.73)
Positive Feelings (T2)	3.83 (.85)	3.71 (.93)	3.91 (.78)
Political Activism (T3) <sup>a</sup>	1.29 (1.72)	1.60 (1.77)	1.11 (1.64)
Civic Behavior (T3) <sup>†</sup>	3.94 (1.32)	<b>4.23 (1.14)</b>	<b>3.77 (1.39)</b>

*Note.* Participants rated how much they felt each emotion with respect to thinking about poverty as a social problem. All variables are reported as measured at baseline (T1) unless otherwise noted. Guilty = Feeling guilty; Angry = Feeling angry; Overwhelmed = Feeling overwhelmed; SIRP-Individual = Individual attribution of responsibility of poverty; SIRP-System = Systemic attribution of responsibility of poverty; Negative Feelings = CIT negative feelings subscale; Positive Feelings = CIT positive feelings scale; Political Activism = CBS political activism subscale; Civic Behavior = CESB behavior subscale.

<sup>a</sup> While the mean level of political action was not statistically different between groups at time 3, analyses in prior work found that the CESC group changed to a greater degree in this behavior over time (citation removed for blind review).

<sup>†</sup> Based on an independent samples t-test, groups differed at the  $p < .05$  level.

\*\* Based on an independent samples t-test, groups differed at the  $p < .01$  level.

**Table 3**  
*Bivariate Correlations Among Continuous Study Variables*

Variable	1	2	3	4	5	6	7	8	9
1. Guilty	1	<b>.46**</b>	<b>.20*</b>	.15	-.13	.20	.07	<b>-.29**</b>	<b>.30**</b>
2. Angry	<b>.37**</b>	1	.17	<b>.27**</b>	.01	.19	.13	<b>-.35**</b>	<b>.30**</b>
3. Ovrwlmnd	<b>.38**</b>	<b>.47**</b>	1	.14	.06	.15	.02	<b>-.25*</b>	.14
4. FinStrssH <sup>a</sup>	.06	.09	.13*	1	<b>.38**</b>	-.13	<b>-.29**</b>	-.19	.06
5. FinStrssC <sup>a</sup>	.02	<b>.19**</b>	<b>.25**</b>	<b>.40**</b>	1	-.12	-.14	<b>-.22*</b>	.08
6. Ladder <sup>a</sup>	<b>.17**</b>	.03	-.04	<b>-.14*</b>	<b>-.21**</b>	1	<b>.55**</b>	-.08	.15
7. LadderHx <sup>a</sup>	.05	.02	.02	<b>-.31**</b>	<b>-.13*</b>	<b>.50**</b>	1	.07	.06
8. SIRPInd	-.06	<b>-.34**</b>	<b>-.27**</b>	-.05	<b>-.16**</b>	.03	.02	1	<b>-.33**</b>
9. SIRPSys	<b>.17**</b>	<b>.32**</b>	<b>.32**</b>	.03	<b>.13*</b>	.04	.02	<b>-.30**</b>	1

*Note.* Intercorrelations among study variables for PSYC 427 students at T2 ( $n = 99$ ) are presented above the diagonal, and intercorrelations among study variables at T1 ( $n = 278$ ) are presented below the diagonal. Guilty = Feeling guilty when I think about poverty; Angry = Feeling angry when I think about poverty; Overwhelmed = Feeling overwhelmed when I think about poverty; FinStrssH = History of Financial Stress Scale; FinStrssC = Current Financial Stress Scale; Ladder = Perception of Social Status within the United States; LadderHx = Perception of Social Status within the United States in Childhood; SIRPInd = Individual attribution of responsibility of poverty; SIRPSys = Systemic attribution of responsibility of poverty

<sup>a</sup> Only measured at time 1

\*  $p < 0.05$ . \*\*  $p < 0.01$ .

students remained at this level while on average, CESC students reported significantly higher scores than they did at baseline on anger ( $t(98) = -2.91$ ,  $p < 0.01$ ), guilt ( $t(98) = -2.86$ ,  $p < 0.01$ ), and overwhelm ( $t(98) = -4.24$ ,  $p < 0.001$ ). Post hoc, we noted that bivariate correlations before and after the course also showed a shift in how endorsement of emotions was interrelated (see Table 3): at baseline, the three emotions were correlated at similar levels. At the end of the course, anger and guilt remained strongly related, but anger and overwhelm no longer show a significant correlation, and overwhelm and guilt remain related but at a weaker level than at baseline.

Results showed significant relationships between student identities and emotion at the end of the course but only partially in the direction we hypothesized. We evaluated these relationships using correlations (for the continuous measures of social class) and independent sample t-tests (for categorical measures of race, sexual orientation, and gender). With respect to social class, students who reported more financial stress in their families while growing up reported significantly more anger at the end of the course (see Table 3;  $r = 0.27$ ;  $p < 0.01$ ). There was no other significant relationship between social class indices and emotion for CESC students at the end of the course. Interestingly, these relationships were quite different at the end of the course than they were at baseline: At baseline, more financial stress in their current lives was related to overwhelm and anger over poverty, and historical stress was related to overwhelm. These results suggest that students felt different about the connection between the broader societal landscape and their individual and family circumstances at the end of the course.

With respect to the other identity categories we explored, our results were counter to our hypotheses, with students of dominant identities experiencing *less* guilt at the end of the course (see Table 4). Results showed a pattern in which those who identified as male reported less overwhelm, guilt, and anger at the end of the course, but this difference was only statistically significant for guilt ( $t(97) = -2.52, p < 0.05$ ). Men also endorsed less emotion at baseline, with overwhelm the statistically significant difference. However, the movement of men's scores on guilt differed from the other emotions: At the end of the course, men were closer to the rest of the sample on both overwhelm and anger, increasing in both. In contrast, over the semester, men moved further from the rest of the sample on guilt, even decreasing a bit on average ( $m$  (men) = 3.22 at baseline versus 3.18 at time 2,  $m$  (not men) = 3.44 at baseline versus 3.81 at time 2). Similarly, White students reported significantly *less* guilt than non-White students at the end of the semester, counter to our hypothesis, though unlike men, their average score on guilt did increase during the class. We did not find a significant difference across sexual orientation categories or other racial groups (i.e., Black students compared to all other students, Latinx students compared to all other students).

## How Does Emotion Relate to Student Perspectives? (RQ2)

To evaluate the relationship between CESC student emotion and the targeted attitudes in the course, we used two hierarchical linear regressions, with deficit and system attributions for poverty as the dependent variables. For parsimony, in the first block we planned to enter demographics and in the second block general report of positive and negative affect but only when those relationships were significant at the bivariate level. In the third block we included the three emotions as reported at the end of the semester. Table 5 shows the detailed results of these analyses.

In the regression predicting students' deficit orientation toward poverty, significant demographics included identifying as male (more blame of individuals), identifying as Black (less blame of individuals), and experiencing current financial stress (less blame of individuals). This block explained a significant percentage of the variance in the dependent variable ( $R^2 = 0.11, F(3, 95) = 4.00, p = 0.01$ ). Because there was no bivariate relationship between positive or negative affect and the dependent variable, the second block was the final block, including all three emotion variables. This block explained an additional 14% of the variance in deficit orientation ( $R^2 = 0.25, F(6, 92) = 5.12, p < 0.01$ ). Of the three emotions in the block, only anger had a significant relationship with the outcome, such that students who reported greater anger blamed individuals less for living in poverty.

With regard to predicting students' systemic attributions for poverty, neither demographic variables nor general affect related significantly to the outcome at the bivariate level. We therefore conducted a multiple linear regression with all three emotions as predictors. The regression explained a significant percentage of the variance in the dependent variable ( $R^2 = 0.13, F(3, 95) = 4.57, p < 0.01$ ). While at the bivariate level, both anger and guilt were significantly positively correlated with systemic attributions, in the multivariate analysis, none of the three emotions outweighed the others in predicting the outcome.



**Table 4**  
*T-Tests for Relationships Between Student Gender, Sexual Orientation, Race, and Study Variables*

Variable	Male				Heterosexual				White				Black								
	Yes		No		Yes		No		Yes		No		Yes		No						
	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>	<i>M(SD)</i>	<i>t</i>					
<b>Time 1</b>																					
Guilty	<b>3.13(1.21)</b>	<b>3.29(1.11)</b>	3.25(1.13)	3.28(1.13)	-1.19	3.14(1.12)	3.35(1.12)	-1.55	3.20(1.23)	3.27(1.11)	-0.40	3.32(1.14)	3.77(.92)	3.79(1.00)	-0.97	3.70(.99)	3.69(.97)	.10	3.95(.84)	3.20(1.23)	1.84
Angry	<b>3.00(1.10)</b>	<b>3.57(.95)</b>	3.48(1.01)	3.43(.98)	.37	3.37(1.03)	3.55(.97)	-1.53	3.61(.92)	3.45(1.01)	.94	3.36(.70)	3.04(.72)	2.89(.68)	<b>3.14**</b>	3.01(.67)	3.15(.75)	-1.62	2.90(.75)	3.13(.71)	-1.87
OvrwImd	3.27(.70)	3.50(.61)	3.38(.61)	3.71(.60)	<b>-2.33*</b>	3.49(.62)	3.44(.64)	.65	3.65(.61)	3.43(.63)	<b>2.02*</b>	3.18(.72)	2.89(.68)	<b>3.14**</b>	3.01(.67)	3.15(.75)	-1.62	2.90(.75)	3.13(.71)	-1.87	
SIRPSys	3.18(1.14)	3.81(.99)	3.68(1.05)	3.64(1.08)	.15	3.34(1.11)	3.84(.98)	<b>-2.32*</b>	4.20(.86)	3.57(1.06)	<b>2.18*</b>	3.82(.96)	4.14(.87)	4.28(.61)	-1.36	4.14(.85)	4.03(.93)	.59	4.20(.68)	4.05(.93)	.60
Angry	3.73(1.16)	2.39(.68)	4.01(.97)	4.04(.89)	-1.12	4.17(.95)	3.94(.94)	1.18	4.13(.52)	4.00(1.01)	.50	2.76(.78)	2.39(.68)	2.40(.67)	.64	2.50(.57)	2.46(.79)	.22	2.10(.74)	2.54(.70)	<b>-2.24*</b>
SIRPSys	4.12(.58)	4.04(.61)	4.09(.54)	3.9(.77)	.98	4.0(.56)	4.0(.63)	-0.09	4.13(.84)	4.05(.56)	.52	1.40(1.94)	1.27(1.68)	1.37(1.51)	-0.39	1.20(1.65)	1.36(1.75)	-0.61	1.13(1.62)	1.31(1.71)	-0.50
Activism	3.37(1.22)	4.03(1.31)	4.05(1.39)	3.73(1.14)	1.50	4.04(1.30)	3.85(1.34)	1.00	4.50(1.36)	3.85(1.30)	<b>2.28*</b>	3.37(1.22)	4.03(1.31)	4.05(1.39)	3.73(1.14)	4.04(1.30)	3.85(1.34)	1.00	4.50(1.36)	3.85(1.30)	<b>2.28*</b>
Behavior	3.37(1.22)	4.03(1.31)	4.05(1.39)	3.73(1.14)	1.50	4.04(1.30)	3.85(1.34)	1.00	4.50(1.36)	3.85(1.30)	<b>2.28*</b>	3.37(1.22)	4.03(1.31)	4.05(1.39)	3.73(1.14)	4.04(1.30)	3.85(1.34)	1.00	4.50(1.36)	3.85(1.30)	<b>2.28*</b>

*Note.* Demographic variables were dichotomized to focus on identities most likely to have experienced social privilege, and most likely to have experienced marginalization. Participants rated how much they felt each emotion with respect to thinking about poverty as a social problem. Guilty = Feeling Guilty; Angry = Feeling Angry; OvrwImd = Feeling Overwhelmed. SIRPInd = Individual attribution of responsibility of poverty; SIRPSys = Systemic attribution of responsibility of poverty; Activism = CBS political activism subscale; Behavior = CESB behavior subscale.

\* Based on an independent samples t-test, groups differed at the p<.05 level.

\*\* Based on an independent samples t-test, groups differed at the p<.01 level.

**Table 5**  
***Hierarchical Regression Analyses for Emotions and Attributions about Poverty at Time 2 for those enrolled in course***

Model	Predictor	SIRP-I Model 1: $R^2 = .11^*$ Model 2: $\Delta R^2 = .14^{**}$				SIRP-S Model: $R^2 = .13^{**}$			
		<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>
1	Male	.26	.17	.15	1.49	--	--	--	--
	Black	-.38	.20	-.19	-1.92	--	--	--	--
	Finstress-C	-.19	.11	-.18	-1.84	--	--	--	--
2	Male	.10	.17	.06	.59	--	--	--	--
	Black	-.31	.19	-.15	-1.64	--	--	--	--
	Finstress-C	<b>-.22</b>	<b>.10</b>	<b>-.20</b>	<b>-2.17*</b>	--	--	--	--
	Guilty	-.08	.07	-.12	-1.06	.11	.06	.19	1.77
	Angry	<b>-.21</b>	<b>.08</b>	<b>-.26</b>	<b>-2.50*</b>	.14	.07	.20	1.84
	Overwhelmed	-.11	.07	-.15	-1.60	.04	.06	.07	.67

*Note.* Predictors included in the analysis based on bivariate connection to outcomes. For SIRP-S, no demographic variables were significant at the bivariate levels, so there is only one model, including the three emotion variables. SIRP-I = SIRP Individual Blame Scale; SIRP-S = SIRP Systems Blame Scale; FinStress-C = Current Financial Stress Scale; Guilty = Feeling guilty about poverty; Angry = Feeling angry about poverty; Overwhelmed = Feeling overwhelmed about poverty.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

## Does Emotion Predict Civic Engagement? (RQ3)

To explore the impact of emotion on behavioral civic engagement one year after the end of the course, and to explore whether taking the course influenced that connection, we used hierarchical regressions with a similar system as described in research question 2. The first block contained a dummy-coded variable for whether or not students took CESC. Subsequent blocks contained any demographic variables significant at the bivariate level, any general affect variables significant at the bivariate level, and all three emotions. A final block included an interaction term between each emotion and the CESC course. For the purpose of testing moderation, we standardized our continuous predictor variables (Frazier et al., 2004).

Table 6 shows the results of these analyses. When the dependent variable was political activism, there were no demographic or general affect variables significant at the bivariate level. Having been enrolled in CESC did not predict political action, and of the three emotions, only anger predicted greater engagement. Analyses showed no interaction effects, so the table gives parameters for the model before the interaction term was added. The model explained a significant percentage of the variance in the dependent variable ( $R^2 = 0.10$ ,  $F(4, 158) = 4.19$ ,  $p < 0.01$ ).

When community engagement was the dependent variable, each block (taking CESC, identifying as Black and as a man, and the three emotions) added significantly to the variance explained. The final model explained

**Table 6**  
***Hierarchical Regression Analyses for Emotions at time 2 and Civic Engagement Outcomes at time 3.***

Model	Predictor	Civic Behavior				Political Activism			
		<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>
		Model 1: $R^2 = .03^{**}$				Model 1: $R^2 = .01$			
		Model 2: $\Delta R^2 = .08^{**}$				Model 2: $\Delta R^2 = .08^{**}$			
		Model 3: $\Delta R^2 = .03^{**}$							
1	CESC	<b>-.45</b>	<b>.21</b>	<b>-.17</b>	<b>-2.13*</b>	-.42	.28	-.12	-1.50
2	CESC	<b>-.51</b>	<b>.21</b>	<b>-.19</b>	<b>-2.48*</b>	-	-	-	--
	Male	<b>-.76</b>	<b>.28</b>	<b>-.21</b>	<b>-2.70**</b>	-	-	-	--
	Black	<b>.71</b>	<b>.30</b>	<b>.18</b>	<b>2.38*</b>	-	-	-	--
3	CESC	-.36	.22	-.13	-1.62	-.09	.29	-.03	-.31
	Male	<b>-.67</b>	<b>.29</b>	<b>-.18</b>	<b>-2.33*</b>	-	-	-	--
	Black	<b>.68</b>	<b>.30</b>	<b>.17</b>	<b>2.28*</b>	-	-	-	--
	Angry	<b>.25</b>	<b>.13</b>	<b>.19</b>	<b>2.02*</b>	<b>.51</b>	<b>.17</b>	<b>.30</b>	<b>3.05**</b>
	Guilty	-.02	.13	-.01	-.14	.04	.17	.02	.23
	Overwhelmed	-.01	.12	-.01	-.10	-.01	.15	-.01	-.09

*Note.* Predictors included in the analysis based on bivariate connection to outcomes. For Political activism, no demographic variables were significant at the bivariate levels, so there is no model 2. Civic Behavior = CESB behavior subscale; Political Activism = CBS political activism subscale; CESC = enrolled in course; Guilty = Feeling guilty about poverty; Angry = Feeling angry about poverty; Overwhelmed = Feeling overwhelmed about poverty.

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

14% of the variance in the outcome ( $R^2 = 0.14$ ,  $F(6, 156) = 4.00$ ,  $p = 0.01$ ). In this model, not identifying as male, identifying as Black, and reporting more anger about poverty predicted greater engagement. As with the first regression, no interaction effects were significant, and the table presents the model before interaction terms were added.

## Discussion

### Results Add Nuance to the Important Role of Emotion in the Justice-Oriented Classroom

In this study, we found that students enrolled in a course bringing them into contact with the difficult realities and systemic causes of poverty increased the negative emotions they felt about that social issue, independent from their overall tendency to feel negative or positive emotion in their day-to-day life. These findings add detail to the emotional landscape students and instructors experience in justice-oriented service-learning courses: while students on average reported negative emotion about poverty before the course started, compared to

students who did not take the course, those enrolled reported more anger, overwhelm, and guilt at the end of the semester. These findings support the call of prior scholars to attend to student emotion in the classroom given their implications for both engaging in course content and longer-term shifts in justice-oriented attitudes and behaviors.

## Student Positionality

Adding nuance to these results, as expected, we found that students in the class were not a monolith, such that specific aspects of their positionality predicted variance in emotional response to the course. The more students reported personal experience with financial stress in their families of origin, the stronger their anger at the end of the semester. Students' *current* financial stress was not related to emotion at the end of the semester—at the beginning of the semester it was related to both overwhelm and anger. Both male students and White students reported less guilt at the end of the semester than did students who were not male or White. While men overall endorsed less emotion, there was something specific about their lesser experience of guilt after taking the course that set it apart from anger and overwhelm.

Because all demographics are proxy variables in this study—measuring identity rather than experiences that those identities might have produced—we cannot be certain about the reason for these differences, and they require further exploration. However, for White students versus students of color, it seems possible that students who are White feel less personally connected to the issue of poverty during the class. While poverty among people who are White is part of the course content, the course also covers the disproportionate level of poverty in communities of color, and the clients with whom students come into contact with at their placements are disproportionately people of color. Considering the racial differences together with the results with respect to history of financial stress, one possibility is that student emotion is linked to personal connection with social issues in students' networks, or for “people like me.”

This result echoes the findings related to shared experience of threat (Beckes et al., 2013), in which a sense of connection to the person experiencing threat intensifies the contagion of emotion. Scholarship has also shown that this shared experience of threat is powerful at the level of social identity group, particularly when one's identity is made salient (Paterson et al., 2019), or when similar experiences of discrimination across groups is highlighted (Cortland et al., 2017). Sharing the sense of threat, but also being aware of relative privilege (being in the helper rather than client role at placement), might explain the more acute endorsement of guilt. Conversely, those without a personal connection might more convincingly distance themselves from the distress they encounter, perhaps focusing on differences to increase their comfort. Additionally, it may be that the course, with its coverage of systemic oppression and economic marginalization, shifts White and male students' feelings about their own privilege, perhaps making finer distinctions about their sources of advantage and disadvantage. Such a shift might lead those with privileged identities to actually feel *less* accountable for social ills. This possibility is supported by our multivariate results, which revealed a lower level of civic engagement among students who are male and among students who are not Black.

The fact that relationships between positionality and emotion are different at baseline than they are at the end of the course suggests that the course does not just intensify emotion across the board—it provides a lens through which experience is viewed (and felt) differently. This finding adds to Boler’s (2014) contention that the shift in perspective students can experience in such courses is profound and the suggestion of Zembylas (2016) and others that emotion is not just a response to course material but is part of what may be learned.

## Emotion and Blame

The connection between emotion and the targeted outcomes in the class—deficit and systemic attributions for poverty—again underscores the presence of specific emotions in the classroom. Less blame of individuals for poverty is related to all three emotions at the bivariate level, and anger outweighs the other two in the multivariate analysis. Anger and guilt are both related to more blame of systems, with neither outweighing the other. These findings repeat the pattern in our prior work in which individual and system attributions are relatively independent (Cattaneo et al., 2021). Here, while anger appears to be central in both perspective shifts, a notable difference is at the bivariate level, where the sense of being overwhelmed is related to blaming individuals less for their poverty. The reduction of individual blame challenges the notion that the United States is a meritocracy in which an individual’s hard work necessarily brings success, potentially causing cognitive dissonance and the feelings of overwhelm that may come with it (Festinger, 1957). Perhaps the combination of anger and overwhelm also conveys frustration at the lack of power individuals have over their circumstances. System blame provides a possibility for pathways to change, which does not eliminate negative emotion but may provoke less anxiety than giving up previous beliefs about who is at fault. While individual and system blame are related to each other, one is not the natural offshoot of the other (i.e., blaming individuals less does not necessarily lead to blaming systems more). It is possible that feelings of overwhelm might even make this shift less likely: research on system-justification theory has shown that under conditions of threat, people are more likely to justify the status quo rather than question or reject it (Jost et al., 2004; Kay et al., 2009). Future research might explore in a more granular fashion the nature and function of student anxiety as they process their experience in the course.

## Anger Predicts Engagement One Year after the End of the Course

With respect to students’ civic and political engagement one year after the end of the course, results highlighted the importance of anger above and beyond other emotional responses. In both cases, prior work has shown that students who took the course increased in their level of engagement over time (Cattaneo et al., 2021), but analyses did not show a moderating effect of the course. In other words, more anger meant more action, both politically and in terms of community service, whether or not students were enrolled in the course. This result is perhaps unsurprising, given that anger is an activating emotion.

The nature of student anger also appears to change over the course of the semester—at baseline, anger and overwhelm were strongly related, but at semester’s end, they were independent. Boler’s (1999) discussion of the pedagogy of discomfort articulates the differences among types of anger, including both the anger of indignation and defensiveness. We did not explore these nuances in this study, but it is possible that as students encounter more information about the nature and impact of poverty, the type of anger they experience shifts. Given that anger predicted engagement, perhaps course coverage of pathways to make change helped to sharpen and focus that anger, despite feeling overwhelmed by the magnitude of the problems to be addressed. It is also important to note that greater student overwhelm or guilt was *not*, at least in these analyses, an impediment to action. In sum, students increased in the intensity of all emotion, with anger contributing to greater engagement, regardless of whether they also felt overwhelmed and guilty.

## Limitations

The limitations of this study point to directions for future work. First and foremost, the study focuses on a specific course in a particular university and singles out the issue of poverty among the many different manifestations of social injustice that might be studied. Whether the same results would be obtained in other courses with different content remains to be explored. Several important limitations relate to the measurement of the key variables in the study. Each emotion was measured with a single item developed for this project. This measurement strategy does not capture the complexity of these emotions, or the range of other emotions that might arise in the course, and does not allow for direct comparison with prior research. Additionally, we measured emotion at three discrete time points and did not assess the ways in which emotion might fluctuate after particular experiences or types of content. Finally, all measures were self-report: for civic engagement, this introduces students’ perceptions of their own behavior, and in relying on students’ self-report of emotion, we did not avoid the filter of their interpretation, including their level of comfort in endorsing particular emotions. With these limitations in mind, we suggest the following next steps in research and pedagogy on the basis of our results and prior work.

## Implications for Research and Pedagogy

In her description of a pedagogy of discomfort, Boler (2014) calls for compassion toward students who may struggle with negative emotion in the face of “shattering” worldviews. The results of this study amplify that point: on average students enter the class with negative feelings related to course content, and those negative feelings intensify in ways that suggest students are evaluating the world differently, perhaps with respect to their own experiences. We and others have described the need to alert students to the likelihood of discomfort in the class; these results suggest specificity beyond that general point. Just knowing these emotions are there (and telling students they are coming) does not convey how we should best manage them. We concur with Felten and colleagues (2006), who recommend that student emotion be integrated in the reflection process, and with others who note the potential for students to build generalizable skills related to emotion through this process (Manring, 2012;



Mitchell et al., 2015). Students might be guided in noting moments of emotional resonance and exploring what those moments have to teach them. Inviting students to share these responses with each other might build comfort with discomfort, understanding it as part of what is learned in the course (Zembylas, 2016).

Our results suggest that guilt and anger both vary according to student positionality, and reflection prompts might anticipate this pattern. We suggest that instructors both model for and convey to students the understanding that emotion is not just expected, is not just an invitation to reflection, but it is information in and of itself about the encounter between us and the world. Discussion might yield insight into *how* and *why* students' social location, relative to their classmates, relates to their emotional and cognitive responses to course content. Such comparison might be especially thought-provoking for students at the same placement. The politics of emotion might be fruitfully included in these reflections—what cultural norms have to say about who expresses overwhelm, anger, or guilt and what it means about us when they do (Zembylas, 2019)?

Results also communicate the necessity of accompanying growing student awareness of problems with awareness of pathways toward change. The overwhelm associated with reduced deficit perspectives is an important source of information, and students might be guided in noticing and exploring it—what is being threatened or potentially lost? Results suggest focusing on avenues to change might bring some relief from overwhelm, and future research might further explore ways that emotional awareness and approach can facilitate learning. Specifically, prior work has noted the role of emotion in attention (Cavanagh, 2016; Larsen, 2017) and might delve into the question of when it moves students toward or away from relevant content. Is there a way to gauge optimal levels of overwhelm, similar to optimal levels of frustration, such that students are pulled to investigate further rather than turn away?

Beyond building on the understanding of emotion in the classroom overall, this study also suggests pedagogical steps and research questions related to each of the three emotions we measured. Our study measured emotion simply, and there is much complexity to be explored. In particular, Zembylas (2019) has described strategies for building a sense of “shared responsibility” rather than “collective guilt.” Our findings suggest that this process might be different for students who have experienced varying levels of privilege. Contrary to the political discussions in the current US landscape, where legislators are aiming to “protect” students from feeling guilt about their privileged statuses (e.g., Anderson, 2021), in our data, students with racial and gender privilege experienced *less* guilt. Importantly, guilt was relatively high across the board, but the students feeling it most acutely were those who are more likely to have a personal connection with experiences of marginalization. What might these results mean for the possibility of developing a prosocial sense of shared responsibility? Research might explore this topic, and our guess is also that there might be productive conversation about this in the classroom. Indeed, at least in our course, we realize that building a sense of shared responsibility for addressing societal ills might be a more transparent objective of the course, and that students might be part of an ongoing dialogue about how this differs from guilt and why and how the class might move in that direction.

Finally, anger emerged as a salient and impactful emotion in these results. As noted, its nuances require more exploration, but transparency with students about the potential for their anger to drive action seems warranted. Here again, students might discuss the nature of their anger, when they feel it, and how it does and does not pull them in

directions that feel useful. These results add to scholarship that centers empathy and compassion as the motivators for civic engagement (Langstraat & Bowdon, 2011)—indeed it is possible that the anger students feel is driven by compassion and empathy. Kiely’s (2005) model of transformational learning suggests that moments of personalization drive such visceral responses—both research and class discussion could bring these possibilities to the fore.

## Conclusion

The results of this study build on the consensus that rather than something to be avoided or feared, emotion is a central component of what is happening for students in the classroom. In this justice-oriented service-learning course, student emotion intensified, interacted with personal experience, and was associated with increased engagement a year later. Results suggest that there is more to learn about student anger, guilt, and overwhelm in the classroom and beyond, and that students might be invited to reflect on these aspects of their experience as part of the process of transformational learning.

## Acknowledgments

This research was supported with a grant from the Spencer Foundation.

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