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► To cite this version:

Sébastien Goudeau, Nicole M Stephens, Hazel R Markus, Céline Darnon, Jean-Claude Croizet, et al..
What causes social class disparities in education? The role of the mismatches between academic contexts and working-class socialization contexts and how the effects of these mismatches are explained..
Psychological Review, 2024, 10.1037/rev0000473 . hal-04722389

HAL Id: hal-04722389

<https://hal.science/hal-04722389v1>

Submitted on 8 Oct 2024

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Psychological Review

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Online First Publication, July 18, 2024. <https://dx.doi.org/10.1037/rev0000473>

CITATION

Goudeau, S., Stephens, N. M., Markus, H. R., Darnon, C., Croizet, J.-C., & Cimpian, A. (2024). What causes social class disparities in education? The role of the mismatches between academic contexts and working-class socialization contexts and how the effects of these mismatches are explained.. *Psychological Review*. Advance online publication. <https://dx.doi.org/10.1037/rev0000473>

What Causes Social Class Disparities in Education? The Role of the Mismatches Between Academic Contexts and Working-Class Socialization Contexts and How the Effects of These Mismatches Are Explained

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Within psychology, the underachievement of students from working-class backgrounds has often been explained as a product of individual characteristics such as a lack of intelligence or motivation. Here, we propose an integrated model illustrating how *educational contexts* contribute to social class disparities in education over and beyond individual characteristics. According to this new *Social Class–Academic Contexts Mismatch model*, social class disparities in education are due to several mismatches between the experiences that students from working-class backgrounds bring with them to the classroom and those valued in academic contexts—specifically, mismatches between (a) academic contexts' culture of independence and the working-class orientation to interdependence, (b) academic contexts' culture of competition and the working-class orientation toward cooperation, (c) the knowledge valued in academic contexts and the knowledge developed through working-class socialization, and (d) the social identities valued in academic contexts and the negatively stereotyped social identities of students from working-class backgrounds. Because of these mismatches, students from working-class backgrounds are likely to experience discomfort and difficulty in the classroom. We further propose that, when attempting to make sense of these *first-order effects*, students and teachers rely on inherent characteristics (e.g., ability, motivation) more often than warranted; conversely, they overlook extrinsic, contextual factors. In turn, this explanatory bias toward inherent features leads (a) students from working-class backgrounds to experience self-threat and (b) their teachers to treat them unfairly. These *second-order effects* magnify social class disparities in education. This integrated model has the potential to reshape research and discourse on social class and education.

Keywords: inequality, education, social class, mismatch, explanations

The probability of experiencing difficulty in the classroom is not randomly distributed among students but in part shaped by social class: The more that a student's family is socioeconomically disadvantaged, the greater the probability that the student will experience (relative) difficulty in the classroom (Organisation for Economic Co-Operation and Development [OECD], 2019). Our

goal here is to formulate a comprehensive account of how academic contexts undermine the educational outcomes of students from working-class backgrounds and thus reproduce social inequality, with a particular focus on the clash between the culture of academic contexts (from preschool to graduate school) and the culture that students from working-class backgrounds are exposed to at home.

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The study was funded by the Agence Nationale de la Recherche (Grant ANR-19-CE28-0007-PRESCHOOL awarded to Sébastien Goudeau) and the Jacobs Foundation (awarded to Sébastien Goudeau).

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Sébastien Goudeau played a lead role in conceptualization, resources, and writing—original draft and an equal role in writing—review and editing. Nicole

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Within psychology, the relationship between social class and academic outcomes has often been explained from a deficit perspective, which assumes that the underachievement of students from working-class backgrounds is a product of individual characteristics such as low intelligence, motivation, or self-control (e.g., Harden, 2021; Lee et al., 2018; Marks, 2020). This focus on individual characteristics also characterizes how teachers and students tend to understand social class differences in achievement (Goudeau & Cimpian, 2021; Goudeau et al., 2023). In contrast, here we focus on understanding how *educational contexts* contribute to the reproduction of inequality, over and above individual differences. Several well-established social psychological constructs and theories are relevant to this question, including cultural mismatch (e.g., Stephens, Fryberg, et al., 2012), achievement goals (e.g., Smeding et al., 2013), social comparison (e.g., Goudeau & Croizet, 2017), and social identity threat (e.g., Croizet & Claire, 1998). These different lines of research highlight how key characteristics of academic contexts (e.g., emphasizing independence and competition)—alongside broader structural factors, such as disparities in economic resources among schools—fuel social class inequality. However, the features of educational contexts that contribute to social class inequality have mostly been studied separately, and the theories and predictions that emerge from these distinctive lines of research have not been fully articulated. Understanding how academic contexts undermine the achievement of students from working-class backgrounds—and thus reproduce social inequality—requires integrated and systematic analysis. Providing this analysis is the goal of the present article.

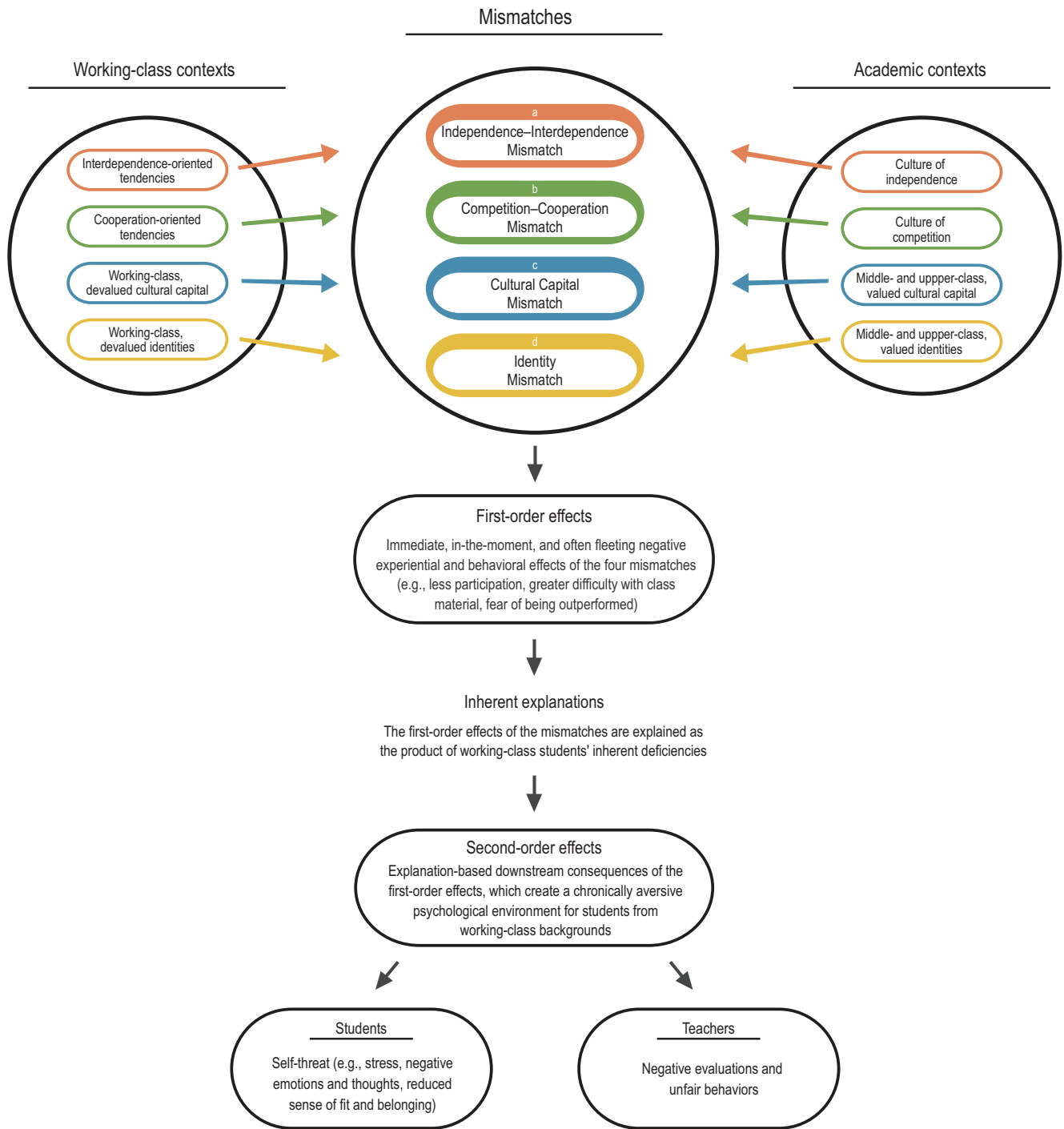
Thus, our aim here is to integrate several distinct but complementary lines of work in social psychology and related fields and develop a unified theoretical model that we term the *Social Class–Academic Contexts Mismatch model*. This model builds on and expands research in psychology, sociology, and sociolinguistics that theorizes about the mismatches between the home experiences of students from working-class backgrounds and the cultural ideas and practices prevalent in academic contexts (e.g., Bernstein, 2003; Bourdieu & Passeron, 1990; P. J. Miller & Moore, 1989; P. J. Miller & Sperry, 2012; Stephens, Fryberg, et al., 2012). In psychology, for instance, the cultural mismatch framework has focused specifically on the divergence between the independent norms prevalent in many universities and the interdependent norms common among students from working-class backgrounds (Dittmann et al., 2020; Stephens, Fryberg, et al., 2012; Stephens, Markus, & Fryberg, 2012). Going beyond the focus on independence versus interdependence, we propose that the social class disparities in education can be productively viewed as the product of a *range of mismatches* between the psychological and behavioral tendencies that students from working-class backgrounds bring with them to the classroom and the psychological and behavioral tendencies valued in academic contexts at all levels of education. We argue that these mismatches occur because education is not class-neutral but is instead structured by a culture that reflects that of middle- and upper-class contexts (Bourdieu & Passeron, 1990). Consequently, academic settings tend to match and affirm the psychological and behavioral tendencies of students from middle- and upper-class backgrounds and, conversely, mismatch and devalue those of students from working-class backgrounds (Bourdieu & Passeron, 1990; Stephens, Markus, & Fryberg, 2012). Thus, even though they navigate the “same” educational environment, students from different social class backgrounds have different experiences in this environment, with students from

middle- and upper-class backgrounds feeling relatively comfortable and students from working-class backgrounds feeling relatively threatened. In turn, these diverging experiences affect students’ ability to learn and achieve at their best.

We begin by describing our Social Class–Academic Contexts Mismatch model. We use the term “academic contexts” to refer to the environments within educational institutions, from preschools to PhD programs, where teaching and learning take place. From our perspective here, these contexts encompass not just physical elements (e.g., classroom layout, school supplies) but also the ideas and corresponding practices that influence how students learn and interact. Thus, we first argue that academic contexts are *sociocultural* contexts that are modeled after, and thus reflect, the cultures common in middle- and upper-class families. We then describe four distinct ways in which academic contexts tend to create a mismatch for students from working-class backgrounds. Each mismatch arises from the fact that working-class contexts foster culture-specific psychological and behavioral tendencies that differ from the tendencies that are valued in academic contexts. As shown in Figure 1, these four mismatches include (a) an *independence–interdependence mismatch* between the culture of independence that organizes academic settings and the interdependence-oriented tendencies that are fostered via socialization in working-class contexts, (b) a *competition–cooperation mismatch* between the culture of competition that organizes academic settings and the cooperation-oriented tendencies fostered by socialization in working-class contexts, (c) a *cultural capital mismatch* between the cultural capital that is valued in academic contexts (e.g., an interest in art, knowledge of books) and the forms of knowledge and skills developed through socialization in working-class contexts, and (d) an *identity mismatch* between the social identities that are valued in academic contexts and the social identities of students from working-class backgrounds, which are devalued by pervasive negative stereotypes about their intelligence.

After reviewing empirical evidence for the hypothesized mismatches, we turn our attention to the questions of mechanisms and propose that these mismatches undermine the academic performance of students from working-class backgrounds in two stages (see Figure 1). Initially, each mismatch gives rise to a range of uncomfortable experiences among students from working-class backgrounds. For example, they may find less enjoyment in classroom activities or experience more discomfort and difficulty with these activities; as a result, they may also participate less. We term these initial effects *first-order effects* and hypothesize that they are somewhat unique to each mismatch (though perhaps not entirely). In contrast, the effects at the next stage are common across mismatches. Specifically, we hypothesize that the first-order effects of the four mismatches are likely to trigger a quest for explanations among students and teachers. Using recent theorizing about an *inherence bias* in intuitive explanation (e.g., Cimpian & Salomon, 2014a, 2014b; Horne et al., 2019), we further propose that students and teachers typically make sense of the initial social class differences caused by the four mismatches mostly through inherent explanations—namely, explanations that appeal to differences in the personal characteristics of students from different social class backgrounds (e.g., their ability, intelligence, or motivation)—and neglect explanations in terms of extrinsic, contextual factors (e.g., Goudeau & Cimpian, 2021). This explanatory bias affects

Figure 1
Social Class–Academic Contexts Mismatch Model



students from working-class backgrounds both directly by shaping how they explain the differences between themselves and other students and indirectly by shaping teachers' evaluation of and behavior toward these students. Directly, the inherent explanations that students from working-class backgrounds generate for social

class differences in the classroom lead them to experience self-threat, which in turn triggers stress, negative thoughts and emotions, and concerns about not fitting in or belonging in school. Indirectly, teachers' inherent explanations for social class differences in the classroom lead them to evaluate and behave toward students from

working-class backgrounds in unfair ways that further undermine these students' experiences and academic achievement. We term these explanation-based effects on students and teachers *second-order effects* of the proposed mismatches.

Finally, we discuss a range of moderators that are likely to shape the magnitude of the proposed mismatches and their effects. These moderators pertain both to academic contexts (e.g., school subject, stage of schooling, the broader national context) and to the students themselves (e.g., age, gender, race). Incorporating these moderators into our theorizing allows us to formulate more precise predictions regarding students' psychological experiences in various contexts, predictions that can guide future research.

Summary of Theoretical Contributions

The present account contributes significantly to scientific understanding of how academic contexts interact with social class to shape educational disparities. Drawing on the clash between the culture of academic contexts and the culture that students from working-class backgrounds are exposed to at home, we formulate a comprehensive, unified account of how academic contexts undermine the educational achievement of these students. This account, the Social Class–Academic Contexts Mismatch model, contrasts with previous theoretical approaches, which have tended to focus on individual deficits to explain working-class students' underachievement in school. Rather than “blaming the victim,” the present model identifies four distinct mismatches between the psychological and behavioral tendencies socialized among students from working-class backgrounds and those valued in academic contexts, including independence–interdependence, competition–cooperation, cultural capital, and identity mismatches. Beyond simply identifying these mismatches, the present model also provides a detailed mechanistic account of how the hypothesized mismatches undermine the experiences and achievement of students from working-class backgrounds. Drawing on the relevant evidence from cognitive science, we highlight the crucial role of inherence-biased explanations for the initial differences caused by the four mismatches, explanations that prompt self-threat among students from working-class backgrounds and that also prompt teachers to evaluate and behave toward these students in unfair ways. Adding nuance to the model, we discuss potential moderators of the effects of the hypothesized mismatches, related to both academic contexts and students themselves, offering a framework for making precise predictions and guiding future research in this field. Overall, we introduce a comprehensive, generative analysis of the relationship between social class and educational outcomes, providing a valuable contribution to scientific understanding of the challenges faced by students from working-class backgrounds and potential interventions to address these issues.

Social Class–Academic Contexts Mismatch Model

The goal of the present section is to describe our Social Class–Academic Contexts Mismatch model. As a preamble, (a) we explain and problematize deficit perspectives on social class disparities in education; (b) we introduce a sociocultural perspective on academic contexts as an antidote to deficit perspectives; and (c) using this sociocultural perspective, we elaborate on what we mean by the term “social class” in the context of the present argument.

After addressing these introductory matters, we dedicate the majority of the section to outlining how the middle- and upper-class perspectives prevalent in academic contexts (i.e., the emphasis on independence and competition, the value placed on certain cultural capital and social identities) can create a mismatch with the psychological and behavioral tendencies that students from working-class backgrounds bring with them. For each mismatch, we review the empirical evidence showing that it can disadvantage students from working-class backgrounds, undermining their psychological experiences and achievement in school.

Challenging Deficit Perspectives on Social Class Disparities in Education

Psychology has a long history of studying social class disparities in education. Most of this research is guided by what some have termed a *deficit perspective* (e.g., Menchaca, 1997; Sheehy-Skeffington et al., 2023; Valencia, 2010; Wang et al., 2021). At the core of this perspective is the notion that the academic underperformance of students from working-class backgrounds can be attributed to deficits in individual attributes such as intelligence, executive function, motivation, or self-control abilities. Some scholars have argued that these individual differences result from genetic variations (e.g., Harden, 2021; Krapohl & Plomin, 2016; Marks, 2020). Others contend that working-class students underachieve because of the deprivation they experience in their social environments (e.g., Hart & Risley, 1995, 2003). Whether researchers invoke genes or family environments to explain social class disparities in education, they view students from working-class backgrounds as less than capable of succeeding in academic contexts.

In contrast to a deficit perspective, our model considers the role that academic contexts themselves play in shaping social class disparities in education (Inzlicht & Schmader, 2012). Understanding how academic contexts undermine the experiences and achievement of students from working-class backgrounds requires considering that these contexts are more than the immediate situations that are often the focus of social psychological research (Ross & Nisbett, 1991). That is, much social psychological research focuses on the effect of immediate features of the situation (e.g., the way a test is presented). However, according to a complementary sociocultural perspective, the immediate situations that individuals navigate are embedded in larger institutions (e.g., education), which are organized by culture-specific ideas (Adams et al., 2008; A. P. Fiske et al., 1998; S. T. Fiske & Markus, 2012; Markus & Kitayama, 2010; Stephens, Markus, & Fryberg, 2012). We argue here that scientific understanding of how academic contexts contribute to social class disparities in education will be enriched by analyzing such contexts from a sociocultural perspective.

Academic Contexts as Sociocultural Contexts

From a sociocultural perspective, contexts can be analyzed in terms of four key elements: ideas, institutions, interactions, and individuals (Adams et al., 2008; A. P. Fiske et al., 1998; S. T. Fiske & Markus, 2012; Markus & Kitayama, 2010; Stephens, Markus, & Fryberg, 2012). By “ideas,” we mean pervasive norms, values, ideologies, and assumptions that are derived from the broader culture and history of the society in which a context is embedded. These ideas are often invisible to the individuals in that context—they make

up the “cultural air” that everyone breathes, defining what is true of the world and what is valuable and good (Hamedani et al., 2023; Hook & Markus, 2020; Markus & Conner, 2013; Shweder, 2003). In many cultures, for example, academic contexts are shaped by pervasive ideas that portray students as independent, autonomous agents whose actions are guided largely by their personal preferences and interests (e.g., Stephens, Fryberg, et al., 2012). Cultural ideas that are common in academic contexts also include the notions that all students are given equal opportunities to succeed in school (e.g., Butera et al., 2023), that student outcomes reflect primarily their individual merit and abilities (e.g., Darnon, Smeding, & Redersdorff, 2018), and that some students (e.g., those from middle- and upper-class backgrounds) are more intellectually capable than others (e.g., those from working-class backgrounds; Brummelman & Sedikides, 2023; Croizet & Claire, 1998).

Cultural ideas shape *institutions*—namely, the structures that define and formalize the rules of society (P. Berger & Luckmann, 1966; Darnon et al., 2009, 2012; A. P. Fiske et al., 1998; Hook & Markus, 2020). For example, the cultural ideas of equal opportunities and individual merit shape the institutional practices of competition and selection that characterize educational contexts, practices such as tracking, ability grouping, and admissions tests (e.g., Batruch et al., 2019; Butera et al., 2023; Darnon, Smeding, & Redersdorff, 2018).

In turn, institutions shape daily *interactions* by encouraging certain types of interpersonal behaviors and inhibiting others (Markus & Conner, 2013; Tankard & Paluck, 2017; Yamagishi & Hashimoto, 2016). For example, the fact that educational institutions are competitive encourages students to compare their skills and performance to those of their peers in the course of their daily interactions in classrooms (e.g., Ames, 1992; Ames & Archer, 1988; Festinger, 1954; Jury et al., 2017; Nicholls, 1984).

Finally, by routinely interacting with others in the context of institutions that are shaped by pervasive cultural ideas, *individuals* come to embody patterns of habitual thought and behavior that mirror those that are expected and valued in their respective contexts. For example, navigating the school system might foster endorsement of the ideas of equal opportunity and meritocracy among students and teachers, as well as more competitive behavioral tendencies (e.g., Darnon et al., 2023). In this way, the broad cultural ideas that pervade a context and organize the institutions and interactions within it “get under the skin” and shape the psychological and behavioral tendencies of individuals who are frequently exposed to that context.

Previous work has suggested that various aspects of the sociocultural context of education can undermine the psychological experiences and achievement of students from working-class backgrounds. By integrating these disparate lines of research, our Social Class–Academic Contexts Mismatch model provides a powerful theory that illuminates the role of academic contexts in creating and maintaining social class disparities in education. At the core of this model is the proposal that academic contexts reflect middle- and upper-class perspectives that mismatch with the psychological and behavioral tendencies commonly instilled via socialization in working-class contexts (Bourdieu & Passeron, 1990; Croizet et al., 2017; Lareau, 2003; Stephens, Markus, & Fryberg, 2012).

Defining Social Class From a Sociocultural Perspective

A person’s social class is their position in the hierarchy of their society, a position that is based on access to material resources (e.g.,

financial assets), cultural resources (e.g., manners, aesthetic preferences), and social resources (e.g., influential connections) that afford power and status in that society (e.g., Stephens et al., in press). When individuals have access to more of these societally valued resources, they gain power and status and, in turn, are afforded a higher social class. A sociocultural analysis of social class, however, goes beyond merely pointing out differences in access to resources. Such an analysis illuminates how differences in access to resources, combined with pervasive segregation based on such differential access (e.g., Mijis & Roe, 2021), structure the sociocultural contexts that individuals navigate in daily life (Easterbrook et al., 2023; Goudeau et al., 2017; Kraus et al., 2012; Piff et al., 2018; Stephens, Markus, & Phillips, 2014). In other words, social class is not just an individual-level demographic characteristic but also a multilayered sociocultural context with a characteristic set of interactions and ideas (Bourdieu, 1979; Bourdieu & Passeron, 1990; Lahire, 2019; Kraus et al., 2012; Piff et al., 2018; Stephens et al., 2007). For example, because individuals in working-class contexts have access to fewer resources and experience greater uncertainty in daily life, they often need to rely on and support each other in times of need. These class-specific patterns of interactions reinforce, and are in turn reinforced by, class-specific patterns of cultural ideas. In working-class contexts, for example, being interdependent with others is often seen as desirable and good (S. T. Fiske & Markus, 2012; Kraus et al., 2012; Stephens et al., 2007).

Relevant to our argument, the patterns of cultural ideas and interactions that are common among individuals from a particular social class shape how parents interact with their children (i.e., their socialization practices). In turn, class-specific socialization practices cultivate class-specific psychological and behavioral tendencies among children. For example, socialization in working-class contexts instills in children a particular set of psychological and behavioral tendencies to work together with others and to defer to peers and adults (Dittmann et al., 2020; Kusserow, 1999; Lareau, 2003; P. J. Miller & Cho, 2018; P. J. Miller et al., 2005; Snibbe & Markus, 2005). While these tendencies are adaptive in students’ home environments, they diverge from—or mismatch with—those that are valued in academic contexts, which tend to reflect middle- and upper-class socialization practices and the corresponding psychological and behavioral tendencies (Bourdieu & Passeron, 1990; Lamont & Lareau, 1988; Lareau & Weininger, 2003; Stephens, Markus, & Fryberg, 2012). In contrast to the deficit perspective on social class disparities, the sociocultural perspective maintains that the tendencies socialized in working-class contexts are not inferior to those that are valued in academic contexts—they just happen to be *different*, and this difference should not be mistaken for a deficit.

The next four sections present four key dimensions along which the psychological and behavioral tendencies instilled by working-class contexts mismatch with those valued in academic contexts. Bridging important lines of research in social psychology, we propose that social class disparities in education are fueled by the mismatches between the socialized tendencies of students from working-class backgrounds and the following dimensions of academic contexts: (a) their culture of independence; (b) their culture of competition; (c) the cultural capital that is valued in these contexts; and (d) the social identities that are valued in these contexts (see Figure 1).

Independence–Interdependence Mismatch: Mismatch Between the Culture of Independence in Academic Contexts and Working-Class Orientation Toward Interdependence

What Is It?

The first type of mismatch that undermines the psychological experiences and achievement of students from working-class backgrounds is a mismatch with the culture of independence that is prevalent in academic contexts. These contexts are saturated with implicit and explicit cultural ideas about independence (Fryberg & Markus, 2007; Markus, 2017; Millet & Croizet, 2016; Stephens, Fryberg, et al., 2012; Stephens, Markus, & Fryberg, 2012; Stephens, Markus, & Phillips, 2014). According to these ideas, individuals are free actors who are wholly separate from other individuals in their social environments and whose behaviors are guided by their own personal preferences and interests (Markus & Kitayama, 1991; Stephens et al., 2007). Conversely, according to a contrasting set of cultural ideas about interdependence, which are more common in working-class contexts, individuals are interconnected actors who are intrinsically linked to and influenced by other individuals in their social environments and whose behaviors take into account the needs of others.

Consistent with the cultural ideas about independence that are prevalent in academic contexts, schools often tell students to “think for themselves,” to develop and express their unique interests and preferences, to be self-sufficient, and to work independently toward goals that center on the individual self (rather than their families or their communities; Stephens et al., 2007; Stephens, Fryberg, et al., 2012). These valued psychological and behavioral tendencies are aligned with the independence-oriented tendencies fostered by socialization in middle- and upper-class contexts, but they mismatch with the more interdependence-oriented tendencies commonly socialized in working-class contexts.

Indeed, middle- and upper-class contexts are also structured by cultural ideas about independence. For instance, parents in middle- and upper-class contexts are more likely to invite children to express their interests, preferences, and opinions during the various activities of everyday life (Lahire, 2019; Lareau, 2003). Children can express their choices regularly in terms of food, clothing, and extracurricular activities. These everyday life experiences promote independence-oriented psychological and behavioral tendencies that match with the independence-oriented culture of academic contexts.

Conversely, working-class contexts are more often structured by cultural ideas about interdependence. In working-class contexts, which are characterized by scarce economic resources and low levels of power, life is more uncertain and unpredictable, which in turn fosters class-specific cultural ideas about the value of interconnectedness and interdependence (Stephens, Markus, & Phillips, 2014). These ideas shape socialization practices in working-class contexts, which tend to prioritize orientation and adjustment to the environment and others. Children learn early on in their interactions with their parents that one should “stick together” to navigate the challenges of life (Kusserow, 1999; Lamont, 2000; P. J. Miller & Cho, 2018; P. J. Miller et al., 2005; Snibbe & Markus, 2005). These socialization practices seep into the individual, fostering a corresponding set of psychological and behavioral tendencies that mismatch with the independence-oriented culture of academic contexts.

Consequences

The consequences of the independence–interdependence mismatch on students’ subjective experiences (e.g., stress, emotions, sense of belonging) and performance are well documented, at least at the university level. For instance, when the messages that universities send to their first-year students portray the university’s culture as independent (e.g., a place to explore one’s personal interests, work independently, and pave one’s own path), students from working-class backgrounds experience more difficulty with academic tasks, show higher levels of stress and negative emotions, a lower sense of fit with the college environment, and perform less well relative to when universities frame their culture as interdependent (e.g., a place where one is part of a community, works collaboratively, and is connected with other people; Phillips et al., 2020; Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012). Moreover, in the United States, first-year students’ independent versus interdependent motives for attending college predict their subsequent academic performance: Those who endorse more interdependent motives for going to college perform worse than those who endorse fewer such motives (Phillips et al., 2020; Stephens, Fryberg, et al., 2012; Tibbetts et al., 2018).

Independence-oriented educational *practices* have similar effects. In independent cultural contexts, students often work individually and are evaluated on their own (Dittmann et al., 2020). They are seldom asked to work together with others or evaluated as part of a group (Boykin et al., 2004). In university settings, the practice of assessing students individually undermines the experiences and performance of students from working-class backgrounds compared to practices that assess students’ performance collectively (Dittmann et al., 2020). The latter is a more effective assessment strategy for students from working-class backgrounds because working together is an experience that more closely matches the psychological and behavioral tendencies commonly socialized in working-class contexts.

In sum, the research we reviewed highlights how the independence-oriented cultural ideas (and the corresponding psychological and behavioral tendencies) that are common in academic contexts create a mismatch with the interdependence-oriented cultural ideas (and the corresponding psychological and behavioral tendencies) that are common in working-class contexts. This mismatch undermines the psychological experiences and achievement of students from working-class backgrounds.

Competition–Cooperation Mismatch: Mismatch Between the Culture of Competition in Academic Contexts and the Working-Class Orientation Toward Cooperation

What Is It?

The second type of mismatch that undermines the psychological experiences and achievement of students from working-class backgrounds is a mismatch with the culture of competition that pervades academic contexts. These contexts are structured by cultural ideas about equal opportunity and meritocracy (Autin et al., 2015; Batruch et al., 2019; Butera et al., 2023; Darnon et al., 2009, 2012; Dornbusch et al., 1996; Jury et al., 2017). According to these ideas, all individuals in society (and, by extension, all students in school) are afforded the same opportunities for success. As a result, an individual’s success or failure is often

assumed to be a product of their merit. These broad ideas shape the structure of education as an institution: Rather than simply being places where students learn and grow, academic contexts are geared toward selecting students with more presumed merit and separating them from those with less presumed merit (e.g., via tracking or ability grouping). The need to measure merit, in turn, orients academic contexts toward competition (Butera et al., 2023; Darnon et al., 2009; Jury et al., 2017), which is often deemed the most effective way to determine which individual students are meritorious and “separate the wheat from the chaff.” While this culture of competition may be relatively in tune with the psychological and behavioral tendencies instilled via socialization in middle- and upper-class families, it is likely to clash with the psychological and behavioral tendencies of students socialized in working-class contexts.

In middle- and upper-class contexts, interactions between parents and children are guided by the same ideas of equal opportunity and meritocracy that are prevalent in academic contexts. As a result, middle- and upper-class parents tend to cultivate competition-oriented psychological and behavioral tendencies among their children (Garcia, 2018; Kusserow, 2004, 2012; Lareau, 2003). In these families, training for competition can start very early—for example, when children are coached by their parents for admission interviews at competitive private preschools (Kusserow, 2004, 2012). Parents from middle- and upper-class backgrounds also tend to use everyday activities to develop skills that will ultimately help their children to compete in school (e.g., counting the number of food items on the plate, naming the animals in a book; Garcia, 2018; LeFevre et al., 2009). These parents also involve their children in a wide range of extra-curricular activities (e.g., foreign languages, musical instruments, sports) that further enhance their chances of standing out in a competitive society (Kusserow, 2004, 2012; Lareau, 2003; Sanrey et al., 2021). The attitudes of parents from middle- and upper-class backgrounds on this point were aptly captured by Pinker (1994): “In contemporary middle-class American culture, parenting is seen as an awesome responsibility, an unforgiving vigil to keep the helpless infant from falling behind in the great race of life” (p. 40). The competitive tendencies socialized among children from middle- and upper-class families match the culture of competition prevalent in academic contexts.

In contrast, interactions between parents and children from working-class families are guided by a different set of ideas: that solidarity and fitting in with others are paramount (Kraus et al., 2009; Lareau, 2003; Markus et al., 2004; Stephens et al., 2007). Indeed, the very idea at the heart of competition—namely, that one’s own success increases others’ probability of failure—is at odds with the solidarity-oriented, “we’re in this together” socialization messages that parents from working-class backgrounds send to their children. These socialization practices instill a corresponding set of psychological and behavioral tendencies. For instance, people from working-class backgrounds are more likely to seek similarity to others rather than trying to stand out and be distinct (e.g., Stephens et al., 2007; Jury, Smeding, & Court, 2015), which puts them at a disadvantage in competitive contexts, where standing out is an effective strategy for success (Lareau, 2003; Markus et al., 2004; Stephens et al., 2007). Additionally, people from working-class backgrounds tend to display a tendency to doubt their chances of success (i.e., they show lower self-esteem and self-efficacy; Belmi et al., 2020; Johnson et al., 2011; Twenge & Campbell, 2002;

von Soest et al., 2018; Wiederkehr et al., 2015). Less positive (or inflated) views of one’s worth and abilities, in tandem with the tendency to seek similarity, solidarity, and harmonious relationships with others, can undermine the goal to perform better than others, which creates a mismatch with the culture of competition in academic contexts.

Consequences

There is substantial evidence that the mismatch with the culture of competition that is common in academic contexts undermines the experiences and achievement of students from working-class backgrounds. For instance, research on achievement goals has suggested that in high school, students from working-class backgrounds are less focused on outperforming others than students from middle- and upper-class backgrounds (N. Berger & Archer, 2016, 2018). Similarly, French university students from working-class backgrounds are more likely to experience fear of failure and try to avoid performing more poorly than others (a so-called performance-avoidance goal; Jury et al., 2017; Jury, Smeding, & Court, 2015), a combination that is not conducive to success in competitive contexts (Bruno et al., 2020; Jury, Smeding, & Darnon, 2015).

The mismatch with the culture of competition that prevails in academic contexts also undermines the actual performance of students from working-class backgrounds (e.g., Canning et al., 2020; Crouzevialle & Darnon, 2019; Darnon, Jury, & Aelenei, 2018; Smeding et al., 2013). For example, simply making salient to students the idea that the role of education is to select the best students can lead university students from working-class backgrounds to do less well on a subsequent test (Jury, Smeding, & Darnon, 2015). Similarly, Smeding et al. (2013) showed that when an assessment was presented as a tool designed for selecting the best students, university students from working-class backgrounds underperformed compared to students from middle- and upper-class backgrounds. However, this difference was reduced when the assessment was instead presented as a tool designed to improve learning. To take another example, Crouzevialle and Darnon (2019) manipulated university students’ subjective socioeconomic status by asking them to compare themselves to a target with very high or very low socioeconomic status. In a competitive context, participants induced to have low subjective status (via a comparison to someone with higher status) performed more poorly than participants induced to have high subjective status. This difference disappeared in a noncompetitive context.

In sum, the orientation toward solidarity and cooperation that is characteristic of students from working-class backgrounds clashes with the culture of academic contexts, which is organized around competition and selection. This clash undermines the academic experiences and outcomes of students from working-class backgrounds.

Cultural Capital Mismatch: Mismatch Between the Knowledge and Skills Expected and Valued in Academic Contexts and the Knowledge and Skills Developed Through Working-Class Socialization

What Is It?

The third type of mismatch that undermines the psychological experiences and achievement of students from working-class backgrounds is a mismatch with the cultural capital that is valued

in academic contexts. Academic contexts are partly organized by ideas about which types of knowledge and skills (“cultural capital”) are valuable and which are not (Bernstein, 2003; Bourdieu & Passeron, 1990; Gaddis, 2013; Lamont & Lareau, 1988). For instance, possessing knowledge of arts and literature is highly valued in academic contexts and, correspondingly, so is spending one’s free time at museums and libraries to acquire this knowledge (Lahire, 2019; Lareau, 2003). The cultural capital valued in academic contexts is often gained via the psychological and behavioral tendencies socialized in middle- and upper-class families. In contrast, the tendencies socialized in working-class contexts are less likely to lead children to acquire this valued cultural capital (Bourdieu, 1979; Bourdieu & Passeron, 1990; Lahire, 2019; Lamont & Lareau, 1988).

Parents from middle- and upper-class backgrounds are more likely than parents from working-class backgrounds to socialize the types of psychological and behavioral tendencies that would allow children to develop the cultural capital that is valued in academic contexts. For example, parents from middle- and upper-class backgrounds instill an interest in books and reading among their children by purchasing a wide array of books for children to have at home, routinely reading books with their children, and taking their children to libraries and bookstores (e.g., Gaddis, 2013; Lahire, 2019; Lareau, 2003). They also involve their children in extra-curricular activities of the “right” sort (e.g., foreign languages, musical instruments; Bradley et al., 2001; Lareau, 2003). In addition, parents from middle- and upper-class backgrounds are more likely to provide access to educational activities that are explicitly designed to develop their children’s academic skills (e.g., Bradley et al., 2001). For example, parents from middle- and upper-class backgrounds are more likely to purchase games and books that develop and reinforce school skills, such as learning numbers, letters, colors, and shapes (Bradley et al., 2001; Lareau, 1989). Similarly, during the COVID-19 lockdown, parents from middle- and upper-class backgrounds were more likely than parents from working-class backgrounds to encourage activities considered to be “educationally profitable” for their children (e.g., creative activities, reading books) and less likely to promote “unprofitable” activities (e.g., watching TV; Sanrey et al., 2021). The forms of knowledge and skills developed through middle- and upper-class socialization match with the cultural capital valued in academic contexts.

In contrast, the cultural capital valued in working-class contexts tends to prioritize knowledge and skills that help children navigate the challenges of an unpredictable environment where resources are generally scarce. For example, parents in working-class contexts foster their children’s ability to develop practical and manual skills (Hoggart, 1958; Nunes et al., 1993; Segall et al., 1999), which have immediate applicability to everyday life. These parents also instill in their children a tendency to be self-reliant, which is valuable in a context where adults have less time to spend with their children (Stephens, Markus, & Phillips, 2014). More generally, early-life adversity promotes the development of a suite of “hidden talents” that seem to function as an adaptation to harsh and unpredictable environments (e.g., increased ability to keep track of changing information; see Ellis et al., 2022; Frankenhuus & Nettle, 2020). However, while these forms of knowledge and skills may be well suited to the challenges faced by working-class families, they mismatch with the cultural capital valued in academic contexts.

Consequences

Greater familiarity with the cultural capital of academic contexts makes it easier for students from middle- and upper-class backgrounds to do well on academic tasks and gives them a head start in the classroom; in contrast, students from working-class backgrounds are at a disadvantage with respect to this valued knowledge. Unequal familiarity with the cultural capital valued in academic contexts shapes classroom interactions in two key ways that amplify social class inequalities in education.

First, because they are less familiar with the cultural capital valued in academic contexts, students from working-class backgrounds are less likely to participate in classroom activities and discussions (Goudeau et al., 2023). In addition, teachers may also provide them with fewer opportunities to engage in those activities and discussions relative to their peers from middle- and upper-class backgrounds. A fine-grained quantitative analysis of whole-class discussions in a sample of French preschools confirmed that preschoolers from working-class backgrounds spoke considerably less than their peers, even after accounting for differences in language proficiency (Goudeau et al., 2023). More specifically, students from working-class backgrounds were less likely to be called on by the teacher to answer questions and were also less likely to “take the floor” (i.e., interrupt others or otherwise speak without being asked). As whole-class discussions help students to develop their language and public speaking skills, which is why such discussions are in fact a core aspect of preschool education, unequal participation could fuel class-based inequalities in education.

Second, because students from working-class backgrounds are less familiar with the knowledge and skills valued in the classroom (due to the cultural capital mismatch), they are also more likely to struggle than their peers when completing academic tasks (e.g., doing an exercise, answering a question from the teacher). As a consequence of these struggles and relatively poor performance, they are more exposed to upward social comparison, which can further undermine their achievement (Goudeau & Croizet, 2017). To investigate how social comparison moderates the link between cultural capital and achievement, Goudeau and Croizet (2017) experimentally manipulated the experience of cultural capital mismatch among French fifth graders: They randomly assigned students to receive different levels of familiarity with a new arbitrary written code (i.e., a series of symbols corresponding to a set of letters). Half of the students—the “high-training” condition—received extensive training on this code (reproducing the typical experience of students from middle- and upper-class backgrounds), while the other half—the “low-training” condition—received little training (reproducing the typical experience of students from working-class backgrounds). Students then took a test. Students in the low-training condition (who had a low level of familiarity with the relevant cultural capital) performed worse than their peers in the high-training condition (who had a high level of familiarity with the cultural capital) but even more so when they were exposed to the success of better-off peers (i.e., when social comparisons were made salient). In contrast, the performance of students with more cultural capital did not vary significantly as a function of whether they could compare their performance to others.

In sum, a mismatch with the cultural capital valued in academic contexts can undermine the psychological experiences and achievement of students from working-class backgrounds in a number of

ways. Most obviously, students from working-class backgrounds are simply less familiar with the information that teachers expect them to know (and that students from middle- and upper-class backgrounds know already), which has direct consequences for their achievement. Beyond this immediate effect, the cultural capital mismatch undermines the interactions that students from working-class backgrounds have with others (e.g., depriving them of opportunities to contribute to class discussions) and makes them more vulnerable to upward social comparisons, which can further undermine their performance and exacerbate social class inequalities in education.

Identity Mismatch: Mismatch Between the Social Identities Valued in Academic Contexts and the Negatively-Stereotyped Social Identities of Students From Working-Class Backgrounds

What Is It?

The fourth and final type of mismatch that undermines the psychological experiences and achievement of students from working-class backgrounds is a mismatch with the social identities that are valued in academic contexts. Similar to many other contexts in a society (e.g., workplace contexts), academic contexts are shaped by broad cultural ideas that associate intellectual ability with some social identities in that society more than others (i.e., cultural stereotypes). Most relevant to our argument, students from working-class backgrounds are the targets of negative cultural stereotypes that portray them as less intelligent than their peers from middle- and upper-class backgrounds (e.g., Brummelman & Sedikides, 2023; Croizet & Claire, 1998; Darley & Gross, 1983; Désert et al., 2009; Durante et al., 2017; S. T. Fiske et al., 2002; Régner et al., 2002; Steele, 1997). Students from working-class backgrounds are aware of these stereotypes (Shutts et al., 2016) starting as young as 6 years of age (Désert et al., 2009; Sigelman, 2012). In turn, the fear of confirming negative stereotypes about one's group or of being judged in light of these stereotypes contributes to the experience of *social identity threat* for students from working-class backgrounds (Steele & Aronson, 1995; Steele, 1997), which can in turn undermine their experiences and performance in school. Even though individual students can contest the negative stereotypes associated with working-class backgrounds, these stereotypes nevertheless represent a "threat in the air" (Steele, 1997) and are at odds with the need to achieve a positive self-image (Easterbrook & Hadden, 2021; Steele, 1997, 2010).

Consequences

Past research suggests that academic contexts can trigger social identity threat among students from working-class backgrounds. For example, Croizet and Claire (1998) asked French university students to take a difficult test that was described either as a diagnostic assessment of their intellectual abilities or as a means of studying the attentional processes involved in memory. When the test was presented as an assessment of intellectual abilities, students from working-class backgrounds scored lower than students from middle- and upper-class backgrounds. However, this difference disappeared when the test was presented as nondiagnostic of intellectual ability

(see also Croizet & Dutrévis, 2004; Désert et al., 2009; Harrison et al., 2006; Spencer & Castano, 2007).¹

In academic contexts, the cultural ideas that devalue working-class social identities may create and maintain social class disparities through multiple institutional practices and interpersonal interactions (Easterbrook & Hadden, 2021). Consider, for instance, the pervasive use of standardized tests as a measure of merit from preschool to university; such high-stakes evaluative contexts are likely to trigger social identity threat among students from working-class backgrounds, lowering their performance (Croizet, 2008). Many other—often subtle—cues might similarly trigger social identity threat among students from working-class backgrounds during daily interactions, including the language of the teacher or the cultural artifacts displayed in the classroom (for a review, see Inzlicht & Schmader, 2012).

The claim that an identity mismatch undermines the psychological experiences and achievement of students from working-class backgrounds is also consistent with the Identity-Based Motivation model (Oyserman, 2015; Oyserman & Destin, 2010). According to this model, students' motivation in a context depends on the extent to which their group identities fit (or do not fit) with that context. When students perceive their identities to be congruent with the current context, difficulties are interpreted as suggesting that students are doing something "important," which allows them to remain motivated in the face of challenges (Aelenei, Lewis, et al., 2017; Oyserman et al., 2018). Arguably, students from middle- and upper-class backgrounds are more likely to be in this position. In contrast, when students perceive their identities to be incongruent with the current context, difficulties are interpreted as suggesting that students are doing something "impossible" (i.e., pointless), which then undermines their motivation. Arguably, students from working-class backgrounds are more likely to be in this position.

Are the Four Mismatches Distinct or Overlapping?

Now that we have described the four hypothesized mismatches, one key question that arises is whether these mismatches are distinct or overlapping. From our perspective, they are conceptually distinct but also likely to overlap empirically. They are conceptually distinct and can in principle occur independently of each other because they are triggered by different aspects of academic contexts: The independence–interdependence mismatch is triggered by academic contexts' culture of independence; the competition–cooperation mismatch is triggered by academic contexts' culture of competition; the cultural capital mismatch is triggered by the value that academic contexts assign to certain forms of knowledge and skills; and, finally, the identity mismatch is triggered by the value that academic contexts assign to certain social identities. Each one of these triggers is sufficient for the corresponding mismatch to occur among students from working-class families—nothing else is needed. For instance, a student's mismatch with an academic context's culture of independence can set into motion the relevant downstream consequences *without* the student also experiencing a

¹ Given recent debates regarding the replicability of the findings in the literature on social identity threat (e.g., Flore & Wicherts, 2015), more research is needed to establish the robustness of the negative effects of social identity threat on the performance of students from working-class backgrounds and the conditions under these effects occur.

mismatch with the social identities valued in that particular academic context. Vice versa, a student from a working-class family may experience an identity mismatch with an academic context, with all that such a mismatch entails (e.g., social identity threat), without also experiencing an independence–interdependence mismatch in that particular context.

At the same time, the four mismatches are likely to overlap empirically because the elements of academic contexts that trigger each mismatch are likely correlated. For example, academic contexts that value independence are likely to also value competition as a means of differentiating between students as independent, autonomous agents. This correlation is not perfect (e.g., many Asian cultures are competitive but interdependent rather than independent; L. Zhao & Heyman, 2018), but is nevertheless likely to be high. Thus, in practice, the four mismatches are likely to occur simultaneously in many circumstances, raising additional interesting questions about whether their effects are additive or interactive.

Interim Summary

So far, we have reviewed several social–psychological phenomena known to undermine the psychological experiences and achievement of students from working-class backgrounds and, as a result, give rise to academic disparities. We have proposed that these phenomena can be fruitfully conceptualized as mismatches between the psychological and behavioral tendencies of students from working-class backgrounds and those that are valued in academic contexts. What are the mechanisms through which these mismatches undermine the experiences and achievement of students from working-class backgrounds? While each mismatch undoubtedly has its own distinct pathways, we propose that the way students and teachers *explain* the differences between students that arise due to these mismatches is a key *shared* mechanism through which the mismatches affect the experiences and achievement of students from working-class backgrounds.

A Shared, Explanation-Based Mechanism Through Which the Four Mismatches Undermine the Psychological Experiences and Achievement of Students From Working-Class Backgrounds

We propose that the four mismatches reviewed in the previous section undermine the psychological experiences and achievement of students from working-class backgrounds in part through a shared, explanation-based² mechanism that amplifies the initial negative effects of each mismatch (e.g., discomfort, difficulty). That is, these initial effects are often explained by students and teachers as being the product of individual differences in students' inherent characteristics (e.g., scholastic ability, motivation, intelligence; see Goudeau & Cimpian, 2021). For students from working-class backgrounds, such explanations are likely to be associated with more stress, distraction, negative thoughts and emotions, and concerns about not fitting in or belonging in school. For teachers, such explanations can lead to negative evaluations of working-class students' potential and, downstream of these evaluations, unfair behaviors toward them (e.g., placement in lower-than-deserved academic tracks). In other words, we argue that the four mismatches take their toll in two stages: an initial stage that tends to be relatively specific³ to each mismatch (“first-order effects”) and a subsequent,

explanation-based stage that is shared across the four mismatches (“second-order effects”).

At the initial stage, each of the mismatches described above gives rise to a host of in-the-moment negative experiential and behavioral effects on students from working-class backgrounds. For instance, the independence–interdependence mismatch might lead students from working-class backgrounds to participate less in, derive less enjoyment from, and maybe even experience discomfort with classroom activities that are premised on the idea that it is desirable to stand out from one's peers and be unique. To take another example, the cultural capital mismatch triggers another set of first-order effects, some shared with the other mismatches and some unique. Most notably, this mismatch leads students from working-class backgrounds to experience difficulty with the material in the classroom. In its own way, each mismatch erodes the well-being and achievement of students from working-class backgrounds through a corresponding set of first-order effects, many of which were described in the sections above.

Our focus in the present section is on the second-order effects that arise as students and teachers try to *explain* the occurrence of the first-order effects. It is widely recognized that people strive to understand their environment by searching for an explanation (e.g., Dweck, 2017; Weiner, 1985; Wilson, 2022); this is a basic human drive that manifests as early as infancy (e.g., Baillargeon, 1994; Stahl & Feigenson, 2015). Given their relative salience, the first-order effects of the four mismatches are likely to prompt a search for an explanation (e.g., a student from a working-class family might ask themselves, “Why don't I have interesting things to contribute?”). From our perspective as psychological scientists, the most accurate explanation for these first-order effects reflects the multiple mismatches between the student's home environment and the academic context. It is unlikely, however, that this explanation will come to mind in the moment for many students and their teachers. Instead, we argue that both students and teachers are likely to explain the first-order effects of the four mismatches as a consequence of inherent or intrinsic factors (such as students' intelligence or motivation) and will correspondingly tend to overlook extrinsic or situational explanations (such as students' social background or family situation; for a review, see Goudeau & Cimpian, 2021).

The Inherence Bias in Explanation

Decades of research in social psychology have consistently shown that a person's actions are often assumed to correspond to their dispositions, a phenomenon known as the *correspondence bias* (Gilbert & Malone, 1995). While various factors have been suggested to contribute to this phenomenon (e.g., Gilbert & Malone, 1995;

² The term *explanation*, as we use it here, is roughly synonymous with the terms *construal*, *attribution*, or *interpretation*. We chose *explanation* to emphasize the connection with the relevant literature in cognitive science (including the inherence bias framework; Cimpian & Salomon, 2014a, 2014b), but nothing substantive hinges on our choice of this term over the others. We also clarify that the term *explain* refers to a cognitive process, whether or not its output is verbalized. Thus, when we claim that students and teachers explain their observations a certain way, we are not claiming that they are engaging in a conversation with others to explain the relevant observations; for our purposes, explanation can be a purely internal process.

³ We do not claim that the first-order effects of the four mismatches are completely nonoverlapping. Some amount of overlap is expected, but there will also likely be first-order effects that are unique to a specific mismatch.

Jones, 1990; Trope, 1998), a prevailing explanation is that perceivers tend to consistently underestimate the influence of situational factors on human behavior (but see Gawronski, 2004), a tendency often referred to as the *fundamental attribution error* (e.g., Jones, 1979; Ross, 1977). The correspondence bias and the fundamental attribution error are specific instantiations of a more general explanatory tendency: the *inherence bias* (Cimpian & Salomon, 2014a, 2014b; Horne et al., 2019). That is, the tendency to overuse inherent factors (and, correspondingly, to underuse extrinsic factors) is a general characteristic of the process by which people make sense of the world rather than being limited to explaining behaviors and attitudes. This sense-making process exhibits an inherence bias because it relies on readily accessible, easy-to-process cognitive content—where inherent features tend to be overrepresented—rather than the most relevant or appropriate cognitive content. Thus, the use of the term “bias” is meant to indicate that human explanations diverge systematically from those of an ideal, perfectly rational reasoner, although the exact degree of divergence will vary from case to case depending on features of the reasoner, the context, and the observation being explained.⁴ Consistent with the claim that the inherence bias is general (rather than being limited to explanations of behaviors and attitudes), such a bias has been documented across such disparate domains as how people make sense of social conventions (e.g., Cimpian & Steinberg, 2014; Tworek & Cimpian, 2016), societal hierarchies (Hussak & Cimpian, 2015, 2018a; Peretz-Lange et al., 2021), historical events (Hussak & Cimpian, 2018b), life events (Dunlea & Heiphetz, 2020), features of language (e.g., Sutherland & Cimpian, 2015), and natural phenomena (Horne, 2017; Hussak & Cimpian, 2018b).

The bias to overuse inherent factors in the process of generating explanations is due to a combination of cognitive factors whose effects are moderated by important cultural factors. The cognitive factors involved in the emergence of an inherence bias include (1) attentional factors (e.g., the student him- or herself is in the spotlight of attention when the search for an explanation is triggered, whereas contextual factors are often less salient), (2) biases in long-term memory retrieval (e.g., inherent properties of an object or person are more easily retrieved), (3) working-memory constraints (e.g., inherent properties are relationally simpler and thus easier to manipulate in working memory), and (4) insufficient monitoring by metacognitive processes, which mistakenly use the ease with which inherent explanations are generated as a sign of accuracy (for a review, see Horne et al., 2019).

Beyond these cognitive sources, the bias toward inherent explanations is reinforced by cultural ideas and institutional features of school contexts. In European and North American cultural contexts, the pervasive idea that a person is an independent, autonomous entity (e.g., Markus & Kitayama, 1991) may exacerbate the tendency to explain behavior as the result of the person’s own characteristics (Butera et al., 2021, 2024; Plaut & Markus, 2005; Stephens et al., 2009). In the context of schooling, cultural ideas such as equal opportunity and meritocracy (e.g., Darnon, Smeding, & Redersdorff, 2018; Duru-Bellat & Tenret, 2012) also imply that observed differences in performance correspond to inherent differences in effort and ability. Indeed, students and teachers prefer attributing performance differences between students to merit—an internal quality—rather than to external, contextual factors (Dompnier & Pansu, 2007, 2010; Pansu et al., 2008). In addition to these cultural ideas, the inherence bias is reinforced by common features of education as an institution (Pansu et al., 2008). For

instance, consistent with cultural ideas about meritocracy, schools often sort students into higher versus lower ability “tracks” based on ostensible merit. Similarly, consistent with cultural ideas about equal opportunity, classrooms are structured as physically homogeneous environments (e.g., all desks are alike, and sometimes students wear uniforms; Croizet et al., 2017; Kuppens et al., 2018). This apparent homogeneity is likely to draw attention away from the external constraints that are shaping students’ behavior and toward the students’ own inherent characteristics (Mijis, 2016).

Notably, there is solid evidence not just for a general inherence bias in explanation (e.g., Cimpian & Salomon, 2014a; Horne et al., 2019) but also for the claim that this bias extends to explanations for (differences in) achievement outcomes. For instance, Peretz-Lange et al. (2021) found that 5- and 6-year-olds explained group differences in performance on an unfamiliar game predominantly in terms of inherent personal characteristics (e.g., ability, strength). Strikingly, this bias was observed even though an external constraint was made salient in the context that could have explained the winning group’s superior performance (i.e., the game was rigged to favor their strengths; see also Amemiya et al., 2022). Moreover, the frequency of inherent explanations produced by children did not increase significantly when the experimenter verbally highlighted an inherent feature for them (e.g., “Yellows are good at throwing, not Purples”), which suggests that children’s default explanations are heavily biased toward inherence. Extending this evidence to classroom behaviors, Goudeau et al. (2023) found that 5-year-old children explain differences between their peers in classroom participation predominantly in inherent terms (e.g., those who participate more are thought to be smarter and nicer; see also Dompnier & Pansu, 2007, 2010; Pansu et al., 2008; Renoux et al., 2024).

Although the inherence bias is stronger among children (e.g., Cimpian & Steinberg, 2014; Dunlea & Heiphetz, 2020; Peretz-Lange et al., 2021; Tworek & Cimpian, 2016), in part because the cognitive resources to overcome it are scarcer at this stage of development, adults are susceptible to it as well (e.g., Hussak & Cimpian, 2018b). Thus, teachers who observe differences between students from working-class versus middle- and upper-class backgrounds in how likely they are to express opinions, “think for themselves,” and so on, may also be prone to attribute these differences (i.e., first-order effects) to inherent differences in motivation or ability (e.g., Musto, 2019; Pansu et al., 2008), neglecting that these students’ family backgrounds mismatch with academic contexts and that this mismatch could affect their behavior.

As previously stated, we believe that these explanatory processes typically play out in similar ways regardless of which specific mismatch generated the first-order effects that are being explained. In other words, the hypothesized explanation-based mechanism will be shared across the four mismatches and lead to a common set of negative downstream second-order effects, which we detail in the next sections. For example, even though discomfort with activities that highlight individuality (e.g., “all about me” posters that showcase students’ favorite activities or hobbies) is the first-order effect of the independence–interdependence mismatch and difficulty with school material is often the first-order effect of a different mismatch (namely, the cultural capital mismatch), both of these outcomes will likely be

⁴ For example, contexts that increase the accessibility of extrinsic information beyond its (low) baseline levels are likely to attenuate the magnitude of this bias.

explained as being due to an inherent deficiency of students from working-class backgrounds. In turn, this explanation is likely to trigger self-threat among these students (a second-order effect) and prompt teachers to downgrade their evaluation of these students' potential (another second-order effect; see Figure 1). As we lay out this argument, we flag the claims that are already supported by evidence and those that await empirical validation; the latter provide a valuable guide for future research on the emergence of social class inequalities in education.

We argue that these second-order, explanation-based effects are a critical part of the mechanism by which the hypothesized mismatches undermine the experiences and achievement of students from working-class backgrounds. By shaping how students and teachers react to the (first-order) social class differences prompted by the four mismatches, these second-order effects in essence create the psychological reality that students from working-class backgrounds must navigate in school—a shared and likely self-reinforcing (e.g., Cohen & Garcia, 2008) psychological reality according to which these students are simply not equipped to succeed. Whereas the first-order effects of the mismatches are often fleeting, the second-order effects can transform school into a chronically aversive psychological environment for students from working-class backgrounds.

Inherent Explanations Prompt Self-Threat Among Students From Working-Class Backgrounds

We argue that the mismatches between the home and school environments trigger self-threat among students from working-class backgrounds. Self-threat is a second-order effect of these mismatches, prompted by inherent explanations for a range of more specific first-order effects. Self-threat is a state of cognitive imbalance that occurs when the sense of oneself as a valued entity is jeopardized (Schmader et al., 2008; Steele, 1988). Self-threat triggers a distinctive set of physiological, cognitive, and affective processes: stress, negative thoughts and emotions, vigilance to situational cues, monitoring of one's own performance, fear of performing poorly, and lower sense of belonging. In addition, because these psychological processes use up cognitive resources (Beilock et al., 2007; Crouzevialle & Butera, 2013; Rydell et al., 2014), self-threat can also undermine academic performance.

It is unlikely that, on their own, the first-order effects of the four mismatches between the home and school environments are sufficient to trigger self-threat among students from working-class backgrounds. Students' inference-biased explanations for these effects may be *necessary* for self-threat to arise. Hypothetically, if a student explained the differences between them and other students (e.g., greater difficulty with school material) as a temporary, normal phase of adapting to a new context (e.g., Autin & Croizet, 2012; Stephens et al., 2019; Wilson & Linville, 1985) or as a product of external circumstances (e.g., Dar-Nimrod & Heine, 2006; Goudeau et al., 2017), then there would be little reason for them to experience self-threat. It is especially when the first-order effects of the mismatches are explained as being due to inherent personal limitations, which *devalue the self*, that the physiological, cognitive, and affective reactions that characterize self-threat are likely to arise.

Existing research on the four mismatches, some of which was reviewed in the preceding sections, has suggested that they trigger self-threat among students from working-class backgrounds. We

describe the relevant phenomena here briefly and then go on to argue that they are indeed explanation-based second-order effects of the mismatches. To begin, the independence–interdependence mismatch elicits a physiological reaction of stress and negative thoughts and emotions among working-class college students (Stephens, Townsend, et al., 2012). The extent to which students from working-class backgrounds endorse interdependent cultural ideas as they enter college also predicts a lower sense of fit and belonging 4 years later (Phillips et al., 2020). Competitive settings, which trigger a competition–cooperation mismatch for students from working-class backgrounds, increase these students' fear of performing poorly (Jury et al., 2018). Similarly, the identity mismatch increases physiological levels of stress (Blascovich et al., 2001), negative thoughts and emotions (Cadinu et al., 2005; Johns et al., 2008; Logel et al., 2009), as well as vigilance to situational cues (Murphy et al., 2007) and concerns about belonging (Steele, 1997, 2010).⁵

There is also some evidence that the phenomena just described are second-order effects due to inherent explanations as opposed to first-order effects caused directly by the relevant mismatches. For instance, although fifth-grade students from working-class backgrounds perform more poorly in school than students from middle- and upper-class backgrounds, this difference is larger when students are primed with inherent beliefs—specifically when they were told that at school, “where there is a will, there is a way” and that school success is only a matter of personal efforts and hard work (i.e., meritocracy; Darnon, Wiederkehr, et al., 2018; Wiederkehr et al., 2015). Similarly, Goudeau and Croizet (2017) manipulated the availability of an extrinsic explanation for performance differences due to cultural capital mismatch (a first-order effect) and found corresponding differences in the symptoms of self-threat. Goudeau and Croizet (2017) told half of the fifth-grade students in their study that some students in their class had received more training than others in a new task; the other half were unaware of these differences in prior training. The achievement difference on a subsequent test between students with more versus less training was significantly reduced when the students were made aware of the disparities in prior training, an extrinsic explanation.

Evidence for the key role of explanations is also provided by interventions that have made available extrinsic explanations for students' experiences of being and feeling different from other students (Stephens et al., 2019). These interventions aimed to teach university students that their social class backgrounds are an important factor that shapes the nature of their college experience—in particular, the challenges they confront, the strengths they can leverage, and the strategies they need for success (Stephens, Hamedani, et al., 2014; Stephens et al., 2024; Townsend et al., 2019). By helping students understand how their present experiences are influenced by their backgrounds before entering university (an extrinsic explanation), these interventions reduced social class disparities in achievement.

We have argued that mismatches between the home and academic contexts undermine the experiences and achievement of students from

⁵ Although most evidence for the claim that an identity mismatch triggers self-threat comes from research on mismatches on the basis of racial/ethnic and gender identity, it is reasonable to assume that some of the same mechanisms are at play for mismatches on the basis of social class background.

working-class backgrounds in part because the initial, first-order effects of these mismatches are explained as resulting from inherent, personal deficiencies, and these explanations then trigger self-threat (a second-order effect). Although we have reviewed some results that are consistent with this argument, the evidence to date is far from comprehensive: The relevant studies cover only a subset of the proposed mismatches, a few specific types of inherent and extrinsic explanations, and a limited range of dependent variables and educational levels. We see this mechanistic claim as one of the ways in which our account can set the agenda for future research. By proposing a unified, explanation-based—and as yet underexplored—mechanism through which the multiple mismatches undermine the experiences and achievement of students from working-class backgrounds across their educational trajectory, we hope to inspire more research on the role of explanation in the emergence and maintenance of social class inequality in education.

Whereas inherent explanations for the first-order effects of the four mismatches give rise to self-threat among students from working-class backgrounds, the corresponding second-order effect on *teachers* is different: Inherent explanations for the first-order effects of the mismatches might incline teachers to form negative opinions of and behave unfairly toward students from working-class backgrounds. We now go on to articulate this other “branch” of our proposed explanation-based mechanism. We note at the outset that the evidence for this branch is even less comprehensive than the evidence for the first (via students’ own explanations), so much of what we say in the next section should be interpreted as a roadmap for future research.

Inherent Explanations Influence Teachers’ Evaluation of and Behavior Toward Students From Working-Class Backgrounds

We propose that teachers may also explain the first-order effects of the various mismatches as a consequence of a lack of motivation or ability on the part of students from working-class backgrounds. In turn, their inherent explanations may lead teachers to think about and behave toward these students in unfair ways. Many teachers are, of course, aware of their students’ familial background and are sometimes able to use this information in their explanations for what they observe in the classroom; at the same time, we expect that they cannot completely escape the pull of inherent explanations, which are easy to generate in the moment and intuitively compelling (e.g., Horne et al., 2019). This possibility is also supported by evidence that the inherence bias, like many other judgment biases, is exacerbated under circumstances that tax participants’ cognitive resources (e.g., Gilbert et al., 1988; Hussak & Cimpian, 2018b; Salomon & Cimpian, 2014). For instance, Hussak and Cimpian (2018b) found that participants were less likely to use extrinsic information in their explanations when they were put under time pressure, which increased cognitive load, than when they could take as much time as they wanted to generate an explanation. Arguably, teachers are almost always under time pressure in the classroom, managing the behavior and learning of dozens of students at a time. In these contexts, teachers might be particularly likely to overlook any information they may have about their students’ familial backgrounds and life circumstances. Testing this prediction empirically would be worthwhile.

We start by briefly reviewing evidence of teachers’ negative evaluation and unfair behavior toward students from working-class backgrounds; this evidence is substantial. In contrast, the connection between this phenomenon and teachers’ explanations is, at this point, largely speculative—that is, there is not yet much evidence that this is a second-order, explanation-based effect of the mismatches proposed here. We will conclude the present section by reviewing the (indirect) evidence we are aware of regarding this connection and highlighting important open questions on this topic.

Teachers’ Evaluation of and Behavior Toward Students From Working-Class Backgrounds

There is solid evidence that teachers tend to be more negative and unfair in their evaluation and behavior toward students from working-class backgrounds compared to those from middle- and upper-class backgrounds (for a review, see Batruch et al., 2023; Turetsky et al., 2021). First, teachers often have more negative perceptions of these students’ competence than would be expected based on their *actual* competence. For example, when teachers assess the reading and math skills of *equally performing* students from working-class versus middle- and upper-class backgrounds, they tend to perceive students from working-class backgrounds as less competent (Campbell, 2015). Similarly, teachers tend to find more mistakes in an assignment when they think it was submitted by a student from a working-class (vs. middle- or upper-class) family, and they assign a lower grade as well (Autin et al., 2019; Doyle et al., 2023). Notably, teachers’ unfair evaluation sometimes prompt them to behave toward students from working-class backgrounds in ways that are superficially *positive* but ultimately still undermining. For example, teachers might offer exaggerated praise to students from working-class backgrounds when they perform well (Schoneveld & Brummelman, 2023). While teachers’ exaggerated praise may be well-intentioned, it is premised on an unfair view of working-class students as *less capable* than other students, which makes their good performance more surprising and thus worthy of extra praise. Such overly positive teacher behaviors disadvantage students from working-class backgrounds because they and their peers can “read between the lines” and decode the subtle meaning in these behaviors: When teachers give praise that is disproportionate to the magnitude of a student’s success, they must think that the student is not very capable (Schoneveld & Brummelman, 2023).

Second, and related to the first point, teachers’ tracking recommendations are unfair toward students from working-class backgrounds. For example, when teachers have to decide which academic track is more suitable for students from different social classes—students with the *same* level of achievement—they tend to consider a lower, less challenging track more suitable for students from working-class backgrounds and a higher, more challenging track more suitable for students from middle- and upper-class backgrounds (Batruch et al., 2019, 2023; Doyle et al., 2023).

Third, teachers’ behaviors can sometimes unfairly deprive students from working-class backgrounds of opportunities to improve their skills. For example, as reviewed above, Goudeau et al. (2023) have shown that teachers tend to privilege the oral participation of students from middle- and upper-class backgrounds over that of students from working-class backgrounds with *matched* oral language skills (see also Heath, 1983; Michaels, 1981, 1991).

We propose that teachers' unfair evaluation of and behavior toward students from working-class backgrounds arise in part⁶ because teachers explain the first-order social class differences in the classroom as being a consequence of students' inherent characteristics. However, as we go on to describe next, the evidence for this connection is relatively sparse so far, creating fruitful opportunities for new research on this topic.

The Role of Explanations in Teachers' Evaluation of and Behavior Toward Students From Working-Class Backgrounds

Four distinct lines of research hint at the possibility that teachers' unfair evaluation of and behavior toward students from working-class families arise, or are at least exacerbated, when teachers explain the differences between these students and their middle- and upper-class peers as being a matter of inherent characteristics (e.g., ability, motivation).

First, teachers' perceptions of the competence of students from working-class backgrounds (relative to equally performing students from middle- and upper-class backgrounds) are more negative when teachers are experimentally led to believe that the goal of education is to differentiate higher versus lower performers than when they are led to believe that the goal of education is to improve learning for everyone (Autin et al., 2019; Batruch et al., 2019). Arguably, the goal of "separating the wheat from the chaff" induces a stronger focus on students' inherent characteristics, such as their aptitude. Thus, this experimental result is compatible with the claim that inherent explanations lead teachers to behave in a way that magnifies social class inequalities.

Second, teachers who believe that group differences are biologically rooted and fixed are more likely to make stereotypical recommendations for academic tracking: They are more likely to recommend boys for science, technology, engineering, and mathematics (STEM) tracks and girls for language tracks (Nürnberg et al., 2016). Although this result pertains to gender rather than social class, it is plausible to expect that teachers who similarly believe that the (first-order) social class differences between students are due to inherent factors would also be particularly likely to assume that students from working-class backgrounds are better suited for lower academic tracks.

Third, instructors who express the belief that only certain students (vs. all students) have the potential to attain the highest levels of STEM ability create environments in which students who identify as women or racial/ethnic minorities feel less belonging and are less likely to aspire to careers in STEM (Rattan et al., 2018; see also Rattan et al., 2012). To the extent that believing that only a select few can attain the highest levels of STEM ability prompts instructors to explain differences between students in terms of who has "potential" and who does not (an inherent explanation), this result is also broadly compatible with our argument that inherent explanations lead teachers to unfairly downgrade their evaluation of students from working-class backgrounds.

Fourth, teachers who believe in meritocracy—an ideology premised on the idea that school outcomes are due to students' internal characteristics and are thus deserved—also report using practices in their classroom that have been shown to undermine the success of working-class students (e.g., encouraging competition and social comparison, valuing the best students; Darnon et al., 2023). Note that the unfairness in teachers' behavior here is indirect: Teachers with more meritocratic

views do not intentionally discriminate against working-class students; they simply engage in practices that happen to disadvantage these students. Even so, whether or not these meritocracy-inspired practices are *intended* to disadvantage working-class students is, to some degree, irrelevant. Their disparate impact on these students contributes to social class inequality in education.

Although suggestive, the evidence just reviewed is not yet sufficient to establish our claim that teachers' inherent explanations for social class differences in the classroom prompt them to adopt unfair evaluation of and behavior toward students from working-class backgrounds. We welcome further research on this hypothesis. Perhaps the most direct way to investigate it would be to experimentally manipulate teachers' explanations for (first-order) social class differences resulting from the four mismatches described above and examine how this manipulation affects teachers' evaluation of and behavior toward students from working-class backgrounds. In addition to contributing to theory, such a study would have implications for intervention as well. For example, perhaps increasing teachers' awareness of the cultural mismatch between the socialization experiences of students from working-class backgrounds and the school environment—an extrinsic factor—will change teachers' behavior toward them for the better.

Interim Summary

So far, we have described and reviewed empirical evidence for four different mismatches that undermine the psychological experiences and achievement of students from working-class backgrounds in school: the independence–interdependence mismatch, the competition–cooperation mismatch, the cultural capital mismatch, and the identity mismatch. These mismatches are produced by the incongruence between key aspects of academic contexts and the corresponding aspects of working-class socialization. We have also argued that these mismatches contribute to social class inequality in education in part through a common explanation-based mechanism: The social class differences they give rise to (e.g., working-class students being less likely to contribute to class discussions) are often explained as resulting from personal limitations of students from working-class backgrounds, thereby triggering self-threat among these students and unfair evaluation of and behavior toward these students among teachers.

Framing these effects in terms of contextual mismatches makes it clear that they come from a clash between two key factors: the psychological and behavioral tendencies valued in education (i.e., contextual level) and the psychological and behavioral tendencies socialized among students from working-class backgrounds (i.e., individual level). This framework suggests that the effects of a particular mismatch could be amplified or attenuated at either the contextual or the individual level. Thus, we go on to identify and discuss contextual (e.g., school subject, stage of schooling) and

⁶ To clarify, this is not the only reason why teachers might show unfair behavior toward students from working-class backgrounds. In some circumstances, it is possible that teachers are unfair precisely *because* they are aware of students' working-class background and think that it will be an obstacle to their success. In other words, we do not make an exclusive claim that inherent explanations for social class differences are the only possible reason why teachers would show unfair behavior toward students from working-class backgrounds.

individual (e.g., intersecting identities) characteristics that may moderate the effects of the proposed mismatches.

Adding Nuance to the Model: Context- and Individual-Level Moderators

In this last section, we elaborate the Social Class–Academic Contexts Mismatch model by identifying context- and individual-level moderators of the effects of the proposed mismatches. So far, we have assumed that academic contexts are homogeneous—equally likely to emphasize independence, competition, etc. This assumption is an oversimplification that obscures the variation observed across academic contexts. There are systematic differences in the extent to which such contexts display the features likely to trigger the mismatches that undermine the experiences and achievement of students from working-class backgrounds. Although there are many such differences, we will discuss three context-level moderators as illustrative examples: the school subject (e.g., mathematics, language), the stage of schooling (e.g., elementary school, college), and the national context.

A similar argument can be made with respect to students' backgrounds: So far, we have focused on social class as the central aspect of students' background that shapes their experiences in school. However, later in this section, we begin to articulate how students' social class background might intersect with other key social identities or social group memberships (e.g., gender, race/ethnicity) to shape the extent to which they experience a mismatch with their academic contexts.

In addition to bringing greater nuance to the Social Class–Academic Contexts Mismatch model, the content in the present section will enable us to formulate new, concrete predictions about the magnitude of the mismatch that is likely to be experienced by a wide range of students across academic contexts. These predictions further highlight the value of the Social Class–Academic Contexts Mismatch model: Not only does this model bring together into a unified framework phenomena that have been studied separately up to this point, but it also provides new, powerful tools for understanding the obstacles to the educational success of students from working-class backgrounds and for intervening to remove these obstacles.

Context-Level Moderators

The School Subject

School subjects are likely to vary systematically in the extent to which they trigger the experience (and consequences) of a mismatch for students from working-class backgrounds. Although many features of a subject probably contribute to this variability, two features may be particularly important: the subject's prestige and its emphasis on intellectual ability (or "brilliance"). School subjects that are more (vs. less) prestigious and that are more (vs. less) oriented to intellectual ability may exacerbate the mismatches felt by students from working-class backgrounds. We discuss each of these features in turn.

Prestige. Occupations and school subjects differ in the extent to which they are culturally valued and perceived as being high in social standing—that is, they vary in their prestige (e.g., Grusky, 2019). A subject's prestige could exacerbate many, if not all, of the aspects of an academic context that create a mismatch with the psychological and behavioral tendencies socialized in working-class

families. First, in independence-oriented cultures, prestigious occupations and school subjects (e.g., science, mathematics) are likely to exhibit heightened pressure to conform to the cultural ideal of independence. For example, medical schools in North America often pressure students to work independently: The ideal doctor is supposed to work without asking for help except when absolutely necessary (Kennedy et al., 2009). Conversely, this pressure may be lower in less prestigious occupations and school subjects (see Stephens, Fryberg, et al., 2012; Tibbetts et al., 2018). In addition, prestigious occupations are more desirable and are thus often more selective, which might exacerbate the culture of competition already present in academic contexts (Jury et al., 2017). These considerations suggest a straightforward prediction: The extent to which students from working-class backgrounds will experience a mismatch when taking classes in a particular school subject will be positively related to the prestige of that school subject.

Emphasis on Brilliance. A second related feature of a school subject that may exacerbate the mismatches confronted by students from working-class backgrounds is its emphasis on intellectual talent. There are systematic differences between school subjects (and the corresponding careers) in the extent to which they are believed to require brilliance for success (Heyder et al., 2020; Leslie et al., 2015). Subjects in which this belief is prevalent (e.g., math, science) tend to graduate fewer members of groups that are negatively stereotyped with respect to their intellectual abilities (e.g., women, some ethnic/minority groups) at both the bachelor's and PhD levels (Leslie et al., 2015; Meyer et al., 2015; Storage et al., 2016). Extending this argument to social class, it is likely that subjects that emphasize brilliance trigger an identity mismatch for students from working-class backgrounds, who are also targeted by negative stereotypes about their intellectual abilities (e.g., Bauer et al., 2023). Moreover, subjects (and, more generally, contexts) that emphasize brilliance also tend to foster an atmosphere of zero-sum, "dog eat dog" competition and distrust (Porter & Cimpian, 2023; Vial et al., 2022). These features of brilliance-oriented academic contexts mismatch with the psychological and behavioral tendencies socialized among students from working-class backgrounds as well. These considerations suggest another prediction of the Social Class–Academic Contexts Mismatch model: Because a school subject's emphasis on brilliance is likely to make salient the negative stereotypes about the intelligence of individuals from working-class backgrounds and also increase perceived competition, we predict that the extent to which students from working-class backgrounds will experience a mismatch when taking classes in a particular school subject will be positively related to the extent to which that particular subject emphasizes brilliance.

The Stage of Schooling

The effects of the four proposed mismatches on students from working-class backgrounds may vary as a function of where students are in their educational trajectories.

For instance, it is likely that the cultural capital mismatch is particularly prominent in the earliest years of schooling (i.e., preschool and elementary school). During early education, school activities rely to a considerable degree on the skills and knowledge that students bring with them from home (Heath, 1983; Michaels, 1981). Consider, for example, whole-class discussions, which are included in many national curricula for early childhood education and are meant to support the development of language skills. During

these sessions, teachers typically ask students to share personal experiences (e.g., “What did you do this weekend?”) or express personal opinions and interests (e.g., “What is your favorite thing to do with your parents?”). Students’ successful participation in whole-class discussions depends on being able to share experiences and interests that are aligned with teachers’ expectations (e.g., a trip to a museum rather than a trip to McDonald’s; Goudeau et al., 2023; Lahire, 2019; Millet & Croizet, 2016; Montmasson-Michel, 2018). As a result of a mismatch in cultural capital, the contributions of young students from working-class backgrounds are likely to be devalued and less frequently solicited, with potential consequences for the development of these students’ language skills. Whereas the cultural capital mismatch is also relevant at later stages in students’ educational trajectories (e.g., in navigating college life), other mismatches start to come into play as well.

As students move through the educational system, they are increasingly expected to express their opinions and individuality, make their own choices, and work independently (e.g., Aelenei, Darnon, & Martinot, 2017). Access to advanced tracks and prestigious institutions (e.g., the *grandes écoles* in France, the Ivy League universities in the United States) becomes more restricted and competitive as well (e.g., Darnon et al., 2012). These normative changes in the structure of schooling suggest another prediction: namely, that the extent to which students from working-class backgrounds will experience a mismatch with the independence and competition aspects of academic contexts will increase as they move from elementary to middle to high school and beyond.

The National Context

The broader national context in which academic contexts are embedded may also moderate how likely it is that these contexts present a mismatch for students from working-class backgrounds. Here, we discuss two salient features of a national context that may predict the likelihood of such mismatches: the extent to which a national context is dominated by cultural ideas about independence versus interdependence, which may be particularly relevant to the independence–interdependence mismatch, and the extent to which a national context exhibits economic inequality, which may be particularly relevant to the competition–cooperation mismatch. We discuss each of these features in turn.

First, it is important to acknowledge that the evidence we have presented so far for the Social Class–Academic Contexts Mismatch model comes primarily from Western European and North American countries, whose cultures are oriented toward independence. That is, in these countries, the prototypical person is generally conceived as an autonomous agent wholly separate from the social context. However, many other countries around the world are oriented toward interdependence instead (Kitayama et al., 2009; Kitayama & Uskul, 2011; Markus & Kitayama, 2010) or exhibit more complex patterns of cultural ideas about personhood that combine independent and interdependent orientations (Uskul et al., 2023; Vignoles et al., 2016). This variability suggests a prediction: The extent to which students from working-class backgrounds will experience an independence–interdependence mismatch with academic contexts will be positively related to their national context’s orientation toward independence.

Second, countries around the world vary dramatically in the severity of the economic inequalities in their respective societies (OECD, 2023). This is relevant to our argument here because a country’s

level of economic inequality is a positive predictor of the level of competition between individuals in that country (Sommet & Elliot, 2023). This relationship between economic inequality and competitiveness suggests another prediction: The extent to which students from working-class backgrounds will experience a competition–cooperation mismatch with academic contexts will be positively related to their national context’s level of economic inequality.

It is also noteworthy that the features of a national context might predict not just *how likely* it is that a mismatch will occur between academic contexts and students from working-class backgrounds but also *how severe* the effects of such a mismatch might be. For instance, countries with more interdependent cultural orientations seem to also instill greater attention to context (e.g., Masuda & Nisbett, 2001; J. G. Miller, 1984; Morris & Peng, 1994), which may make it easier for students and teachers to recognize the external barriers that students from working-class backgrounds face in academic contexts. In turn, this recognition may partly block the second-order effects of the hypothesized mismatches, which are premised on inherent explanations. It would be useful to test this prediction in future research.

Individual-Level Moderators

A student’s social class background is not the only thing about them that affects whether they are comfortable with independence and competition, whether they possess the cultural capital valued in academic settings, and whether their intellectual abilities are impugned by negative stereotypes. The cultural beliefs and socialization practices relevant to the four mismatches proposed above also vary by gender and race/ethnicity (e.g., Markus & Conner, 2013). For example, girls are socialized to be more interdependent than boys (e.g., Block et al., 2018; Cross & Madson, 1997; Liben & Bigler, 2002; Markus & Conner, 2013), and children who identify as racial/ethnic minorities (e.g., Black, Latinx, and Asian individuals in the United States) are socialized to be more interdependent than children who identify as part of the racial/ethnic majority (e.g., Brannon et al., 2015; Covarrubias et al., 2019). Thus, students who identify as girls/women or racial/ethnic minorities may also experience a mismatch with the culture of independence prevalent in many academic contexts.

Similar arguments can be made about the culture of competition of these contexts: Women and girls are less oriented toward competition and more oriented toward others than men and boys are (e.g., Diekmann et al., 2017; Kiecolt-Glaser & Newton, 2001; Niederle & Vesterlund, 2011; Taylor et al., 2000). In turn, this orientation may affect girls’ experiences in school. For instance, girls are less inclined than boys to enroll in competitive classes (Aelenei et al., 2020), and their performance is also more negatively affected by competitive settings (Souchal et al., 2014; for a review, see Sicard et al., 2021). Similarly, members of many racial/ethnic minority groups (e.g., Black Americans) are more oriented toward cooperation and help rather than competition (e.g., Burlew et al., 1992; Hudley et al., 2003), putting them at greater risk for a mismatch with the competitive culture of academic contexts. The same argument applies to the identity mismatch as well: The identities of students who identify as girls/women or racial/ethnic minorities are also devalued by cultural stereotypes in (some) academic contexts (e.g., Bian et al., 2017; Musto, 2019; S. Zhao et al., 2022).

So far, we have argued that there is a range of backgrounds and social identities (beyond being from a working-class background)

that mismatch with the culture of academic contexts. An important question arises as to whether the effects of embodying *multiple* such identities are additive or interactive (e.g., Cole, 2009; Crenshaw, 1991; Purdie-Vaughns & Eibach, 2008). For instance, is the magnitude of the independence mismatch experienced by girls from working-class backgrounds simply the sum of the independence mismatches experienced by working-class children and by girls? Or do these two identities combine in a nonlinear fashion? This is an important avenue for future research. Previous evidence hints at the possibility that the effects are additive. For example, Harackiewicz et al. (2016) found that the grade-point average of college students at a large public university in the United States showed racial/ethnic and social class disparities of similar magnitude (both Cohen's $d_s \approx 0.30$) but no interaction between the two. Indirect evidence of additive effects is also provided by recent research showing that students from working-class backgrounds who also identified as racial/ethnic minorities endorsed interdependent motives more strongly than students from working-class backgrounds who identified as part of the majority racial/ethnic group (Nguyen & Nguyen, 2020; Tibbetts et al., 2018). As a result of their stronger orientation to interdependence, the former group is also likely to experience a stronger mismatch with the culture of independence prevalent in academic contexts. Although the evidence reviewed so far points in the direction of additive effects, some interactive effects of social class and other identities have also been observed. For example, Aelenei et al. (2023) found that endorsement of self-enhancement values (which are aligned with independence) had a positive association with high school grades *only* among male students who were also from middle- and upper-class backgrounds (see also Bauer & Hannover, 2021).

These arguments and evidence highlight the importance of analyzing how multiple aspects of students' backgrounds and identities jointly shape their educational outcomes. We can more precisely anticipate the effects of the four proposed mismatches for students from working-class backgrounds if their other social identities are considered as well.

Conclusion

Social class remains a strong and consistent predictor of educational outcomes in most societies (OECD, 2019): The lower a student's socioeconomic background, the more likely they are to experience difficulty in the classroom and to drop out of school before they reach university (Andreu et al., 2023; Duncan & Brooks-Gunn, 1997; National Center for Education Statistics, 2023; Sirin, 2005). The relationship between social class and academic achievement has been explored from a number of different perspectives, many of which are anchored by the idea that the underachievement of students from working-class backgrounds is a product of deficits in their individual characteristics or in their families' childrearing practices. In contrast, here we brought together several strands of research illustrating how the sociocultural context of education—and specifically the mismatch between this context and the psychological and behavioral tendencies that students from working-class backgrounds bring with them—amplifies social class inequalities from preschool to graduate school.

To conclude, the Social Class–Academic Contexts Mismatch model unifies previously disparate findings into a coherent theoretical structure and is also generative, highlighting new lines of work that will deepen our understanding of the sociocultural sources of social class inequalities in education. Considering these phenomena

together will allow researchers to make more precise predictions regarding the extent to which various academic contexts undermine or facilitate the academic success of students from working-class backgrounds. In turn, these predictions can inform the design of interventions designed to ensure that these students are provided the same opportunities to succeed as everyone else.

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Received February 22, 2023

Revision received November 15, 2023

Accepted December 31, 2023 ■