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Roads from Expectations to School Success are Twisty – In Some Contexts More Than in Others

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In *The Adventures of Pinocchio*, Collodi (1926/2006) describes in a few lines what it means to have academic dreams, and how it may happen that those dreams clash with much less pleasant realities. When hurrying off to his first school day, Pinocchio, Collodi (1926/2006, chapter 9) writes:

...had his little head busy planning hundreds of wonderful things, building hundreds of castles in the air. Talking to himself, he said, "In school today, I'll learn to read, tomorrow to write, and the day after tomorrow I'll do arithmetic. Then, clever as I am, I can earn a lot of money."

Expectations for success of real-world students are certainly much more attuned to reality than those of Pinocchio. Yet, for too many, dreams will not come true at school as well. The merit of this monograph is to push us forward in the way of understanding why things go this way but also why, when, and for whom things may not go this way. As one would expect from [SRCD Monographs](#), the authors do so by combining solid theory and rigorous methods to carry out their investigation. Regarding theory, the work is framed in a recent advancement of Dweck's (2006) classical mindset theory, namely, the Mindset × Context model (e.g., Yeager et al., 2019). The core tenet of the model is that, like affordances in the physical environment allow toddlers to develop perceptual, motor, and cognitive skills (Gibson, 1977), formal and informal resources in educational contexts are affordances that allow students to construct functional, success-oriented mindsets, and – even more importantly – help them translate such mindsets into successful achievements (Walton & Yeager, 2020). As exemplary cases of contextual affordances, the authors investigate how disadvantaged social identities (namely, those resulting from the intersection between gender and socioeconomic status), stereotype-laden beliefs at the classroom level, and success-oriented peer cultures at the school level, may moderate the link between students' academic dreams and reality; whereby, more prosaically, dreams are operationalized as students' expectations for success in math in grade 9, and reality as the students' actual progressions to higher level math courses from grade 9 to grade 10. To do so, the authors adopt advanced multilevel analytical approaches to handle a nationally

representative dataset of more than 16,000 students across more than 70 public schools in the US.

I see at least two reasons why framing this investigation in the Mindset x Context theoretical model may be fruitful and inspiring for future work. The first reason is that there is an ongoing debate on mindset theory and its main tenets that extends to the soundness, replicability, and practical significance of mindset-oriented interventions in schools. Both the existence and the eventual strength of the links between students' mindsets and academically relevant outcomes (e.g., interest, effort, grades) have been questioned (Li & Bates, 2020; Yeager & Dweck, 2020). Replications (e.g., Li & Bates, 2019) and meta-analyses (Macnamara & Burgoyne, 2022) have, in some cases, failed to provide support for the practical relevance, in terms of academic outcomes, of interventions aimed at changing students' mindsets in more functional directions. At the same time, other empirical works beyond the present monograph (e.g., Yeager et al., 2019), as well as meta-analyses conducted under heterogeneity-focused assumptions (Burnette et al., 2023), support the existence of solid support for mindset theory predictions and mindset-based interventions, especially, if not exclusively, in specific contexts; that is, depending on students' vulnerability and on the presence/absence of contextual affordances (Walton & Yeager, 2020) that allow students to translate their expectations into reality. However, support for the context-dependent nature of the links between mindsets and real-life outcomes is still incomplete. In Burnette et al.'s (2023) meta-analysis, for example, the authors failed to retrieve enough primary studies in which variables pertaining to contextual affordances were included, thus preventing a meaningful evaluation of specific predictions derived from the Mindset x Context model. Research based on large datasets and multilevel approaches is therefore needed to contribute to the debate. This is a good reason why works encompassing both individual- and contextual-level data in mindset studies, such as the present monograph does, are more than welcome.

A second reason why I see this work as potentially fruitful in ongoing theoretical debates arises from the quite unexpected choice to operationalize students' mindset as their expectation for success, namely in math. Although mindsets are conceived as broad systems of beliefs that guide individuals' motivation and action toward their goals in different situations (Dweck, 2017), it is quite automatic to associate mindset theory with research in education focused on growth mindset (i.e., beliefs associated with the malleability of intelligence or other abilities). Obviously, one would rather expect a focus on expectations for success in studies framed in Expectancy-Value Theory (EVT; Eccles [Parsons] et al., 1983). However, such an unusual choice has exactly the merit of making it easier to establish links with the abundant amount of research inspired by EVT. Notably, EVT, similar to classic mindset theory, has also recently undergone a revision and extension process in which the contextual nature of motivation and achievement-related beliefs and behaviors is emphasized, resulting in the proposal of a Situated Expectancy-Value Theory (SEVT; Eccles & Wigfield, 2020). Of interest, EVT/SEVT postulates that expectations of success are the critical, most proximal determinants of achievement-related behavior and outcomes, but does not explicitly assume that this relation may be moderated by contextual affordances, as the Mindset x Context model does. Thus, works that foster integration between different influential models in motivation literature are especially timely (Dweck, 2017; Wigfield et al, 2021).

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In the remainder of my commentary, I would like to highlight two findings pertaining to the contextual variables analyzed in this monograph. The first one deals with the role of peer culture as a contextual affordance that may support or suppress the likelihood that students' dreams turn into realities. In this monograph, peer culture was operationalized as challenge-seeking norms shared among peers at the school level, and results highlighted that where school-level norms were less oriented to support academic effort, students' progress in math was aligned with their prior expectations for success. That is, math progress was lower for students with fewer personal resources and from less advantaged backgrounds, and higher for students who were already on a path to pursue success. To the contrary, in schools with more supportive peer norms, students with less advantaged backgrounds made progress, despite having fewer personal resources and even lower aspirations for success at the personal level. Research highlighting the role of formal and informal resources at the school level to support students' achievement – such as, for instance, challenge seeking norms (Holzberger et al., 2020) – is indeed abundant and well known in the field of education. Yet, implications of such evidence for the design of interventions are still not systematically evident in literature. As highlighted by Walton and Yeager (2020), it is quite unlikely that sophisticated interventions carried out at the individual level to modify students' beliefs and achievement-related behaviors may give rise to stunning and enduring effects, if individuals have then to struggle with contexts that do not support, and sometimes counteract, such modifications.

The last finding that I would like to emphasize deals with the performance-suppressing effect of gender stereotypes at the classroom level. In this work, classroom-level stereotypes were operationally investigated as students' perceptions that in a specific math class students may be judged based on their gender. Results showed that, regardless of any gender stereotypes about math students may have held themselves (which were not measured), their feelings about a stereotyped climate in the classroom did matter and was related to generalized poorer progress in math. This result parallels those of other studies emphasizing the harmful role of classmates' stereotypes on girls' motivation and achievements in math (Wolff, 2021), as well as on boys' outcomes in reading (Muntoni et al., 2021), above and beyond students' own endorsement of self-debilitating gender-stereotypical beliefs about math or reading. Even more critically, however, results from the present monograph highlight that stereotypes at the classroom level did matter for all students, and not only for those who may be themselves the target of negative gender stereotypes (e.g., girls or students from low socioeconomic backgrounds). As a matter of fact, it turned out that even those students who might, in principle, be advantaged by a gender-stereotyped climate, such as boys from high socioeconomic backgrounds, did not obtain a benefit in math outcomes. Research conducted outside the field of education has yielded findings that are consistent and underline the potentially negative effects of stereotype-laden environments even for those who are not the target of such stereotypes. In a study on the role of weight-based stigma in middle childhood, for example, we found that the frequency of stigmatizing episodes in the classroom had a negative effect on children's health-related behaviors – namely, eating restraint – irrespective of children's own body weight, and regardless of their personal experience of being the target of weight-based stigmatization (Guardabassi & Tomasetto, 2022). In the same vein, research on ethnic prejudice and discrimination reveals that children living in neighborhoods where racial discrimination is more prevalent report more depressive symptoms, regardless of their

personal experiences as the targets of discrimination (Heard-Garris et al., 2018). In sum, there is growing evidence that stereotypes hurt even when they are simply “in the air,” as Claude Steele (1997) stated more than 25 years ago, and this is something that researchers working on stereotypes in education should keep firmly in mind as a direction for their current and future work.

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