

Comment

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How Universal Is the Big-Fish-Little-Pond Effect?

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Marsh and Hau (2003) tested the negative effects of attending academically selective schools; that is, a student will have lowered academic self-concept in a selective school than in a nonselective school, a big-fish-little-pond effect (BFLPE). What the model highlights is the shift of the frame of reference (i.e., more competent peers) when one enters a more competitive school. To be sure, such a shift may mean a sobering reality check. But will it necessarily cast self-doubts, leading to an erosion of positive self-concept? The BFLPE model predicts that it will, at least for many. The question is for whom?

A major problem of the BFLPE model is that it makes self-appraisals of competencies and changes in self-concept a monotonic function of one's performance relative to a local norm. It oversimplifies a more complex process suggested in the social comparison literature. For example, people espouse different standards and goals when comparing themselves with peers. The use of social comparison information can be either geared toward mastery and self-improvement, a "unidirectional drive upward" in Festinger's (1954, p.124) words, or focused on relative ability:

whether one is better or worse relative to a comparison target (Butler, 1995). The BFLPE only applies in the latter case.

Even when relative ability is the focus, upward social comparison is not always self-deflating. In fact, it can have a self-enhancing effect if the comparer sees himself or herself as belonging to the same distinct group as the upward comparison targets (i.e., judging targets as similar to oneself; Collins, 1996). The likelihood of such identification increases if the entrance to selective schools is merit based and competitive, leading to the so-called *reflected glory-effect* (Marsh, Kong, & Hau, 2000). More important, people not only form self-representations of what they are but also envisage what they can be (i.e., *possible selves*; Markus & Nurius, 1986). Related to this point are individual and cultural differences with regard to inferring invariant attributes from social comparison. To the extent people are predisposed to see personal attributes as either fixed and stable or fluid and malleable, the measure of self-concept may carry different meanings and valences for different individuals and across different cultures (Dweck, Chiu, & Hong, 1995).

Another way in which people regulate their self-evaluation is also at variance with the BFLPE model. Instead of using social information to seek self-knowledge, individuals can display a self-enhancement or self-protective bias by selectively attending to favorable, self-affirming information (e.g., engaging in downward comparison) and ignoring or dismissing unfavorable ones as invalid (Brown & Dutton, 1995). Thus, in academically gifted programs, those who did not compare favorably with others reduced the amount of social comparison they made; for many of them, self-concept remained unperturbed. Even the lowered self-concept due to poor performance in such gifted programs could also bounce back over time (Gibbons, Benbow, & Gerrard, 1994).

From a methodological point of view, the BFLPE model appears simple and elegant, and the evidence as compelling as it can be. On scrutiny, however, it is not free

of problems. Correlations between individual student achievement and academic self-concept, even interpreted in the most liberal manner, are a crude, proxy measure of the effects of social comparison. No rigorous experimental conditions were in place here that afford high confidence that the effects of individual student achievement on self-concept were due exclusively to the use of peers in school as the frame of reference. One cannot rule out the possibility that higher self-concept for some individuals was partly due to being in a more selective school rather than to within-school social comparison. Furthermore, *school-average achievement*, an indicator of the selectivity of a school, is a derivative measure linearly dependent on individual-level achievement (i.e., schools that have more high-ability students will have high average scores). Thus, when effects of individual student achievement on self-concept were partialled out, we are left unsure whether positive effects of being in a more selective school were also partialled out along the way and how exactly the negative beta weights of school-average achievement should be interpreted.

From a practical perspective, the point that parents and students should consider the emotional or hedonic costs of going to a highly competitive school is well taken. But how much weight the BFLPE should carry in a larger scheme of things should not be overstated. The authors used the case of Jane to illustrate the benefits of not going to a selective school (Marsh & Hau, 2003, p. 366). However, the story was not just a testimonial of the BFLPE theory *per se* but that of negotiating educational opportunities on the one hand and one's abilities and emotional/motivational resources (e.g., how adaptive and resilient she was) on the other. If it were another person, say, Joan, she might well be doing just fine in a more challenging environment, given her abilities, self-motivation, and coping skills. Conversely, if Joan chose not to go to a selective school merely in order to maintain her positive self-image (likely an illusory one), she would miss an opportunity

crucial for her personal and career development.

In summary, Marsh and Hau (2003) should be commended for their painstaking effort to put together this very impressive multinational study. However, to further this line of research, the theoretical basis of the BFLPE needs to be broadened in light of the extant social comparison literature. Specifically, it needs to take into account the complexity and multifaceted nature of social comparison and self-appraisal processes; the active, self-regulatory role individuals play; and the ensuing positive as well as negative consequences. The authors are prudent in pointing out that this single study, with its methodological limitations, should be interpreted in a broader context of the research literature along this line of inquiry. It also appears that the practical significance of the model will remain unclear until the question of for whom and under what conditions the BFLPE will outweigh the benefits of attending a selective school is addressed. Keeping a big fish in a little pond is not the optimal solution, at least for many.

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- man, McCormick, & Gross, 1998). Boredom is an inevitable result of a mismatch between student ability and the level and pace of instruction, and students who experience interest as opposed to boredom show considerably more positive psychological well-being (Hunter & Csikszentmihalyi, 2003). Essentially, the big-fish-little-pond effect focuses on the impact of setting on self-concept but leaves unexamined the impact of group achievement on individual achievement.
- Second, the study used a very narrow definition of student affect. For example, a recent examination of social and emotional development in gifted children includes discussion of perfectionism, nonconformity, social acceptance, personal identity, asynchronous development, and motivation, among many other psychological constructs (Neihart, Reis, Robinson, & Moon, 2002). The three self-concept questions in the Program of Student Assessment (PISA) database hardly tap the wide range of affective factors that influence student well-being. In the article's conclusion, Marsh and Hau (2003) appeared to acknowledge this point when they write that gifted education policy suggests "that bright students will have higher self-concepts and will experience other psychological benefits [italics added] from being educated in the company of other academically gifted students" (p. 374). In the following sentence, they concluded that their "evaluation of the effects of academically selective settings show exactly the opposite effects" (p. 374), yet their research does not speak to "other psychological benefits" or deficits, only to decreases in self-concept of an indeterminate length. At the least, inclusion of the PISA Learning Confidence scales (i.e., items related to perceived academic self-efficacy items and control expectations; see Adams & Wu, 2002, pp. 240–242) would have provided a better indication of how declines in self-concept impact student motivation and beliefs in their ability to learn difficult material. When considered in light of research suggesting that dips in gifted adolescents' self-concept may be temporary (Gibbons, Benbow, & Gerrard, 1994), this study does not provide the level of detail necessary to inform judgments about the effectiveness of academically accelerated schools.
- Third, the specific impact of selective schools on self-concept is difficult to determine with the information provided about the study. For example, this correlational study does not provide information about the impact on mean unstandardized academic self-concept scores. Is it possible that self-concepts are reduced but remain

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It's Not How the Pond Makes You Feel, but Rather How High You Can Jump

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Marsh and Hau (2003) provided an analysis of achievement and academic self-concept in 26 countries. We agree with them on several points but have several concerns about the conclusion that highly selective programs, such as accelerated high schools, should be avoided because these settings may modify student self-concept.

First, the authors stated that current educational policy emphasizes self-concept gains that can be derived from specialized programming for high-ability students. This is overstated. Positive self-concept is certainly important for academic progress. Yet although placement in highly selective programs is likely not to have a positive impact on academic self-concept, most proponents of gifted education do not regard that as necessarily negative, because self-concept frequently remains at a reasonable level, and these negative effects may be temporary. The primary reason for recommending special programs is the robust finding that they enhance the academic achievement of gifted students (Rogers, 1993), an outcome not addressed by Marsh and Hau (2003).

Without appropriate challenge, students' sense of confidence, motivation to learn, and readiness for new cognitive challenges can be seriously undermined (Hoek-