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Fixed and growth mindsets in physics graduate admissions[1]

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Considering the evidence that standard physics graduate admissions practices tend to exclude women and traditionally marginalized racial and ethnic groups from the discipline, we investigate (a) the characteristics of students that physics graduate admissions committee members seek to admit to their programs and (b) the practices associated with these admissions goals. The data for this investigation are interviews with 18 faculty who chair graduate admissions committees in programs that prioritize diversity in their graduate admissions practices. We find that some express elements of an implicit theory of intelligence known as a "fixed mindset," in which intelligence is understood as an inherent capacity or ability primarily measured by standardized test scores and grades. Some also express elements of a "growth mindset," in which intelligence is understood in terms of acquired knowledge and effort. Overall, most faculty interviewed expressed elements of both mindsets. A fixed mindset in physics graduate admissions is consistent with research identifying physics as a "brilliance-required" field, whose members tend to believe that raw, innate talent is a primary requirement for success in the discipline. Such a mindset directly affects the participation of women and some racial or ethnic groups, who are stereotyped as lacking such high-level intellectual ability.

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