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**What innovations have we already lost?: The importance of identifying and developing spatial talent.**

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Summary: In a famous talent search by Lewis Terman, there were two young boys who were not identified as gifted but would go on to win the Nobel Prize in physics. Their names were William Shockley and Luis Alvarez and the scientific area in which they achieved their fame was arguably heavily visual-spatial in nature. Why were two Nobel winners missed? Likely because Terman had used the highly verbal Stanford-Binet, which did not include a good spatial measure. Many standardized tests in schools today lack spatial measures, and this means many spatially talented students are not being identified, and their talent is therefore not fully encouraged and developed. This chapter first reviews over 50 years of data showing that spatial ability in addition to math and verbal ability has predictive power in STEM domains. Next, the issue of spatial training and females in STEM are discussed. Then, how these findings and other research can be translated into education practice is presented. Finally, a discussion of the broader societal implications of neglecting spatially talented students will be laid out. For example, how many innovations have we already lost because we have not adequately identified and developed the talent of some of our most promising innovators?

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