## Practice does not make perfect: Expertise requires Innate talent

Scientists have long argued over the relative contributions of practice and native talent to the development of elite performance. This debate swings back and forth every century, it seems, but a paper in the current issue of the journal Psychological Science illustrates where the discussion now stands and hints — more tantalizingly, for people who just want to do their best — at where the research will go next.

The paper, the most comprehensive review of relevant research to date, comes to a different conclusion. Compiling results from 88 studies across a wide range of skills, it estimates that practice time explains about 20 percent to 25 percent of the difference in performance in music, sports and games like chess. In academics, the number is much lower — 4 percent — in part because it's hard to assess the effect of previous knowledge, the authors wrote.

"We found that, yes, practice is important, and of course it's absolutely necessary to achieve expertise," said Zach Hambrick, a psychologist at Michigan State University and a co-author of the paper, with Brooke Macnamara, now at Case Western Reserve University, and Frederick Oswald of Rice University. "But it's not as important as many people have been saying" compared to inborn gifts.

Read the full, original story: How do you get to Carnegie Hall? Talent