

# **Expertise and Expert Performance**

**Edited by K. Anders Ericsson et al**

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This book is a compilation of the research on expertise and expert performance. Most people assume that no one can become really, really good at what they do, as good as say Stephen Hawking at physics or Wayne Gretzky at hockey, unless they have been endowed with natural gifts, perhaps even genius, in their field. However, it has now been well established that “most types of expertise require at least a decade of extended efforts to attain the mechanisms mediating superior performance”. Furthermore, these “extended efforts” must include a particular type of practice, dubbed “deliberate practice”, which involves intense focus, study, and effort to make incremental improvements. In other words, it seems possible that almost anyone can be an élite performer in almost any field, if he or she is willing to invest the huge amount of painstaking work required. The excerpt is a case study of Mozart’s learning curve.

***Excerpt (pages 769-770)***

“I recently examined in detail the career development of Mozart who, sometimes along with Picasso, is often cited by researchers as the prototype of the creator whose abilities are impossible to understand without invoking a concept like talent or giftedness. Sternberg discussed Mozart’s accomplishments in the context of a critique of research on expertise, specifically of the notion that practice might be more important than talent in determining the level of achievement reached by an individual. Practice may be important in musical performance or swimming but, according to Sternberg, expertise researchers may have ignored domains in which talent is more important than practice (eg, musical composition or painting). According to Sternberg, practice cannot account for the ‘extraordinary early achievements’ of Mozart or Picasso.

*‘Why was Mozart so damn good?.... What made Picasso so good so young? What Mozart did as a child most musical experts will never do nor be able to in their lifetimes, even after they have passed many times over the amount of time Mozart could possibly have had for deliberate practice as a child.... We fail to see evidence all around us – scholarly and common-sensical – that people differ in their talents, and that no matter how hard some people try, they just cannot all become experts in the mathematical, scientific, literary, musical, or any other domains to which they may have aspired. The truth is that practice is only part of the picture. Most physicists will not become Einstein. And most composers will wonder why they can never be Mozart’ (Costs of Expertise, 1996)*

“One piece of evidence that raises questions for Sternberg’s view of Mozart is Hayes’s finding that the Ten-Year Rule holds even for him (and, as we shall see, it holds also for Picasso). As noted, Hayes’s analysis provides no information about the years before the first masterwork. Based on the hypothesis that expertise is necessary for creativity, and on the expertise literature, one might expect to find Mozart developing his skills over those years, as reflected, for example, in increasing production of compositions and in their increasing quality. There should also be evidence for the occurrence of deliberate practice during the formative years.

“In order to test those expectations, I looked in detail at Mozart’s development, in three ways. I examined the number of compositions produced during the various years of Mozart’s career and found that his output increased over the first ten years or so of his career, supporting the notion that he was mastering his craft. Second, I measured the quality of Mozart’s early compositions by determining the average number of recordings for each composition for each year. The quality of Mozart’s compositions increased over the early years of his career, which also supports the idea that he was honing his skill. Finally, there is evidence that Mozart was carrying out deliberate practice over those years under the direction of his father, a professional musician of some repute. Consider Mozart’s earliest piano concertos, the first four written at the ripe old age of 11, and the next three written when he was 16. Those works contain no original music by Mozart: they are simply arrangements of music of other composers. Mozart’s father may have used other’s music as the basis for practice by the young man in writing for groups of instruments. Furthermore, if some of the *published* works by the young Mozart are based completely on the works of others, then Mozart’s *private* tutelage from his father must also have centered on study of works of others. So Mozart learned his craft over many years, under the watchful eye of a professional teacher. This training is not different from that received today in schools of music by aspiring composers.

“These results call into question Sternberg’s claim that most composers will never approach the accomplishments of Mozart’s early years. We have just seen that a number of Mozart’s early compositions show no originality on his part. Many of his other early works, which do contain his own music, have been more or less ignored by musicians and audiences, which means that those works are not ‘so...good’. They have nothing distinctively ‘Mozartian’ about them. Thus, whereas it is no doubt true that most composers will not match Mozart’s ultimate achievements, his early achievements are matched by many composers as they advance through music school.”