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How Intelligence Shifts With Age

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We seem to get slower and wiser at the same time



Photo: Getty Images

Is the saying “older but wiser” just an old wives’ tale? We all know people who are as foolish at 60 as they were at 20 and others whose smarts have cruelly

diminished with age. Meanwhile, legions of seniors who used fountain pens as children now deftly tap out texts on their tablets. So what's the truth about old dogs and new tricks?

A study of adult intelligence, [published in March in the journal Psychological Science](#), pits these maxims against the data. The results challenge some common assumptions—including the idea that mental acuity, like athletic prowess, always declines with age.

“Your physical ability changes over your lifetime. At first you can't do much,” said Joshua Hartshorne, a postdoctoral fellow at the Massachusetts Institute of Technology and the study's lead author. From infancy on, we get better at walking, jumping, climbing and running. But in our early 20s our physical abilities begin to decline, he said. Is such waxing and waning also true for mental ability? “There are two competing ideas,” he added. “As you get older you're slowing down, and as you get older you're getting wiser.”

The new research suggests that we are getting slower and wiser at the same time.

Dr. Hartshorne and his colleague, Laura Germine at the Massachusetts General Hospital, took a close look at the development of cognitive abilities as we age and discovered that different skills have different timetables. Some abilities mature early, such as how fast we recall names and faces. Others, like vocabulary and background knowledge, are late bloomers.

This nuanced view of human smarts is based on separating our thinking process into discrete slices—as opposed to viewing intelligence as a single unit, typically called “G.” This study's findings conflict with most previous research, which shows that “G” is fairly stable across the lifespan. One study followed up [on 87,500 Scottish children tested at age 11](#) and found that their intelligence hadn't changed much 65 years later.

In this new study, the researchers did both retrospective sleuthing and online testing. First they reanalyzed the scores generated by those who took standardized Wechsler IQ and memory tests in the early 1990s—right at the time these tests were created. By dividing the 2,500 adults who first took these tests into 13 age groups, the researchers were able to chart the trajectory of individual skills, from adolescence to retirement and beyond. To get a more textured picture, the scientists added survey and Internet-based tests of reasoning, memory and

social intelligence.

The results showed that our intellectual capacities shift as we age. Processing speed—how fast we absorb and rejjig numbers, names and facts—peaks around 18, then “drops off a cliff,” said Dr. Hartshorne.

How much we can remember and manipulate at one time—the size of that mental notepad, which is called working memory—is at its prime in our mid-20s and plateaus around age 35. Then it moves from center stage.

That’s when our emotional intelligence kicks in. The ability to assess people’s emotional states from a photo of their eyes peaks around age 40 and doesn’t decline until our 60s. One form of wisdom, the ability to guess people’s internal states from very little information, is as useful around the kitchen table at it is in the boardroom, and “the difference between a 20-year-old and a 40-year-old is just huge,” Dr. Hartshorne said.

The gains don’t end there. As our hair becomes silver (and sometimes falls out), our vocabularies continue to grow, peaking as late as age 70, said Dr. Hartshorne, adding that 20 years ago tests of vocabulary showed that it crested much earlier, at age 50. “Given the way we’ve chosen to define intelligence, people are getting smarter,” he said.

This is an encouraging sign. If humans continue to learn into their seventh decade, then at least one platitude is true. You *can* teach an old dog new tricks.