Despite the dedicated efforts of psychologists and clinicians over the previous decades, misunderstandings about IQ testing still abound. The perception of intelligence testing by the public has been at times reverent, dismissive, or even fearful. It's understandably difficult to remain neutral about a scientific endeavor built around the judgment and ranking of human beings. However, many of the criticisms of cognitive tests today actually stem from a misunderstanding of what they are, what they're for, and how to correctly use them.

**Myth: A high IQ score is an achievement**

In societies that greatly value winning and individual success, it's no surprise that a high IQ has become synonymous with absolute worth. This is especially the case where tests are administered at school where high performance is conflated with merit—especially if it allows a child to outcompete his peers.

But this application is certainly not something the original theorists would have agreed with. Most psychologists today take pains to emphasize that an IQ test is not the be all and end all of a human being's ability. Instead, it should be correctly used as an assessment of a very small part of the human experience—namely cognitive function. Child IQ tests are merely meant to narrow in on specific educational needs; a high IQ score is usually no more an achievement than having a certain blood type.

**Myth: IQ tests can reliably place you into different intellectual classes**

Similarly, there is a misconception that certain cut-off scores position a person in different categories, such as “gifted” or “genius.” Though there is some validity to these categories, clinicians seldom use cut-off scores unless making a diagnosis for severe intellectual disability. Where extreme high or low scores are obtained, a single test is usually not enough because a score on a single test means very little without understanding the confidence intervals around that score. The next time you hear a person proudly announce their IQ score, remember that there is a degree of error and variance in that score. What’s more, a “genius” level IQ may fail completely to measure deficits in social or emotional intelligence.

**Myth: IQ is fixed throughout life**

In keeping with the misuse of IQ as a kind of personal identity or badge of honor, many incorrectly assume that IQ can never change. But intelligence arises from both innate “nature” and the “nurture” portion provided by education, opportunity, culture, etc. Thus, IQ will change as a person adapts and responds to the challenges of their environment with time. Moreover, the trajectory of a complex individual’s path in life is so influenced by personality, economics, social factors, physical health, and even luck that IQ alone tells you very little about their effectiveness and success.

**Myth: IQ tests measure global intelligence**

IQ testing has a dark history of misuse. The theory of general intelligence has historically been used to justify discrimination of all kinds, and on a subtler level, many individuals have been adversely affected by the labels that come with such tests. The theory that human cognitive ability can be explained by a general factor, \( g \), is statistically supported, but very few psychologists will claim that this alone accounts for intelligence. Today, many resist the word intelligence entirely and refer instead to the more specific “cognitive ability.”

**Myth: It’s the test itself that measures an individual’s IQ**

Lastly, it’s sometimes assumed that an IQ test is on its own an instrument that merely needs to be taken to reveal a person’s intelligence, and this has led to a proliferation of quick online tests. However, an IQ test is merely a tool that must be used by a qualified and knowledgeable expert, both to administer and to interpret the results. Sadly, many people are tested by unqualified practitioners who fail to explain what the numbers really mean, or else people assume that an informal online quiz is valid without the input of a clinician at all. The clinician does far more than merely score the test. They interpret the result and place it in the appropriate context. It’s common for certain subscales to be invalid for certain individuals, or to observe large variance on subscales—and only a trained clinician can make that decision.

Likewise, a qualified psychometrist can ensure that the test is administered properly, since rapport with their client and the right testing conditions are essential for a test result to have any meaning. Finally, a clinician understands that cognitive ability is not a simple linear scale— they can carefully appraise the input of a range of other variables and make more nuanced observations.