

# "All Models Are Wrong, But Some Are Useful"

Post by "Novem" of May 20, 2025 at 5:35 PM

"In philosophy of science and in epistemology, [instrumentalism](#) is a methodological view that ideas are useful instruments, and that the worth of an idea is based on how effective it is in explaining and predicting natural phenomena. According to instrumentalists, a successful scientific theory reveals nothing known either true or false about nature's unobservable objects, properties or processes.[1] Scientific theory is merely a tool whereby humans predict observations in a particular domain of nature by formulating laws, which state or summarize regularities, while theories themselves do not reveal supposedly hidden aspects of nature that somehow explain these laws.[2] Instrumentalism is a perspective originally introduced by Pierre Duhem in 1906.[2]

Rejecting scientific realism's ambitions to uncover metaphysical truth about nature,[2] instrumentalism is usually categorized as an antirealism, although its mere lack of commitment to scientific theory's realism can be termed nonrealism. Instrumentalism merely bypasses debate concerning whether, for example, a particle spoken about in particle physics is a discrete entity enjoying individual existence, or is an excitation mode of a region of a field, or is something else altogether.[3][4][5] Instrumentalism holds that theoretical terms need only be useful to predict the phenomena, the observed outcomes."

I suppose many people's views here fall under this philosophy of science? It's also Epicurean to study nature - do science - for our own benefit as it reduces uncertainty and anxiety and gives us peace of mind and pleasure with that knowledge. That's an instrumental view of science.

And that we are pragmatic when it comes to metaphysical or epistemic certainty and skepticism - accept or reject/revise a scientific claim/model/theory when evidence confirms or fails to confirm beyond a reasonable doubt - like in Martin's article. Otherwise we really cannot live our lives if we are paralyzed by extreme skepticism or by trying and theorize and rationalize our way through without testing to see if those rationalizations have merit.