

On the theoretical method

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When I try to explain what I do to people (outside my research community), I am often met with the reaction of “...ok, but what practical applications does it have?”. I often sense a feeling of aversion especially at the mention of the word “theoretical”, which I was surprised to know is thought of as being “...completely and utterly useless in the”real” world, done just for the sake of one’s own amusement...“. Though this might be true to some extent, I want to focus on the word”theoretical” today. Let’s see how the dictionary defines the word “theory”:

Theory (*noun*): a supposition or a system of ideas intended to explain something, especially one based on general principles independent of the thing to be explained.

Put in other words, coming up with a theory means to come up with useful abstractions of reality, being simple enough to lead itself to some level of deductive analysis and being complex enough to model reality upto some level of acceptable accuracy. Why do we need to theorise? It is because of our fundamental incapability of handling the complexities of the world at the same time. We need to digest information in a processed form. Broken down to be simple enough to be understandable. That is the point of the theoretical method.