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Thought May Just be Organizing Representations

After discussing the many nuances of the computational theory of the mind (CTM), I have at times agreed completely with what it says – both from experience and from being convinced by its logic, and at times found myself struggling for an explanation for a claim it makes. I'd like to discuss some of these instances.

Thought experiments like the fact that if we see a grey object in the light and a grey object in the dark, we can correctly identify that the latter object is actually white beg the questions that some cognitive scientists like Edelman posed that if the same perception, the same inputs, lead to different outputs – surely there must be some calculation or "computation" going on in the brain to account for this difference in outputs. I agree with these cognitive scientists' logic. Based on this, I am completely convinced that there is some evidence for a computational theory of the mind – that this evidence unequivocally shows that there is "computation" in the brain.

By this premise, thought then, is programming certain representations (inputs) into the mind, and organizing (computing) the relationships between these representations to produce outputs, or overt thought.

This is why I bought Pinker's argument that language is words plus rules and nothing else – because of how intuitively most of the class were able to generate trees from the sentences today – if that could be done so easily using inputs and then organizing these inputs computationally, language must just be words (representations) and the rules (organization) associated with them. From my own experience designing a parser for a particular grammar in a computer science class –I saw too how there was an exhaustive list of rules that could be developed to meet the specifications of any language.

That language is words and rules, and that this supports CTM, I concede. Yet, there is an aspect of language that CTM cannot explain. I was recently discussing an essay with a friend and he said, "your English can always be better". This phrase suggests that there can always be a "better", more pleasing way of expressing meaning in English. Yet, can this phenomenon be explained by language as words and rules (organizing representations)? To express something in a particular way, but then be able to express that same meaning in a "better" way, is not a semantic difference, yet not really a syntactic one either. Syntactically, it is equally correct to say for example that "that was a tasty apple" or that "that was a delicious apple", yet how can one "compute" which representation of the same meaning is more pleasing. Because the idea of being pleasing isn't inherently programmable – it isn't a numeric value that can be assigned to each syntactic representation of some meaning – it is an inherent feeling one gets about sentences after reading them entirely, considering the context and so on. So here is an instance of language that cannot be explained by the CTM.