

Dissertation Abstract | Jonathan Vandenburg

People speak, think, and act based on the alternative possible scenarios which come to mind. Understanding alternative possibilities is essential for understanding modal language (what is possible and what is necessary), conditional language (what would happen *if* a certain condition is satisfied), and knowledge (what one can know and be justified in believing given certain evidence). The dominant approach to determining the relevant alternatives in a situation uses the notion of similarity, arguing that the relevant alternatives are those which are most similar to reality. However, it is often left unclear which dimensions similarity is measured over, leaving the predictions for specific cases of language use or belief formation uncertain.

My dissertation develops a new theory of the relevant alternatives in a situation. I argue that peoples' beliefs are causally structured, containing laws about how different variables are related to each other and how changes in some variables can affect other variables. I argue that the alternatives that come to mind are determined by this causal structure: an alternative is relevant if it is consistent with the causal laws in the situation. I develop this theory in the first chapter of my dissertation; the remainder of the dissertation shows that this theory makes reasonable predictions by applying it to the semantics and epistemology of conditionals, the theory of knowledge, and the epistemology of stereotyping.

In the second chapter, I use the theory to develop a new framework for applying causal models to the semantics of conditionals and counterfactuals. I do this by interpreting causal notions in terms of possible worlds and similarity, which is better understood for conditional semantics. The resulting theory is more intuitive and empirically tractable than competing similarity-based accounts but has more familiar logical properties than competing causal approaches. In the third chapter, I develop a theory of how people change their beliefs when they learn a conditional. I argue that the outcome of conditional learning depends on background causal information and can sometimes require agents to learn a new causal model of the world. I then provide a theory of conditional learning where an agent eliminates possibilities from the causal model which are inconsistent with the new conditional information.

In the fourth chapter, I use the causal theory of alternatives to give a new account of the relevant alternatives theory of knowledge. On this theory, one can only know a proposition if the proposition is true in all relevant alternative circumstances. I use the causal theory to precisely delineate the relevant alternatives in an epistemic situation, applying the theory to common cases like perception and testimony. I also argue that this theory of knowledge can explain why statistical evidence is not sufficient to know something, how knowledge attributions can change depending on the context, and why many Gettier cases are excluded from knowledge.

Finally, I apply the causal theory to the epistemology of stereotyping. I argue that people who form stereotypes often have a false causal understanding of group differences: they attribute stereotypical properties to group members innately or causally, while social science research shows that group differences arise from complex social factors. I argue that the causal approach to stereotyping, unlike other epistemic approaches, can explain what is wrong with "rational racism," or statistical discrimination, which occurs when a stereotype is statistically accurate. I show how the causal beliefs surrounding stereotypes can influence the alternative scenarios people find relevant and the interventions people think make the most sense in response to group differences.