

The paper is interesting. It discusses the importance of building models, making assumptions explicit, causal inference and prediction.

It talks about disputes on rational choice theory (Watts, 2014, p.319). When first introduced in 1960s, models based on that theory were heavily criticized by scholars in various social science fields (Watts, 2014, p.320). Some of the criticisms included the dependence on implausible or empirically invalid assumptions and poor predictions demonstrably inconsistent with empirical evidence (Watts, 2014, p.320). The dispute remains unsolved until present, while rational choice theory has had great impact on researches in various social science fields as a theory, an approach or a paradigm.

Watts (2014) shows the main pitfall in using commonsense theories of action (p.327). Watts (2014) pointed out that the validity of the assumption that “understandability and causality were effectively interchangeable” (p.327), which supports the validity of epistemic conflation, is an illusion (p.327). Watts (2014) argued that there was no guarantee that an explanation makes sense for some cases would be a “generalizable causal mechanism” or even “the cause of that particular outcome” (p.327). He also strengthened the importance of factors unable to observe ex ante on prediction, which could lead to great threaten to resulting explanations (Watts, 2014, p.327).

To solve the problems of rational modeling and causal explanations, Watts (2014) proposed three alternatives, i.e., relying more on experimental methods, counterfactual model of causal inference and evaluating models with their ability to prediction (p.335-337). Although all of them have defects, combining those methods will make up for the defects of rational modeling and causal explanations.

However, the paper disdains theory that specifically outlines the assumptions and mechanisms of process being modeled, which I disagree with. Theoretical models are not detailed description of the real world, in contrast, they should make crucial simplifications to catch the principles behind the complex phenomenon. As is known, the more precise, the more complicated. Then there is

no difference between using models and observing the real world directly. In my view, models can help causal inference and prediction at least in 2 ways.

For one thing, the strong and even unrealistic assumptions themselves are clues to analyze a problem in reality. When we get outcomes different to that of a standard model, we can first check which assumption is not satisfied, so that we can build advanced models to analyze the problem based on the previous model. In other words, having theoretical models means that we can take apart the complex problem, limit the factors we should consider and solve it step by step rather than starting from scratch every time.

For another, the theoretical model may not be able to give precise prediction, but can predict the correct tendency. It's true that assumptions of models are not perfectly satisfied in most cases, but it's likely that they are almost satisfied, which means the result of standard model will still work to some extent. It's unwise to apply the model mechanically to real problems, but prediction of the model can provide a heuristic view on the whole problem and help us discard those policies that obviously make no sense and save time to analyze other alternatives.

## **Reference**

**Watts, Duncan J.**, "Common Sense and Sociological Explanations", *American Journal of Sociology*, September 2014, 120 (2), 313-351.