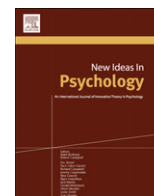




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Theory use in social predictions

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A B S T R A C T

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In a commentary to our article on the role of theory and simulation in social predictions, Krueger (2012) argues that the role of theory is neglected in social psychology for a good reason. He considers evidence indicating that people readily generalize from themselves to others. In response, we stress the role of theoretical knowledge in predicting other people's behavior. Importantly, prediction by simulation and prediction by theory can lead to high as well as to low correlations between own and predicted behavior. This renders correlations largely useless for identifying the prediction strategy. We argue that prediction by theory is a serious alternative to prediction by simulation, and that reliance on correlation has led to a bias toward simulation.

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It is an honor for us that our article was commented on by a distinguished colleague (Krueger, 2012), who has been successfully investigating social projection for years. In his commentary, Krueger gives an informative summary of the development of the field, and then proceeds to express some concerns and objections regarding our article. We try to address some of his points.

The purpose of our original article was to marry philosophical considerations about simulation theory and theory theory with the prospering field of social projection. This has benefits for both sides: Ideas from philosophy of mind are tested empirically, and social projection research can borrow from a theoretically elaborate philosophical background. More importantly, these fields differ with respect to their standard assumption: The standard assumption in social projection is that people simulate when predicting others. In contrast, in the philosophy of mind, the theory view of understanding other minds has long been dominant (e.g., Churchland, 1984).

1. Theory theory and social predictions

We agree with Krueger that social projection largely equals simulation. However, the possibility of using a folk theory for predicting others should be taken more seriously in social psychology. Folk psychology consists of an array of lay theories or platitudes about how the mind works, which are believed more or less uncritically. Mundane examples for widely held lay theories are: People who work hard succeed; the longer an event lies in the past, the worse it is remembered; people cannot change their personality, moral character, or intelligence; opposites attract; or that happiness is a matter of wealth. Lay theories also include information about typical everyday settings, typical characters, and how people are expected to behave in certain contexts (Karniol, 2003). They encode general knowledge that can be applied to all people. The answer to Krueger's question where such lay theories come from is that they are a compendium of day-to-day psychological wisdom based on various personal experiences. It takes time to develop these theories, and, like scientific theories, they are refutable and revisable (e.g., Harris, 1992).

If our original article can be interpreted as saying that the basis of these lay theories is an inference from well-known people to people in general, we apologize for this misunderstanding. Lay theories come from everyday

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experiences, irrespective of whether well-known or unknown people are involved. Of course, lay theories can be enriched with information about specific people if such information exists (Nickerson, 1999). For example, a social-cognitive variant of theory theory, namely Karniol's (2003) self-as-distinct model, holds that general (generic, in Karniol's terminology) knowledge can be used in predictions. The self has no special status in this model. Specific knowledge, that is applicable only to a certain individual, can lead to an activation of the self, but this is not equal to using the self as a basis for a prediction. In sum, there is an alternative to the projection view that is theoretically plausible and empirically substantiated.

2. Correlations and social projection

Once we realize this, the status of correlational data becomes a central issue. What do correlations tell us about the prediction strategy? The use of either theory or simulation can lead to a high correlation. Our example of a choice between carrion and apples as food is only a far-fetched example to illustrate that the use of a theory can also lead to a prediction that entirely overlaps with one's own choice. Take a more realistic prediction: Would someone prefer raw beef or cooked beef? Most people would (correctly) predict a preference for cooked beef, but some people (sometimes) prefer raw beef (otherwise there would be no beef tartar). However, for predicting this, there is no need to project your own preference. Rather, you can apply the simple rule that people prefer cooked over raw meat. If you do so, a high correlation between own and predicted choice follows. Krueger (2008, 2012) correctly points out that there are ways to identify biases based on projection by using corrected correlations (see below), but most of the evidence for social projection still is based on uncorrected correlations.

Theory can account for high as well as for low correlations. Knowledge used in predictions can be wrong, and it does not necessarily have to do anything with oneself – knowledge can happen to lead to a prediction that is similar to one's own point of view, but it needs not to. Therefore, correlations are hard to interpret and are unreliable indicators of social projection. However, correlations varying widely in magnitude all have been interpreted as providing evidence for social projection. Krueger points out that “By sampling error alone, self-other correlations will vary, and that variation is a general property of empirical evidence. (...) Meta-analysis is a suitable method to aggregate effect sizes over studies and to thereby wash away the error”. This might not be an easy task. While effect sizes do vary, this variation is treated differently in meta-analyses (cf. Borenstein, Hedges, Higgins, & Rothstein, 2009). Under the fixed-effect model, the assumption is that there is only one true effect which underlies all studies, and differences in the effect sizes are due to sampling error only. The goal is to estimate the one true effect. In contrast, under the random-effects model, the assumption is that there is an array of true effects depending on the characteristics of the studies, and therefore, that there are different effect sizes that underlie the effect size variations in various studies. The goal is to estimate the mean of a distribution of effects. Here, variations in the effect sizes are due to sampling error,

in addition to true variation in effect sizes. Therefore, depending on the approach, variation in the magnitude of correlations can be interpreted as a variation around a fixed-effect (indicating the same process, i.e., projection), but also as a variation that indicates different processes (e.g., the application of different theories). Meta-analysis by itself does not tell you whether the effect is fixed or random; rather this is up to the researcher to decide.

A related point is which magnitude of correlation should be used as a benchmark for demonstrating projection. Krueger points out that our proposal of using self-reliability has a problem: It sets a ceiling and ensures that only a bias of underprojection can be discovered. Different aspects of projection have to be distinguished here. One is evaluative: Whether a prediction leads to a correct outcome. Social projection can be justified and be statistically appropriate (Dawes, 1989; Hoch, 1987), and there are measures that capture whether a ‘truly false consensus effect’ (Krueger & Zeiger, 1993) exists, by correlating item endorsements with the difference between estimated and actual consensus. A truly false consensus effect tells us that people are getting their predictions wrong, but again, not what the source of this bias is (i.e., simulation vs. theory). The other aspect is conceptual: From the perspective of simulation theory, one cannot use the self too much. Either you simulate or you don't, but this is not a matter that is related to the correctness of the prediction. Simulation means that you use your own system in exactly the same way for predicting thoughts, actions, and feelings of another person as you would use it if you thought, acted, or felt yourself. Logically, there is no way to overuse the self. Krueger's observation thus is true; by using self-reliability you could only detect underprojection, because overprojection is logically impossible. If social cognition were to use this benchmark, the conclusions probably would be quite different: that there are many cases of underprojection.

Taken together, additional methods that go beyond simple correlations are necessary, for example, the use of empathy gaps (Loewenstein, 1996), the method of juxtaposed versus independent predictions by Perner, Gschaidner, Kühberger, and Schrofner (1999), or the use of process tracing methods in addition to input–output measures (Schulte-Mecklenbeck, Kühberger, & Ranyard, 2011). In addition, even self-reports can be successfully used in studies on social projection (Dunning & Hayes, 1996). In sum, it is not that correlations should be abandoned altogether, but they should be interpreted with caution and supported by additional methods.

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