

## **Theory Construction and the Empirical Social and Behavioral Sciences**

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The empirical social & behavioral sciences (ESBS), and particularly social psychology as the largest ESBS field, have made significant advances in empirical measurement and mathematical modeling. The ESBS nevertheless feature comparatively “soft” empirical structures and unsophisticated theoretical superstructures (mere directional, nominal hypotheses). Strengthening the theoretical structures requires hardening the empirical structures—primarily via large enough samples. Of equal importance is a sophisticated notion of an ESBS theory. For what an ESBS theory is—and how one constructs it—has remained unclear.

Approaching this need for a philosophy of science perspective, the project’s central goal is to develop a toolbox for theory (re-)construction that enables ESBS scientists to formulate point-specific hypotheses, and to integrate/differentiate such hypotheses into theoretical frameworks. ESBS researchers could learn much from how such superstructures have developed in the hard sciences, notably in physics—insights this project draws on. As the toolbox should align with is cognitively accessible in the ESBS today, the project “downplays” formal logic and set theory as representational tools, instead foregrounding topology (aka conceptual spaces).

Compared to what ESBS-research offers today, project results allow ESBS researchers to do yet more with the data they collect, namely: to construct, and validate, sophisticated (point-predicting) empirical theories.