

Response Paper: Abstraction and Detail in Experimental Design

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1 Summary

Political scientists are often confronted with the question of how abstract or detailed their experiments should be which typically follows from the trade-off between experimental control and generalizability. The work in [1] provides a conceptual framework which helps experimentalists to make sense of the wide range of choices for the degree of abstraction or concreteness of their designs. The implications of abstraction introduced by this framework are tested through replication and extension of three well-known experiments in political science [3, 4, 5].

In detail, the introduced conceptual framework outlines three dimensions of abstraction: situational hypotheticality, actor identity and contextual detail. Situational hypotheticality is related to whether a scenario is described as hypothetical or not. A hypothetical situation allows experimentalists to manipulate features of the world to draw comparisons from different states of the world. Actor identity as second abstraction dimension deals with the question if the identity of actors are real or artificial. This can be distinct from the hypotheticality of the situation the actors are embedded, leading to experiments where real-world actors (e.g., Donald Trump and Barack Obama) are used in a hypothetical scenarios [2]. The third level of abstraction involves the amount of additional context information provided by the experiment. This contextual detail is usually composed of three related dimensions, where the first is the volume of information provided, the second

concerns how the context is presented and the last is the content of the information itself.

The empirical evaluation is performed via replication and extension of three vignette-based (experiment presents a hypothetical situation) survey experiments: The Elite Cues experiment extends [4], which compares support for immigration policy based on receiving an in- or out-party endorsement. Additionally, the In-Group Favoritism experiment replicates [3] and tests how the manipulation of the expected gains in a trade deal can affect the public support. Finally, the Nuclear Weapons experiment extends [5], which evaluates the effect of manipulating the effectiveness of nuclear weapons on public support for nuclear attacks.

The results of this paper indicate that changing the framing of an experiment to explicitly hypothetical does not change the main findings itself. Also, most actor identity conditions do not affect the main treatment effects, but it is worth mentioning, that using high-salience actors impacts the endorsement treatment. Altering the contextual details of the experimental setting showed that extended experimental vignettes seem to dampen the original treatment and leads to more conservative treatment effects.

2 Discussion

The corresponding paper confronts the issues raised through so-called "design degrees of freedom", which embodies important experimental design questions (e.g., real or made-up actor names, contextual detail, presentation of information). Their proposed framework of abstraction with 3 different dimensions is built upon the construal level theory [6]. The construal level theory defines abstractions as higher-level representations and involves distinction between invariant features and secondary features, which may change with context. In the work three dimensions for conceptualizing the abstraction in experimental design are presented: situational hypotheticality, actor identity, and contextual detail. The authors state that these three dimensions strike them the most important for designing studies, but can be complemented with other dimensions. Unfortunately, they do not state other possible dimensions and therefore limits the reader's chance of evaluating the importance of the selected dimensions themselves.

Another area in which the paper could be further developed is in its discussion of the relationship between abstraction and detail and different

scientific disciplines. While the authors touch on this briefly, they do not provide a detailed analysis of how different disciplines may require different balances between abstraction and detail in their experimental designs. Also, the experimental evaluation of the theoretical framework via reproduction and extension of political-science only relevant experiments hinders to assess the consequences of the potential trade-offs associated with differing levels of abstraction in other areas. Extending the framework to multiple scientific disciplines would be particularly relevant for interdisciplinary research, where researchers from different fields may have different perspectives on what constitutes an appropriate level of abstraction or detail.

References

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