

SEMINAR

Department of Experimental Statistics
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Learning from Replication Studies: Implications for Applied Statistics and Theory Development

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3:30-4:20pm
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Abstract:

We can agree on the notion that scientific progress does not occur in a vacuum because it is the artifact of knowledge accumulation; as such, it is commonly observed, previous scientific works being cited when new ones are presented; praise and criticism are made based upon the critical evaluation that it is primarily conditioned by the researcher's experience. Very few researchers, however, navigate the extra mile to corroborate preceding findings. A stricter approach for assessing the extent of the value or quality of prior research can be followed by just replicating the results found on the most important literature in one's research agenda or those works that cast serious doubts. Meticulously, replication studies allow us to scrutinize systematically, in terms of the used statistical methods, data requirements, and more importantly the theoretical frameworks that support the contributions being made. Essentially, a replication study allows us to learn in an exhaustive manner how previous research work was conducted. In this presentation, I will share the results from a replication study, and will explain the hurdles that one may face in doing this type of work that some would even consider it a waste of time. Moreover, I will indicate how to approach a replication and extension of earlier works. And more significantly, the implications for applied statistics and theory development will be exemplified.

Keywords: research methods, applied statistics, theory development