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Learning from near misses from Covid 19

Conley and Johnson [1] make a significant contribution to how the social sciences need to advance research on Covid 19. The authors suggest that studies on Covid 19 could learn from other similar one-time events to better understand causality and hence generalizability: Researchers need to be creative in their research design due to the uniqueness of Covid 19 by constructing datasets that contain the same variables as the one-time event or studying possible effects over longer time periods. These approaches aim to study events that have occurred and examine their causal effects. However, Covid 19 also enables the study of non-events or near misses where an event is indistinguishable to the adverse event except for the outcome. Studies show that near misses occur significantly more often than adverse events [2]. For example, the aviation industry tries to learn from the rare event of a plane accident by studying the near accidents that did not happen, or the nuclear industry learns from near fatal accidents that were avoided due to certain crucial actions [3]. The Covid 19 pandemic provides a wealth of events where there were near misses at a country, firm and individual level. For example, how did some countries avoid the catastrophic consequences of the pandemic, how did some firms manage to survive by maneuvering around major supply chain disruptions and how did some individuals evade the fatal or severe mental illness consequences of the pandemic with their timely actions? Studying these near misses is a special case of a more general approach to constructing hypothetical history in order to better understand not only the event itself but also the underlying distribution from which the realization of the near miss incident is drawn [4]. Each of these near misses provides an opportunity to learn about causation that requires an in-depth examination of the elements with a diverse set of interpretations across similar observations and across observers that experienced the non-event [5]. Some studies have argued that near misses might provide a richer context to study causation than actual events as the latter is often compromised by financial, legal and political influences strewn with self-interested interpretations [5, 6]. Hence, the ability to learn from near misses might complement more conventional methods in the social sciences better to understand causation, generalizability, and the consequences of the Covid 19 pandemic. By doing so, it may also allow societies to be better prepared the next time.

Letter in response to [Past is future for the era of COVID-19 research in the social sciences](#) (24 March 2021, *Proceedings of the National Academy of Sciences*)

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References

- [1] D. Conley and T. Johnson, “Past is future for the era of COVID-19 research in the social sciences”, *Proc. Natl. Acad. Sci.*, vol. 118, no. 13, pp. 1-4, 2021.
- [2] P. Barach and S.D. Small, “Reporting and preventing medical mishaps: lessons from non-medical near miss reporting systems”, *British Medical Journal*, Mar. 18, Vol. 320, No. 7237, pp. 759-763, 2000
- [3] A. Azadegan, R. Srinivasan, C. Blome and K. Tajeddini. “Learning from near-miss events: an organizational learning perspective on supply chain disruption response”, *International Journal of Production Economics*, 216, pp. 215–226, 2019.
- [4] A. Stinchcombe, *Theoretical Methods in Social History*. New York, NY: Academic Press, 1978.
- [5] J.G. March, L.S. Sproull and M. Tamuz. “Learning from samples of one or fewer”, *Organization Science*, 2, pp.1–13, 1991.
- [6] M. Tamuz and E. Thomas. “Classifying and interpreting threats to patient safety in hospitals: insights from aviation”, *Journal of Organizational Behavior*, 27, 919–940, 2006.

Acknowledgements

Chander Velu would like to acknowledge funding from the Engineering and Physical Sciences Research Council (EP/R024367/1 and EP/T024429/1) and the Economic and Social Research Council – The Productivity Institute (ES/V002740/1). Sriya Iyer would like to acknowledge funding from The Keynes Fund, Cambridge.