Deep Roots and Reality

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This proposed paper is designed to provide a framework to understand and assess papers that purport to uncover deep roots in economics/political/social outcomes. The seminal work of Acemoglu, Johnson, and Robinson (2001, 2002) led to a sea change in the study of economic growth and development, with its focus on institutions as the underlying determinants of economic success and failure. As a result, m current research is focused on identifying deep roots to current disparities and as such, is focused on showing how events from the distant past have contemporary footprints. This work is often called historical economics, to distinguish it from work in economic history

While the *a priori* plausibility of many deep roots arguments is strong, there are substantial disagreements on the state of deep roots evidence and relatively little systematic investigation of the identification problems that are specific to deep roots claims. Bisin and Moro (2022) and Voth (2022) develop arguments on the credibility of a range of deep roots claims while Durlauf (2023, 2024) and Kelly (2022) have challenged some of these same studies.

In this paper, I will follow the spirit of Sims' classic paper Macroeconomics and Reality to attempt to provide a systematic evaluation of the identification assumptions in the deep roots literature and use this systematization to provide a framework for credible deep roots analysis. Unlike Sims, my objective is not to reject deep roots studies per se. Rather, I wish to 1) characterize the identification assumptions required for deep roots analysis using axes that allow one to best assess their credibility and 2) propose "credence measures" that maps degrees of credibility of the assumptions to the claims of an empirical exercise thereby providing a metric for the strength of evidence in a given study.

How will this be done? I will argue that the identification problems involved in the deep roots literature can be understood as deriving from three separate issues. First, to what extent do unobservables produce spatial dependence across the units under study (cities, countries, etc.) that either render the deep roots unidentifiable or too imprecisely estimated to allow firm inferences? (The latter is the import of Kelly (2022)). Second, to what extent does the magnitude of the time gap between a deep root and contemporary dry of outcomes affect the credibility of the necessary conditions for identification? The time dimension, I will argue, implies (in a precise way) that the number of assumptions needed for identification scales with the time gap, extending claims in Durlauf (2023). Third, to what extent is a deep roots claim associated with aspects of the development process that represent a hinge event? By this, I mean the following. If one claims that current differences between the US and China were affected by the decision in the Ming Dynasty to destroy the Treasure Ships fleet and stop exploration of the Pacific, one is

focusing on a hinge event and needs to be assessed relative to the implied branching process involved in the event and its counterfactual. I claim that deep roots conclusions become more credible to the extent that there are historical reasons to think that the root is associated with such a location in the development process.

In order to create credence measures, I will follow ideas in the philosophy literature on abduction. Abduction, also known as inference to the best explanation, is distinguished from logical entailment (deduction) and generalization from cases (induction). It is the process by which science progresses. The question of course, is how to operationalize. Following ideas in a classic paper by Katz and Singer (2007), I will operationalize for deep roots studies by identifying a set of criteria for assessing whether a study is more or less credible that is amenable to calculating credence scores.

I am cognizant that an econometrics paper is not appropriate for the *Macroeconomics Annual*. Each of the three dimensions for credible deep roots inferences I have outlined is, I believe, intuitive and may be exposited with minimal mathematics. There is also a way to visualize the arguments using Directed Acyclic Graphs as developed by Judea Pearl. Similarly, the credence measures will be shown to be straightforward to construct.

Once I have established a framework for credibility assessment, I will apply to a set of classic papers in the deep roots literature: Acemoglu, Johnson and Robinson (2001,2002) on institutions, Ashraf and Galor on genetic diversity, Nunn and Wantchekon (2011) on the slave trade, Voigtländer and Voth on medieval roots to support for Nazism. The objective is not to declare some papers credible and other not, but to provide a language for understanding the strength of credibility.

References

Acemoglu, D., S. Johnson and J. Robinson. 2001. “The Colonial Origins of Comparative Development: An Empirical Investigation.” *American Economic Review* 95: 1369-1401.

Acemoglu, D., S. Johnson and J. Robinson. 2002. “Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution.” *Quarterly Journal of Economics* 117: 1231-1294.

Ashraf, Q. and O. Galor. 2013. “The “Out of Africa” Hypothesis, Human Genetic Diversity, and Comparative Economic Development.” *American Economic Review* 103: 1-46.

Bisin, A. and A. Moro. 2022. “LATE for History.” *Handbook of Historical Economics* A Bisin and G. Federico, eds. Academic Press.

Durlauf, S. 2023. “The Journey of Humanity by Oded Galor: A Review Essay,” *Population and Development Review* 49: 403-421.

Durlauf, S. 2024. “How the World Became Rich by Mark Koyama and Jared Rubin and Slouching Towards Utopia, by J. Bradford DeLong: A Review Essay.” Journal of Economic Literature, forthcoming.

Katz, R., and B. Singer. 2007. "Can an Attribution Assessment Be Made for Yellow Rain?" *Politics and the Life Sciences* 26:24-42.

Kelly, M. 2022. “Understanding Persistence.” Working Paper.

Nunn, N. and L. Wantchekon. 2011. “The Slave Trade and the Origins of Mistrust in Africa.” *American Economic Review* 101: 3221-3252.

Voigtländer, N. and H.-J. Voth. 2012. “Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany.” *Quarterly Journal of Economics* 127: 1339-1392.

Voth, H.-J. 2022. “Persistence-Myth and Mystery.” *Handbook of Historical Economics*. A Bisin and G. Federico, eds. Academic Press.