Necessity, Contingency and Social Reality

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The underlying argument

Whilst there are grounds for the principle of natural necessity in the physical world, because ceteris paribus, such necessity can be grounded in physical laws, but in the social world there is no such 'grounding' analogue.   The nature of the social world (its structures, events and so on) at any given time is that it is contingent upon, but not determined by prior outcomes.   Contingency is the <u>real</u> nature of the social world.

The order of things....

- **Indeterminism -** *Popper, propensity and single cases. Markov matrix.*

- **Necessity.** *Types of necessity, Harré on necessity. Limits of necessity in the social world.*

- **Two examples**

The frequency theory of probability

- **Underpins most quantitative research and is an _epistemological_ theory.**
- **It depends on the observation of the relative frequency of an event in a known sequence and usually takes the form of reasoning from a sample to a population**
- **Each frequency in sample data, though derived from the observation of an actual person (or other unit of analysis), is for the purposes of statistical analysis an 'ideal' person who when aggregated with persons in the sample are considered statistically representative of some part of a wider population**

The Propensity Approach

- Is an ontological theory based on the assumption that all events have a probability of occurrence.
- *Propensity:* That all events have a propensity to occur that ranges between 0 and 1, where 0 is impossibility and 1 is certainty. Most events in the world have a propensity which ranges from near to 0 to near to 1, though as time passes those propensities become realised, or they become impossible.
- *Single case probability.* If events have a propensity to occur, that propensity must reside in the probability attaching to a single case. In other words probability instead of being a function of a long run sequence, becomes attached to the case.

Richard Scheines (2011)

The Causal Markov Axiom

In any probability P generated by a given causal graph G, each variable X is probabilistically independent of the set of Y, consisting of all variables that are not effects of X, conditional on the direct causes of X.

Necessity: Harré and Madden

To attribute necessity to items as various as a condition, an outcome, or effect, the truth of a statement, a conclusion, is, we contend to indicate that within the relevant context no alternative to that condition, outcome, or effect, truth-value or conclusion is possible.

Harré and Madden (1975: 19)

A Priori and A Posteriori necessity

- The *a priori* mode consists of logical necessity, whereby conclusions must follow from premises and transcendental necessity, whereby certain conditions must obtain for a rational human to have knowledge of the world.

- The *a posteriori* mode is divided into *conceptual* and *natural necessity*. The first of these is that which is necessitated conceptually as a property of a thing, which for that thing to be what it is must obtain. A chair cannot simultaneously be a dog, its properties of 'chairness' conceptually necessitate it being a chair and not something quite different.

Natural Necessity - Harré and Madden

When the natures of the operative powerful particulars, the constraining or stimulating effect of conditions and so on are offered as the grounds for the judgment that a certain effect cannot but happen, or cannot but fail to happen, we have natural necessity.

In this they allow for some measure of contingency and go on to say:

When the probability of its happening falls within a certain range we have the natural necessity of a range or function of probabilities.

Harré and Madden (1975: 19)

The homelessness example

- ● Example 1: Mark and Ruth are living in short-term accommodation and are under threat of eviction. Both left home at 16, but each were in care for periods of time in childhood. Both have experienced periods of homelessness.

- ● Example 2: Alex and Sarah are living in emergency temporary accommodation as a result of a devastating fire in their apartment. This they rented, and was their first home together.. Neither had any prior history of being homeless.

- In Example 1 each of the prior events (expressed as Bayesian priors) raised the probability of being homeless, and across a distribution of cases (n = 193) their odds of finally being homeless were 0.8.

- In Example 2 there was no prior history of homelessness, although Alex and Sarah were early in their housing careers and renting. Had they been home owners their insurance would have provided alternative "non-emergency" accommodation. Nevertheless their odds in the distribution were 0.2.

So.....back to my argument

Contingency, Probability and Realism

Following Popper, my argument is that the world is ontologically probabilistic, thus the variant of realism I'm advocating begins from this ontological state, rather than one of natural necessity (though there is no denial of conceptual necessity). This is not the claim that social processes are stochastic, rather that events are contingent in time, whereby the probability of a later event is contingent upon an earlier ones, not in a simple Markov chain, but as can be captured by a multi dimensional probability graph or Markov matrix.

Why does this matter?

- It is an interpretation of realism consistent with emergence and complexity.

- It provides for version of causality that is contingent, probabilistic and cumulative

- It brings 'quants' back in