

# Varieties of Causation – Mulla Sadra and McTaggart

*Abstract* — Beginning of time is the common end of many causal paths. Temporal phenomena compete for somehow finding their way towards one of the beginning of the casual paths. Each casual paths start form a distinct set of parts but they all converge to the same whole. Such original pre-temporal causation is constitution. The temporal is de-constitution, the reverse direction, but implicates a second mechanism of causation which enables a pre-temporal effect to somehow cause its pre-temporal cause. Time moves towards its origin.

**1** – SEP article on "Change and Inconsistency" discusses the notion that change involves some sort of Inconsistency. There seems to be a sense in which such an inconsistency is minimal. For any entity E as a whole constituted by a set of parts {A, B} undergo change but is to remain *extrinsically* unchanged before, during and after the change if

- A changes to B,
- B changes to A concurrently,
- A and B are extrinsically indiscernible (have identical constitutional roles).

**2** – If we take into account the stage during the change as well not just before and after the change, it is only required additionally that there are C and D such that A changes to C before changing to B and B changes to D before changing to A concurrently, and that the whole constituted by A and B is extrinsically indiscernible from the whole constituted by C and D. The entity E before the change (constituted or caused by A and B) is extrinsically indiscernible from E during the change (constituted or caused by C and D) and after the change (constituted or caused by B and A).

**3** – If we translate this structure into the language of McTaggart's B-series, both pairs (A, B) and (C, D) that cause E independently are in beginning of B-series and the entity E in the end of the B-series. The pairs do NOT occur at the same time, they alternate. However, the entity E caused by the first pair and that by the second pair are extrinsically indiscernible AS IF both effects occur at the same time regardless of which pair is at work at any given time. Thus, B-series may be described as consisting of multiple sequences with different non-simultaneous alternating beginnings (sets of parts) all converging to the same end (or equivalently, to simultaneous and indiscernible ends).

**4** – If causal is the flow of constitution (parts-to-whole direction), there are multiple causal routes from each of the sets of parts to the whole. This may be described as the source of inconsistency. It seems that some consistency is regained if there is a *shortest* temporal path starting form the END of the B-series to its beginning (more precisely, one of its beginnings). That is to suggest that temporal is the flow of de-constitution (whole-to-parts direction)—the transition from a whole which is constitutable by each of many sets of parts to the set of parts that generates the shortest path. This also seem to implicate that the temporal flow must deploy a different causal mechanism than the one operating in the causal routes.

**5** – In the context of the Laplacian universe (initial conditions + deterministic laws) this formulation is equivalent to the case in which the initial conditions are only critically determined at the beginning of time, enough to set off the temporal process, and are further determined towards the end of time, as causal routes are gradually excluded from the set of candidates for the shortest path.