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The Non-linear Dynamics of Meaning-Processing in Social Systems

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Social order cannot be considered as a stable phenomenon because it contains an order of reproduced expectations. When the expectations operate upon one another, they generate a non-linear dynamics that processes meaning. Specific meaning can be stabilized, for example, in social institutions, but all meaning arises from a horizon of possible meanings. Using Luhmann's (1984) social systems theory and Rosen's (1985) theory of anticipatory systems, I submit equations for modeling the processing of meaning in inter-human communication. First, a self-referential system can use a model of itself for the anticipation. Under the condition of functional differentiation, the social system can be expected to entertain a set of models; each model can also contain a model of the other models. Two anticipatory mechanisms are then possible: one transversal between the models, and a longitudinal one providing the modeled systems with meaning from the perspective of hindsight. A system containing two anticipatory mechanisms can become hyper-incursive. Without making decisions, however, a hyper-incursive system would be overloaded with uncertainty. Under this pressure, informed decisions tend to replace the "natural preferences" of agents and an order of cultural expectations can increasingly be shaped.

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