

01 - Post-Relational Agency: The being and becoming of things”

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Abstract

Agency represents one of the most fundamental yet contested concepts in contemporary scholarship, spanning fields from biology and cognitive science to philosophy and complex systems theory. This article presents a comprehensive definition of agency and agential potential, grounded in an extensive theoretical framework and supported by evidence across multiple scales of organization. We define agency as the spatiotemporally distributed capacity of bounded relational systems to maintain coherent organizational identity while generating novel causal networks through selective boundary-mediated interactions. This reconceptualization moves beyond traditional individualistic frameworks, positioning agency as an emergent property of relational organization that operates through recursive dynamics between autonomy and interdependence.

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1 Abstract

This article relates the first part of my inquiry on agency, in which I reviewed it from different lenses such as linguistic, political, and bio-chemical, with my most recent dwelling into necessary clarifications what I meant by “thing” and “relation”. Upon it, I revise my previous proposal where I pinned agency as a property of things, to something like the spatio-temporally distributed capacity allowing things and because of thing. Naturally, I’ll dissect those terms, identity, becoming and relating in a semi-formal attempt to express its recursive nature, setting the stage for the next step where I’ll try to simulate the generating mechanisms for and by these exchanges occurs.

2 Introduction:

The polysemic nature of “agency” across scientific disciplines reflects not conceptual confusion but proximity to an organisational principle operating across all scales of spatiotemporal struc-

ture/events. When addressing matters concerning agency, unavoidable efforts toward formal and operable understanding of identity, boundaries, selves and their quantities. This of course from the perceptual evidence we've gathered that things in the universe seem to relate, allowed by design, or now engineered for such, adding to the multiplicity of agents, in the agent discussion, from chemical catalysts to institutions. Previously I asserted, for this same reason, that we could simplify from "agents to things" as it would serve this study enormously well. I've repeated this, but clarity in abstraction is more than an exercise in discipline, as it seems a form of symbolic compression, simplifying but not reducing, Through systematic integration of experimental evidence from protein turnover in organic systems, bioelectric morphogenesis, at stake is a possible demonstration that agency is a linguistic pointer to an overall capacity to affect and be affected, a relational dynamic that operates through processual identity, boundary, mediated interactions, and across scales, where things are vehicles for both, principals and agents intrinsically.

Why? Stated and widely accepted is agency as a capacity or property that agents possess, creating immediate problems: what makes something an agent? Why some have rights and responsibilities, leverage, and others considered as such without the benefit of consideration? The answer typically involves circular reasoning; agents are things that have agency, and agency is what agents have, or agency in context X assumed only agents of context X. This circularity and fragmentation dissolves if we pose agency as a relational distributed capacity; put simply agency as the way and measure of things affect and be affected by what's not the same.

Opening this inquiry lane revealed agents everywhere. Driving change, changing, composing, being composed, belonging, allowing for and becoming of. Chemicals, proteins, cells, organisms, institutions, markets. The ubiquity of agency across scales, from molecular to institutional, both in language, code, as signs and signals, as energy exchanges; echoing not a special property that came from the human construct and we impose on the world but as something we as a species seem to have a degree of competency in recognising. As pattern, and through our fragmented practices in disciplinary discourse and context dependant sense-making ability, we have been spotting across our endeavors and documenting it, sometimes more concretely than others (embedding graph of polysemic analysis via unsupervised labeling). The polysemic nature of "agency" across disciplines, besides presenting what appears to be an intractable conceptual challenge, yet may point toward deeper relational substrate that permeates multiple levels of organisation. The fragmentation mentioned above can also point to the broader epistemic crisis described by Foucault's anal-

ysis of post, industrial knowledge siloing where biology studies “cells” as static units, economics reifies “markets” as virtual systems, and physics treats “particles” as isolated substances.

If we entertain the assumption that things in the universe relate to some degree, which we have we have no evidence otherwise; then defining things and what makes them distinct means of, allowing said degrees of relation, requires addressing identity, boundary and relations in spatial and temporal dimensions. This exercise seems to have major benefits: if only a subset of things in the universe related, by opposition of a general property of the universe, then learning why and how would be rather informative about the nature of the medium in which we exist. In either scenario, the implications of things relating comprise that agency, or this relating capacity, should be in theory measurable regardless of its nature, though not necessarily constant; and it should be scale-appropriate, concerning the space of things.

3 Effect and Affect

Agency as the capacity to affect and be affected. This definition, rooted in Spinoza’s view, avoids the circular reasoning of agent, based approaches. A thing’s agency is not an intrinsic property but a relational capacity that depends on what it’s made of, what’s connected to, it’s intrinsic and extrinsic morphology, the permeability of its boundaries, and its context.

If we consider protein folding, a protein’s “agency”, its capacity to catalyze reactions, bind to other molecules, or change conformation, depends on its three, dimensional structure (morphology), its hydrophobic and hydrophilic regions (boundaries), and the chemical environment (extrinsic relational context). The protein affects other molecules and is affected by them. Its agency is not a property it possesses but a dynamic pattern of affecting and being affected.

Along this study, previously proposed agential ideas (todo: put link to final manuscript), posed agency as a property of things, allowing for and receptive of varied forms of action (from physics). We identified energy transaction as a phenomena connecting things though scales, and I left in the air an intuition of networks of causation, drawing the medium of unfolding. However, numerous gaps remained elusive and reaching a definition for what many disciplines point to as agency required addressing the nature of being.

I’ll go where it takes me, however daunting, and it has brought us here, facing a potentially relational view, begging an explanations of why energy powered transactions mediators appear at