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Joseph Rouse: *Articulating the World*
University of Chicago Press, Chicago, 2015, 423 pages

Joseph Rouse's lifelong mission appears to be to provide an adequate characterization of the role science plays in human life; and thereby to throw some new and interesting light on life itself. His conviction is that ordinary, descriptive accounts of science, revealing its methodology and its possibilities and limitations, will not do; that science is so integrally embedded within our way of life and thereby so deeply imprinted on our world that philosophy of science is inseparable from other philosophical disciplines. In particular, Rouse maintains that an account for the role of science in our lives must be deeply normative: not in the sense that it must tell us what science should do to be effective, but rather in the sense that it must reflect the fact that science is a specific outgrowth of our essentially and inherently normative practices, such that only if this deep-rooted normativity of scientific practices is taken at face value is there any real understanding of science.

Key terms around which Rouse's new book revolves are *naturalism*, *normativity*, *concepts* and *intentionality*. *Naturalism*, in Rouse's view, is a philosophical standpoint whose exponents "regard scientific understanding as relevant to all significant aspects of human life and only countenance ways of thinking and forms of life that are consistent with that understanding" (p. 3) and the core ideas of this stance Rouse finds inescapable, though he "develops these core commitments in ways that many fellow naturalists will find unfamiliar and perhaps even alien" (p. 4). *Normativity* is something that according to Rouse must be incorporated into the naturalistic framework, and this must be done so that we neither compromise naturalism, nor explain away normativity as a mere fiction. *Concepts* and *intentionality* characterize the specific ways we humans deal with our environment and with each other, distinguishing us from other creatures; conceptual understanding is the specific mode of understanding we human beings display, while intentionality characterizes our specific mode of contact with the world.

Language

One of the most illuminating motifs of Rouse's book is his sketch of the possible origins and nature of language. Many philosophers and scientists maintain that the core process behind the emergence of language is what they call "symbolic

displacement". *Perception* produces representations closely tied to the actual environment, and what is needed for *conception*, which underlies language, is the ability to unbound the representations from the environmental stimuli and let the organism put them to the kind of work that we call thinking. Although not rejecting this, Rouse wants to tell a much more complex story about the emergence of language, fearing that taking the notion of "symbolic displacement" at face value might lead us to a dangerously oversimplified picture. What plays a crucial role in Rouse's story is the concept of *niche construction* that has been introduced by several evolution theorists (see, e.g., Odling-Smee, Laland and Feldman 2003; or Kendal 2011).

Rouse stresses that though nowadays we may certainly take language to prominently serve such purposes as transmitting information and enhancing our capacities for its cognitive management (which appears to be closely connected with the "symbolic displacement"), it would be precipitate to assume that language's evolution has been driven by these very purposes from its inception. It is not self-evident that these purposes could even have been in play at the very beginning; and indeed, evolution seldom operates so transparently. The original gains driving the emergence of language might have been quite different (perhaps connected to the cohesion of social groups?); and they might have created a 'linguistic niche' for further generations to which they adapted; and when language thus became our 'second nature', it might slowly have come to gain also the purposes which we now tend to see as key.

Thus language may have started as a mere set of vocal reactions to external stimuli which as such became an integral part of the human niche so that subsequent generations of humans adapted to it by developing swift reactions to such linguistic episodes with at least part of the reactions being further linguistic episodes, the linguistic intercourse thereby growing in complexity. Thus the drive behind the evolution of language is primarily not the adaptive value of better information transfer, nor that of improved symbolic displacement, but the force of linguistic niche construction.

Here is how Rouse sees it:

> Any account of language evolution that posits direct selection for representation and information exchange must confront this difficulty head on. Such capacities would only be useful at all after the achievement of extensive representational articulation, cohesion, and precision. Its initial selective grip would be hard to understand. By contrast, the problem does not arise if articulated vocal expressiveness originally served functions other than reportorial/representational. A limited initial expressive repertoire would

> not be pointless if the initial evolutionary 'payoff' reflected needs to recognize, sustain, and coordinate larger and more amorphous social groups. (p. 119)

Hence, Rouse concludes:

> Language … initially emerges not as the product of enhanced internal capacities of a larger hominid brain but instead as a perceptually salient, developmentally effective, and selectively important behavioral dimension of the developmental and selective environment of some hominid apes. Vocal expressiveness and its behavioral integration into a transformed way of life persisted as an integral part of these organisms' ecological heritage only through its development and reproduction in each succeeding generation. (pp. 119-120)

I think Rouse's account of language emergence and evolution is both novel and persuasive.[1] It lets us escape the received wisdom that human cognition is what I would call an "inside-out" matter: that it was born in our heads (perhaps as a result of our increasing brain capacity) and language was its means of solving the problem of how to get out to be shared among individuals. His account lets us see that it may instead have been more of an "outside-in" matter: that human cognition originated in language through our increasingly complex practices and got into our heads by their internalization.

Intentionality

The concept of language, of course, is closely connected with the concept of intentionality. Hence, what does it take that we human beings display *intentionality* that our linguistic utterances and/or our mental states are *about* something? Rouse presents a useful classification of approaches to intentionality, based on two crucial distinctions. The first is a matter of distinguishing between "approaches that treat intentional or conceptual phenomena as operative-processes or as normative statuses" (p. 56). The former are those that "seek to discern features of intentional comportments that are operative in producing their directedness toward and normative accountability to their objects" (p. 56); the latter "identifies its domain with those performances and capacities that can be held normatively accountable in the right way" (p. 57). Rouse labels the approaches

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[1] It also seems to tally with ideas that I have presented – see, especially, Peregrin (2011; 2014).

as "A" and "B" respectively, and he sides with the latter. I concur: I am convinced that it is only with the emergence of rules that a true *content* comes into the world. If you have only ways of employment of items, however complex and sophisticated, you cannot grant them more than functions; whereas once you have *rules* of how the items *should* be used, you introduce the kinds of distinction (such as that between an impossible and an improper use) necessary for making the items truly contentful (see Peregrin 2014).

Rouse's second distinction among approaches to intentionality is the distinction between those approaches which start from empty intending (which may or may not find a matching object) and those that start from intending as a relation to an object. He labels these as "1" and "2", respectively. Here Rouse sides again with the latter, and again I think he is right: allowing for intentions wholly severed from the object fulfilling them easily leads us to a solipsistic stance where you may wonder whether there is anything at all external to the intentions. Then we are prone to see the intensions as lying "inside" (a mind, a society or whatever), where the "inside" is self-standing enough not to be in any essential contact with any "outside".

Here is, then, the final classification of the approaches Rouse reaches:

> A1: operative process accounts of the constitutive structure of some domain of possible intentional comportment (e.g., the logical structure of a language, the constitutive presuppositions of a "worldview," or the essential structure of transcendental consciousness)
> A2: operative-process accounts of the causal, functional, or practical patterns of a system's interaction with its surroundings, which suffice to open a possible gap between what the system interacts with and how the system's performances "take" it to be
> B1: normative-status accounts of how the performances of a system or group of systems as a whole mostly conform to a systematically construed ideal of rationality in context, such that the goals with respect to which it would be rational are appropriately taken as authoritative for it
> B2: normative-status accounts of how a system's actual engagement with its surroundings is articulated in a way that renders it accountable to something beyond its own actual performances or those of its larger community of intentional systems (pp. 59-60)

From what was said above, it follows that I would favor the same category of approaches as Rouse, namely B2: seeing intentionality as essentially normative and essentially involved with the things that are intended. However, I have difficulty

when Rouse populates the individual compartments of this classification with approaches to be found in the literature. The distinction between the non-normative (A) approaches and the normative (B) ones fares fine: the former compartment accommodates philosophers such as Husserl, Searle, Dretske, Fodor etc., and the latter harbor those such as Brandom, McDowell, Davidson and Heidegger. The problem is with sorting out the latter into the 1 and 2 compartments. I would say that Brandom, put into the B1 cell, definitely does not belong there, and neither does Davidson. On the other hand, I am suspicious about putting McDowell into B2 rather than B1.

McDowell, as Rouse reminds us, is famously worried that our reason might end up severed from the world, "frictionlessly spinning in the void" (see McDowell 1994). Is this worry what makes him, unlike Brandom and Davidson, a good candidate for the B2 compartment? I think the converse is the case: McDowell's worry is intelligible only on the background that there is an "inside" that can be completely severed from an "outside", which would seem to me to put him into the B1 cell. Brandom, on the other hand, stresses that our linguistic practices, which give rise to primordial intentionality, cannot be thought about as severed from the things which they target. The following passage, for example, would sound like an explicit rejection of "empty intending" as the basic point:

> Discourse practices incorporate actual things. … They must not be thought of as hollow, waiting to be filled up by things; they are not thin and abstract, but as concrete as the practice of driving nails with a hammer. … According to such a construal of practices, it is wrong to contrast discursive practice with a world of facts and things outside it, modeled on the contrast between words and the things they refer to. (Brandom 1994, 332)

To preempt McDowellian worries concerning "the void" in which we can turn out to "frictionlessly spin", Brandom continues:

> Thus a demolition of semantic categories of correspondence relative to those of expression does not involve 'loss of the world' in the sense that our discursive practice is then conceived as unconstrained by how things actually are. … What is lost is only the bifurcation that makes knowledge seem to require the bridging of a gap that opens up between sayable and thinkable contents – thought of as existing self-contained on their side of the epistemic crevasse – and the worldly facts, existing on their side. (Brandom 1994, 333)

Moreover, later in the book Rouse seems to be changing his mind and relocating both McDowell and Haugeland into the B1 cell:

> McDowell, Brandom, and Haugeland each in his own way then attempts to show how conceptual understanding really does reach out to be accountable to and constrained by objects themselves. McDowell (1994) appeals to the passivity of conceptually articulated perceptual receptivity to provide the needed "friction"; Brandom (1994) claims that the game of giving and asking for reasons incorporates our causal relations with objects in perception and action; Haugeland (1998, ch. 13) argues that only an "existential commitment" to preserving an "excluded zone" of conceivable but impossible occurrences can allow objects themselves to govern what we say and do. (p. 184)

It seems, now, that all these thinkers start from an "inside" and try to "reach out" into an "outside", where genuine objects really are. I think this is unwarranted (save, perhaps, in the case of McDowell, as I have already pointed out). And as I have already ventured, I find this inadequate: I do not think that Brandom's (or, for that matter, Haugeland's or Davidson's) outlook can be construed in this way.

Conceptual normativity

Anyway, at this point the reader may become truly curious about what exactly Brandom, Haugeland and others, according to Rouse, are all lacking and what it is that he can offer. Rouse argues that "an adequate account of conceptual normativity requires the integration of biological teleology and social practice; neither alone is sufficient" (p. 161). The social practice component of conceptual normativity, I think, is straightforward: it is our taking the utterances (or perhaps, more generally, also non-linguistic antics) of others (and of our own) for correct or incorrect, ascribing them various commitments and entitlements and recognizing the potential slack between what *is* the case and what *should be* the case. However, what is the "biological teleology" component?

What may come to mind is the Millikanian version of "teleological normativity" (cf. Millikan 1984; 2004): some kind of functioning of an organism or of its organ is correct if this was the function for which the organism or organ was selected during evolution. It is, however, important to stress that this is *not* what Rouse's "biological teleology" amounts to – he explicitly distances himself from Millikan in this respect. His kind of teleology has more to do with the fact that an organism operates in an essentially goal-directed way. Rouse explains his standpoint as follows:

> We are not subjects confronting external objects but organisms living in active interchange with an environment. An organism is not a self-contained entity but a dynamic pattern of interaction with its surroundings (which include other conspecific organisms). The boundary that separates the organism proper from its surrounding environment is not the border of an entity but a component of a larger pattern of interaction that is the organism/environment complex. In the absence of appropriate interaction with a suitable environment, there is no organism because the organism dies. Death is the cessation of the constitutive ongoing pattern of interaction that is an organism making a living in its environment. After the organism's death, and especially after the extinction of its lineage, there is also no environment. An "environment" is the "belonging together" of various aspects of the organism's surroundings as collectively enabling/sustaining life. This pattern is teleological and hence normative: it has a goal, and it can succeed or fail in attaining that goal. The goal, however, is not something external to the goal-directed process but is instead the continuation of the process itself: organisms in environments are what Aristotle (1941, bk. IX) called *energeia* ("actualities"), goal-directed processes whose goal or end is present in the process itself. (pp. 186-187)

In so far as I understand the point, a biological organism is essentially goal-directed, which amounts to the "biological teleology" that constitutes the other dimension of conceptual normativity, complementing the "social practice" dimension. Thus an organism acts in a *wrong* way in so far as it does not behave in a way that fosters its inherent goals. In this way it is life itself that is an inherent source of a normativity.

However, taking life itself as yielding normativity seems to me rather problematic. Consider Pinkard's reproduction of Hegel's criticism of Kant:

> The outcome of the dialectic of "consciousness" had shown that it depended on how we were taking things, and that, in turn, raised the issue of what we might be seeking to accomplish in taking things one way as opposed to another. Thus, the issue turned on what purposes might be normatively in play (or what basic needs might have to be satisfied) in taking things one way as opposed to another. At first, it might look as if "life" itself set those purposes, and the necessary rules for judgment would be those called for by the needs of organic sustenance and reproduction. However, practical desires are themselves like sensations in cognition; they acquire a normative significance only to the extent that we confer such a significance on

> them (or, in Kant's language, only as we incorporate them into our maxims). That means that agents are never simply satisfying desires; they are satisfying a project that they have (at least implicitly) set for themselves in terms of which desires have a significance that may not correspond to their intensity. The agent, that is, has a "negative" relation to those desires, and thus the agent never simply "is" what he naturally is but "is what he is" only in terms of this potentially negative self-relation to himself – his (perhaps implicit) project for his life, not "life" itself, determining the norms by which he ranks his desires. (Pinkard 2002, 225-226)

I find this crucially illuminating: it seems to me, just like to Hegel and Pinkard, that a life can yield genuine normativity only in so far as it "has a project"; and I think that it can "have a project" only if embedded in a social network of our human type and if it participates in the network's cooperative practices. Hence, as far as I can see, it is "social practices" all the way down.

This is not to say that life itself cannot yield "its own kind" of normativity; just like evolution yields, in the Millikanian way, "its own kind" of normativity. I only insist that it is a normativity that is on a different level than that yielded by "social normativity". Once you are in the "normative space" opened up by such practices, you are at liberty to see the normativity of both evolution and life.

Science

Of course, a substantial part of Rouse's new book focuses on the nature of science and on its rule within human life. His tenet is that science is not merely one human activity among others, nor even the most important human activity; instead, it is something so deeply integrated with our way of life that it cannot be disentangled from life's other parts:

> We gain a richer and more detailed grasp of scientific understanding and scientific practice by recognizing it to be an ongoing process of niche construction. Scientific niche construction involves coordinated shifts that create new material phenomena, new patterns of talk and skillful performance, the opening of new domains of inquiry and understanding, and transformations in what is at issue and at stake in how we live our lives and understand ourselves. The sciences thereby transform the world we live in and our place and possibilities within it. In doing so, they articulate the world as conceptually intelligible. Neither merely "made up" by us nor found to have been already there, conceptual articulation is the out-

> come of new ways of interacting with our surroundings that mutually reconstitute us as organisms and the world around us as our biological environment. (p. 217)

This view of scientific practices as more of a mode of our existence than our specific activity then allows Rouse to round up his naturalistic picture of us humans within our world:

> Our discursive practices have effected a material transformation of the world and our way of life, which lets the world show itself and affect us in new ways. Our understanding of nature does not and cannot occupy an imaginary standpoint outside nature that would let us represent it as a whole in an intralinguistically articulated "image". Scientific understanding is intraworldly, partial, historically situated, and unable to transcend its own worldly involvements. Yet those involvements extend outward from scientific practices in the narrowest sense to encompass the place of scientific understanding within human life more generally. Conceptually articulated niche construction extends throughout human life. The sciences are important to us because of their integration within those broader issues, not as separate and relatively self-contained. In this respect, scientific understanding belongs within the contingencies of human history and culture. (p. 383)

In this way, Rouse presents a picture of us humans within our world that differs in many respects from that to which we are used. According to him, we are best seen not as subjects opposed to the objective world, but rather as integral parts of the objective world, which, however, must be seen as burgeoning with life; hence it is biology, rather than physics, that is crucial for our understanding ourselves. Our language, our reason and indeed our science should be seen as a natural outgrowth of the ferment of the living world, gaining its shape by means of evolution bolstered by the processes of niche construction and gene-culture co-evolution. The direction of our human life, and of our human history, is not determined to us from within: it is determined by the norms that arise out of our being the living organisms we are, and also by our being the social organisms we are. On the whole, I think that Rouse's book is duly thought-provoking – it opens new vistas on problems we thought we had already seen through.

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