philosophical-psychological-sociological
OPEN PEER COMMENTARIES
radical constructivism

sufficient for limiting current research rou-
tines (negative heuristic), for specifying a
group of admissible procedures (positive
heuristic), for breaking new paths for
research designs (innovative heuristic) and
for self-adaptation and self-accommodation
by radical constructivism itself, depending
on the cognitive evolution of specific empiri-
cal research areas.

As already pointed out, von Glasersfeld’s
“How Conceives of Society?” reserves too
modest a role for radical constructivism. In
my judgment, the availability or the lack of ties
that are at least weak will become crucial for
the viability and the sustainability of radical
constructivism in the years and decades
ahead.6

Notes
1. It must be noted that there are subtle dif-
ferences between radical constructivism
Ernst von Glasersfeld style, second-order

Why Private Meanings Are Incoherent
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Introduction: The view from within

The epistemology of radical constructiv-
ism is based on and tied up with a certain
choice of perspective. The central question of
how knowledge is “built up” (§42) is
addressed strictly from the point of view of a
single individual: an observer’s internal sys-
tem processes raw sensory data by “drawing”
connections (§13) according to “patterns” or
“schemes” that evolve and are selected
according to internal criteria of cognitive via-
bility, i.e., according to whether they have
proven to regularly produce actions that are
“meaningful” according to internal “basic
values” of the individual (§§15–17). Conceiv-
ing of other individuals and of society is, then,
to be understood along precisely the same
lines (§§18 and following). Henceforth, the
strictly internal “conceptual schemes” and
“conceptual structures” that radical construc-
tivism takes as its starting point will be called
private, just to have a convenient term (cf.
§37).

Obviously, radical constructivism does
not content itself with the desire merely to
describe cognitive processes from a certain
individualist stance. One of its most impor-
tant claims, or so it seems, is that this stance is
the only one appropriate to epistemology;
nothing else being unwarranted metaphys-
ical (§32) or ontological (§31) commitments.
As for typical sociological notions such as
“(linguistic) meanings” or “society,” von Gla-
sersfeld urges that they are abstractions that
are to be generated by each individual anew
(§46); it is only “mutual orientation and
adaptation” (§26) that makes conceptual
structures of different interacting individuals
somehow “compatible” (§28). The radical
constructivist stance is even assumed to be a
superior attitude for participants in contro-
versial conversations (§29).

How can “private” conceptual
schemes be “compatible”? 3

In what follows, I will focus on one crucial
step in von Glasersfeld’s argumentation, viz.
his view that every individual constructs his
own private meanings (understood as con-
ceptual structures or elements thereof) for
linguistic expressions, so that linguistic inter-
action and even communication in general is
based on a notion of compatibility between
different speakers’ private conceptual
schemes. The central question here is: “Just
what does it mean that different private con-
ceptual schemes (private meanings) are com-
patible, or what constitutes a viable crite-
ration to this end?” As von Glasersfeld himself
stresses twice (§28, §37), the criteria to be
looked for can only be “public,” residing in
properties of verbal and non-verbal actions
of the interacting individuals, properties that
can be sensed and processed by the participat-
ing system.

Obviously, private conceptual schemes of
different individuals cannot be compared
directly in any way. For one thing, I have no
access to my conspecifics’ internal cognitive
machinery; all I have is my perception of the
actions (more precisely, of the bodily move-
ments and noises) that are the result of this
machinery’s inner working. What is perhaps
more important, I do not even have access to
my own conceptual schemes: I cannot say why

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I am sure that this apple is red; I somehow simply know it.

§4 So all I can do to check that my conspecifics’ private meanings are “compatible” with mine is to look at the circumstances of actual, publicly observable use of the words we use. But again, this is not as trivial as it may sound. As von Glasersfeld puts it in (§28), “this compatibility as a rule, manifests itself in no other way than that the receiver says and does nothing that contravenes the speaker’s expectations.” Of course, this criterion cannot be taken literally: in a thought experiment, even someone whose cognitive schemes are identical to mine in any conceivable respect will at times surprise me, e.g., by unveiling some unknown plans or intentions of his or acting in a way I could not possibly foresee due to lack of some vital piece of information. As a consequence, the radical constructivist faces the burden of proof that there is a non-circular way of determining whether some action is unexpected because of discrepancies between the private meaning schemes of individuals or because of “something else” (e.g., disparities in knowledge of the world).

All we can say for sure is that we observe (or “conceptualize”) more or less stable recurrent interactional patterns around us that gradually change through time, that can, in a certain sense, be extended to include new individuals (e.g., infants), and that differ from what is found in other interactional groups. However, stable interactional patterns also evolve between a man and his dog. What sort of criterion could possibly tell us in the latter case whether the patterns observed are “due to mutually compatible mental operations” (§37)?

One possible escape hatch could consist in pointing out that we might be able to impute private meanings to our conspecifics in just the same way that we are able to impute to them those general cognitive capabilities “that we become aware of in ourselves” (§22). There are many philosophical pitfalls here, however – it is not at all clear how such an imputation is possible at all. It was David Hume who, in his Treatise, pointed out that all that the subject is “aware of” in perceiving or feeling is the perception or feeling itself; by no means do humans sense a “self” that “has” this perception or feeling. But, from the internal point of view, it is only on the model of such a “self” or “mind” that “has” the perception that we can attribute feelings etc. to other “minds”; first-person ascriptions presuppose third-person ascriptions, not vice versa. See the postscript on the problem of “other minds” in Kripke (1982) for an accessible introduction to these issues.

Moreover, there are no clear-cut behavioral criteria for what it means to impute intentions or feelings to others. Dennett (1996) gives ample empirical evidence for animals behaving as if they are able to adopt the “intentional stance” towards other beings, ascribing intentions and propositional attitudes to them, although all available evidence points to the conclusion that these animals do not possess anything like a conceptual (re)presentation of others’ minds, acting only on innate behavioral patterns instead.

An alternative view on interactional patterns

The upshot of the preceding discussion is that we are left with a notion of more or less stable and recurrent interactional patterns, a notion that suggests an inverted way of looking at things: when we ascribe “compatible” cognitive or conceptual abilities to our conspecifics, we do it because we have established recurrent patterns with them. In other words, the patterns are not the causal consequence of private schemes having become compatible through some process of adaptation – they justify our ascriptions, i.e., they give “meaning” to them, only after they have come into existence. Moreover, our ascription acts themselves are simply a part of these patterns. The following sections will expand on this view.

The genesis of complex interactional patterns involving several individuals can be modeled within a generalized theory of evolution, for a lucid presentation of which see Schurz (2001). Although the vast internal complexity of the individual systems involved has a causal bearing on the development of such patterns, the outcome of the development has, on a conceptual level of description, a certain independence of the private cognitive properties to be found “within” those individuals, because the “geometry” and dynamics of the individuals’ “phase spaces” can be vastly different from the geometry and dynamics of the “combined” phase space resulting from their persistent interactions. In particular, the behavior and “attractors” of the combined phase space may, to a surprising degree, be insensitive to details of the inner processes of the interacting individuals. I avail myself of some mathematical notions that are used in a more or less metaphorical, illustrative fashion here, borrowing heavily from Cohen & Stew- art (1994), where the ideas briefly alluded to here are expounded at great length.

The patterns that emerge through the interaction of sufficiently complex individu- als will be only partially “perceivable” by those individuals themselves. Metaphorically, high-dimensional recurrent patterns of state changes (e.g., “attractors”) of the combined phase space are “visible” in the “private” phase spaces of the individuals only as lower dimen- sional “projections.” Different individuals’ phase spaces may yield very different projections of one and the same pattern. (A good intuitive illustration of how much is lost by projecting an object onto a subspace of lower dimensionality can be gained, e.g., from looking at different two-dimensional images of one and the same four-dimensional hypercuboid.

As such, all this does not pose a threat to radical constructivism: one could simply insist on looking only at the private, internal aspects of such interactional patterns, no matter what additional and “high-dimensional” properties, inaccessible to the individ- uals involved in them, they might have. The possibility of discussing such additional properties would still be available, if only as some sort of (theoretical) construct.

It is precisely linguistic communication that shows why epistemology cannot choose to settle for the view from within. I shall take it for granted that any sound epistemological position must be, at least in principle, linguisti- cally communicable to others; language and communication, however, are good examples for interactional patterns of the kind envisaged above. In using language, we simply rely on these patterns; we “live in them,” much the same way as we live in and live by other artifacts that have been created by man. Whatever privately goes on inside us when we happen to be “in” such a pattern is irrelevant, both in the sense that private inner states are not accessible to others and, more importantly, in the insensitivity sense discussed above.

Again, the radical constructivist might be inclined to confuse himself to looking at what goes on inside the individual while it is “in"
such a pattern. We shall now discuss the phenomenon of linguistic reference to see why this will not do the trick. Referring to an “object,” “idea” or “state of affairs” by means of language is possible only inasmuch as the “entity” referred to is involved in an interactional pattern that is, in turn, intertwined with or part of the pattern network surrounding the use of the linguistic expression in question. What is important here is the fact that we have to look at the patterns as a whole, not only its “private,” individual aspects, to see what the reference amounts to. A simple illustration of this would be what Putnam (1975) has called the “linguistic division of labor”: everybody in a certain group might be considered a competent user of the word “gold,” although only a few experts are able to determine with certainty whether a given piece of metal is indeed gold. To give a more mundane example, different people can talk about a certain person even though they have widely differing, and in part possibly false, beliefs about that person. Language here serves as an external device that “transcends” the “private” specifics and idiosyncrasies of the individuals using it.

It follows with conceptual necessity that one does not refer to some private, inaccessible phenomenon when talking about someone’s feelings, intentions or ways of meaning and understanding. In ascribing “intentions,” “values” or “feelings” to a person, each of us, including radical constructivists, inevitably reinstantiates a complex social pattern that, although not causally independent of the internal states of that person, cannot somehow magically be directly “about” private aspects of the person.

If this argumentation is correct, then it follows that there simply is no such thing as a “private meaning”; the very word “meaning” cannot but refer to something that is entangled in and even produced by a whole network of evolving interactional patterns that might have totally different repercussions “inside” different individuals that participate in that network. But if there are no private meanings, then the question of how to check for their interpersonal compatibility simply does not arise. This does not imply that misunderstandings are a priori impossible: we constantly face unexpected reactions, children must “acquire” the meanings of words, etc. But the question of what counts as “unexpected,” and why, in which respect, and with what consequences this is so, and the question of what circumstances someone can be said to have “mastered” the meaning of a word are all settled only within a communicational system. They cannot be answered “in advance” from a purely individualist stance.

Is Ontology Necessary?
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Let me begin by stating that I am very much in sympathy with the arguments and conclusions presented by Ernst von Glasersfeld in this article. Indeed it expresses, in a succinct and powerful manner, what to me is the basis of radical constructivism (RC): Any individual knower can acquire her knowledge only by constructing it, in a process that takes place in her own mind – a subjective act of processing and interconnecting her own personal experiences and mental abstractions. This holds when the constructed knowledge deals with inanimate objects, and also when it refers to other persons – whether as individuals, or grouped together in some notion of a “society.” Thus, there is no conception in RC of establishing knowledge that is objectively true, in the sense of describing correctly some aspect of an ontological reality that exists independently of the subjective experience of knowers.

And yet, when reading the article, I am left with a slightly uncomfortable feeling that there is something missing here – an unspoken issue that is not adequately addressed. The issue is ontological; it may be expressed, somewhat simplistically, in the form of a question: “What is it (i.e., the knowledge that is constructed) knowledge of . . . ?”

RC maintains – as has been repeatedly pointed out by von Glasersfeld and others – that the only “source material” that is available to an individual knower, and from which she can construct knowledge, is her own experiential world: i.e., the total sum of all her experiences (which, it is important to note, will include both sensual perceptions and mental reflections). In other words, there is no way that she can get to peek behind this “filtering screen” of her own experience and observe the world as it “really is,” i.e., some kind of “reality” that exists independently of herself and of other learners. In particular, it is not possible to separate perception from reflection in the construction of knowledge: to “observe” an object independently of our mental processing of the sensual stimuli that we associate with this object (§5). Thus, RC features a sharp distinction between epistemology and ontology, and indeed tends to focus on the former: the origin, scope and limits of the knowledge that is being constructed. In fact, expositions of RC will often reject considerations of ontology as being irrelevant to the construction of knowledge: for instance, von Glasersfeld states (§47) that