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.

15 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.

16 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 under 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.

Inasmuch as *society* is the totality of interactional patterns (in the sense discussed above), this means that a valid notion of society, indeed our being part of it, is *presupposed* in our analyses of communication – not the other way round. In a way, the way human society has evolved is responsible for the most intricate aspects of human cognition – as many others have argued before – without thereby presupposing in any way that society is "a ready-made ontological given" (§31; see Tomasello 1999 for a recent compelling exposition.)

17 As a final point, it should be emphasized that the line of argumentation briefly sketched here does not hinge on any specific ontological assumptions, although the language used to present it, almost inevitably and similarly to many passages in von Glasersfeld's article, is imbued with the kind of "common sense ontology" that is typical of ordinary language. In particular, even when one takes one's conspecifics and their actions strictly to be one's own conceptualizations, it is, I think, quite possible to argue that the referential function of the words we use to ascribe cognitive states or linguistic meanings to another person is, at best, very indirectly connected to whatever private internal processes we assume to be at work "inside" him.

Is Ontology Necessary?

Andreas Quale
University of Oslo
<andreas.quale@ils.uio.no>

1 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 individu-

als, 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.

2 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* …?"

3 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

his goal is to establish a coherent model of knowing, without any superfluous ontological presuppositions.

4 And this is of course quite all right, as far as it goes: the epistemological *theory of knowing* offered by RC is indeed able to stand on its own, with no need for any ontological underpinning. My concern, however, is with the individual *knower*. I submit that she will need (and, indeed, will invariably have) some kind of *ontological basis* for whatever knowledge she constructs. Let me expand on this.

5 We all have a conception, in our minds, of a fundamental division that obtains between what might be called our *internal* and *external* experiential world. To the first belong such items as: our thoughts, emotions, volitions, beliefs, preferences etc. All these are experienced as being, in some sense, situated "inside us." The second is populated by more or less tangible items that we conceive of as being located "outside us": inanimate objects, animals and plants, and other people. And it is important to remark here that I am not talking about the *knowledge* that we can gain about such external items – this has to be constructed by the individual knower, as stated above. Rather, I am arguing that we all "feel" – i.e., experience, in a somewhat vague manner – the perception that these external items *are available out there*, for us to experience. And note that this feeling is *precognitive*: it comes into play before, and provides a base for, any cognitive knowledge construction that the individual knower will engage in. This activity of construction is then, of course, envisaged in RC as a process of continually adapting and modifying mental images, as pointed out in von Glasersfeld's article. But I am suggesting that such a process of construction will necessarily rest on this precognitive ontological notion of an "external experiential world."

6 This touches on the issue of *solipsism* – a vice that RC is often charged with promoting. In the present context, it can be described as the proposition that *there is no external world*: all the external objects that we think we are experiencing are in fact nothing but figments of our imagination, i.e., hallucinations situated in our own mind. Of course, such a posi-

tion will be universally rejected. But note that this rejection is not based on epistemological arguments: from a logical point of view one simply cannot exclude the possibility that one is in fact hallucinating all one's experiences. On the contrary, we repudiate the idea of solipsism on ontological grounds: it simply does not accord with the way we choose to live our lives. (This issue is discussed in more detail in Quale 2007b.) In other words, we adopt as an *ontological presupposition* the viewpoint that our external experiential world is actually there for us to experience.

7 It seems to me that von Glasersfeld is in effect doing precisely that in his discussion of *interactions* between human beings (§15, and particularly §19). In common parlance, the notion of interaction presupposes at least two agents that can interact – i.e., act on, and react back on – each other. (Clearly, this notion becomes meaningless in a solipsist perspective, where there is nothing outside oneself to act on.) The article describes (§19) the child's interactions with items in her external world (including human beings), as being necessary for her construction of reliable knowledge about these items. Surely this must imply the ontological assumption that this external world, and the items in it, are available for us to interact with?

8 A note on terminology: I am deliberately avoiding the use of the term "exist." This is because the notion of "existence" is often associated with specific realist conceptions of an "objectively existing reality," of which we are able to obtain cognitive knowledge. (For a more detailed discussion of this issue, see Quale 2007a.) Instead, I am adopting an alternative terminology, where the external world is described as "being there," and "being available for us." This is intended to evoke the imagery of an external experiential world on a precognitive level, as noted above; and this conception of an external world can then provide, for the knower, the necessary ontological basis for her construction of knowledge, in the way that is defined in RC.

9 To sum up: I maintain that RC, considered as an epistemological model of knowing, should not turn its back on ontology. Rather, I am proposing an extension of this

theory to also take account of non-cognitive knowing. In particular, I am suggesting that it is fully compatible with – and, indeed, that it should explicitly accept – the following ontological premise:

- The external experiential world is available for us, as a *shared resource*. This means that individual knowers are able to act on it, and interact with each other in it; in this way they can reach an agreement that they are experiencing the same world. In that sense, it (i.e., the external experiential world) may be legitimately regarded as the source of our sensual perceptions, and radical constructivists may thus confidently repudiate the charge of solipsism.

- However (and this is crucial), it is not possible for an individual knower to obtain *objective knowledge* of the items that populate this external world. All knowledge must be constructed by a knower, through a processing of mental abstractions as described in von Glasersfeld's article; it is not possible for the knower to isolate the external item from the framework of these abstractions.

10 Expressed in Kantian terms: We cannot observe "the thing in itself" independently of our own faculties of perception and reflection; nevertheless, we are allowed to assume that "the thing is there" for us to observe. I submit that this viewpoint may go some way towards alleviating the unease that many critics of RC have expressed, regarding this theory's alleged "denial of reality" and implications of solipsism.

11 Let me emphasise again that the present commentary is not intended as a criticism of the arguments presented by von Glasersfeld in the article; as already noted, I am in substantial agreement with these arguments. It is, of course, perfectly legitimate to concentrate on the epistemological aspects of knowledge building and in this context declare oneself to be unconcerned with ontological issues. However, I am suggesting that such issues may be of concern in other connections – and indeed that a discussion of them may supplement, and yield some valuable contributions to, the theory of RC.