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Some thoughts about the concept of thinking

(Commentary to Jytte Bang: Steps towards an ecological approach to thinking)

It has been a pleasure to read and think about Jytte Bang's article on an ecological approach to thinking. I have learned much from engaging with the text, and there are so many parts of it that I agree with. So the small number of critical comments raised below should be seen as tiny ripples on a vast sea of agreement. I am not even sure that my comments are directed at the intentions of the text, so to speak, but perhaps more at the ways some of the conclusions are formulated.

In her article, Jytte Bang takes the first step towards an ecological approach to thinking by asking: "What exactly is this process in humans, which psychology has named *thinking*?" She immediately gives a number of helpful answers to the question, such as thinking is "part and parcel of almost all human activity", and thinking is "deeply *personally* and *emotionally* motivated *acting*, embedded in culturally developed systems of *meaning*, directed towards participating in some possible future situation which has to be *anticipated*". As someone with an interest in John Dewey's pragmatic thinking, I am pleased to see that his general view of thinking as a form of action, based on anticipation, resonates in other traditions as well (see Dewey, 1910, for his theory of thinking). As such, Jytte Bang's article is an attempt to spell out in greater detail what it means that thinking is a form of action, not least with regard to the important notion of anticipation, and with constant reference to the instructive example of the child, shopping for a birthday present in a toy store with her father.

Overcoming epistemology?

I wholeheartedly support Jytte Bang's intentions of overcoming the cognitivist, representationalist, dualist, and atomist conception of thinking that dominates psychology, especially in its current *cognitive science* guises, and I believe that the turn to Gibsonian ecological psychology and Hegelian dialectics is a promising way to go. In my opinion, this turn in fact signals a return to ontology at the expense of epistemology, and Jytte Bang presents an interesting synthesis of ecological psychology and dialectics in the form of an "ecological ontology". Since its inception, the discipline of psychology has in many ways been an heir to what Taylor (1995) has called "the epistemological tradition", which, in its shortest form, can be characterized as working with a premise of knowledge being a "correct representation of an independent reality." (Taylor, 1995, p. 3). According to this tradition, we know something when we have inner representations that depict an outside world correctly. Thinking, consequently, becomes the manipulation of inner representations. In this perspective, it is the job of philosophers to study the normative laws of correct thinking in disciplines such as logic, and psychologists should study how humans *de facto* think, i.e., manipulate mental representations, which, as we are informed by numerous empirical studies, often violate the normative laws of logic.

Taylor (1995) cites philosophers, e.g., Hegel, Heidegger, Merleau-Ponty and Wittgenstein, as thinkers who have sought to "overcome epistemology". These thinkers demonstrate the problems inherent in "the epistemological construal" of philosophy and psychology, which involves the picture of the subject as ideally disengaged, the punctual view of the self, and the atomistic understanding of society. Pragmatists such as Dewey could have been added to this canon of non- or even anti-epistemological thinkers. What is left unaccounted for in the epistemological tradition is – first and foremost – how anything can come to represent anything in the first place. What, we might ask, makes an "inner representation" capable of depicting an "outside object", for example? Or, in other words, how can my thoughts be about things in the world? This is a question about the intentionality of thinking. The most influential answer to this question claims that the source of the intentionality of thinking simply is individual mental states. According to Searle's (1983) account of intentionality, for example, it is in virtue of intentional properties of mental states that symbols succeed in representing the outside world. Mental states are primary and display a form of pure and simple intentionality that is then (somehow) conferred unto words, symbols and signs.

Thinking and the role of language

The mentalism represented by Searle is questionable, however, for what are these "mental states" in isolation from human activities and language use? This view entails the idea that, when speaking, humans translate wordless thoughts (pure mental states) into language. However, there are good reasons to believe that there can be no such thing as checking whether this process of "translation" from the constituents of thought into language is done correctly. In reality, thinking does not involve translating thoughts into language, but rather it involves the use of words to describe, and reflect upon, the phenomena that are the subject of thought in a way that strikes the thinker as appropriate (Bennett & Hacker, 2003, p. 344).

Incidentally, however, the whole issue of the role of language in thinking is bypassed by Jytte Bang, who only once mentions the concept of language, although she does consider the notion of 'meaning' in Leontjew's sense. The absence of a discussion of language was surprising to me in a way, since language seems uniquely capable of making "the absent present" in a full-fleshed human sense (think of history books or science fiction novels!). Dewey stressed that language is the most important tool in thinking and argued that "language, being the tool of tools, is the cherishing mother of all significance." (1925, p, 186). If thinking, as Jytte Bang presents it, is embedded in culturally developed systems of meaning and involves anticipation of future situations, then language seems to play a very central role.

As Harré (2002) has argued, the opposite of Searle's mentalistic position is equally questionable: that mental states are intentional in virtue of intentional properties of symbols. The latter view is Jerry Fodor's, for example, and it does not solve the problem of how thinking can be intentional, but merely moves the locus of the problem into a mythical human interior. If the answer to the question "how can I think about this object as a chair?" is "because I have an inner representation of a chair", then we still need to know how I can recognize the alleged inner representation as representing a chair. Both Searle's and Fodor's answers are part of the same epistemological problem, and both go wrong in postulating some (mental) machinery behind the human practice of thinking in order to account for its intentionality and normativity. As Wittgenstein (1953) tried to teach us with his argument against the possibility of a private language, i.e., a language in which the words are defined by something only known to the speaker: We cannot establish normativity individually. For there to be a correct use of words and signs in the human processes of thinking, it must be part of a shared form of life in which people carry out tasks together. If we are interested in what thinking is, we should thus not begin by looking at the individual's brain or even mind. In this sense Jytte Bang is, in my opinion, not radical enough. Although she maintains that "thinking is a functional aspect of human life" that is "informed by and adding to the ongoing flow of dynamic environmental-societal complexities and ambiguities", she still concludes that the "subjective act of thinking is a process in the individual".

Thinking as a process in the individual?

How is thinking a "process" and how does this process occur "in the individual"? To the extent that thinking is a process, I believe it is unnecessarily mysterious to claim that this process takes place "in the individual". Thinking is something humans *do*, they do it in factories, trains, offices and toy stores but hardly inside themselves. The above quote from Jytte Bang's article may well be a slip of the pen on her behalf, or simply my misreading, but if so, I believe it illustrates the grip that the epistemological tradition has on our thinking about thinking. "Thinking is a process in the individual" may mean – although I doubt that this how Jytte Bang interprets the assertion – that either the mind or the brain is the locus of thoughts, but, clearly, the subject that thinks is not the brain or the mind, but the human being. To think otherwise would be to commit what Bennett and Hacker (2003), in a discussion of contemporary neuroscience, have called "the mereological fallacy". 'Mereology' is the logic of part-whole relations, and the mereological fallacy in neuroscience is committed when scientists ascribe (psychological) properties to a *part* of the living human being, typically the brain or the mind, which in fact make sense only when ascribed to a human being as a *whole* (cf. the discussion in Brinkmann, 2006).

It should be kept in mind that if it is true that it does not make sense to ascribe psychological predicates such as thinking to the brain, it will likewise not make sense to ascribe their *negations* to the brain: The brain does not "see", for example, but neither is it "blind", just as the sandwich I am about to eat is not awake – but neither is it asleep! The point being that it is not as such an *empirical* fact that the brain does not think. It is not something we *discover* about the world; rather it is a *conceptual* fact; i.e., a fact about how we can meaningfully apply the psychological predicates in our language. As Wittgenstein pointed out in his *Philosophical Investigations*: "only of a living human being and what resembles (behaves like) a living human being can one say it has sensations; it sees, is blind; hears, is deaf; is conscious or unconscious." (1953, §281).

What about the statement that thinking is a process? To repeat Jytte Bang's opening question: "What exactly is this process in humans, which psychology has named *thinking*?". My immediate reaction was: Why should we think that 'thinking' designates a discrete process? What makes Jytte Bang's article so enjoyable to read is, among other things, the fact that she does *not* view thinking as something discrete in isolation from persons' life activities. But why, then, ask what "this process" *exactly* is? Perhaps 'thinking' denotes a wide variety of actions, processes, states and events in different contexts and situations? The archetypical "thinker" that comes to my mind is Rodin's *Le Penseur*, absorbed in contemplative inwardness (that still has its own "outward criteria", of course, as Wittgenstein would hasten to add – there is definitively a "physiognomy of thinking", we could say, which prototypically includes narrowing the eyes, frowning and scratching one's forehead). But, as Jytte Bang's examples testify, *Le Penseur's* doings are quite different from those of the girl in the toy store.

The polymorphous nature of thinking

Instead of asking what exactly is the process of thinking in humans, we should perhaps begin by giving what Wittgenstein called a perspicuous representation of the use of our words, in this case thinking. We will thus find, I believe, that thinking is deeply polymorphous. Whether or not someone can correctly

be said to think is perhaps not merely a matter of investigating a "process in the individual", for the ascription of 'thinking' *to* an individual depends on the context in which the process occurs. A simple example from Bennett and Hacker (2003, p. 178) may illustrate the idea: Saying '1314' may in one context count as having *thought* of a historical date, but may, in another context, be a *thoughtless* telling of a telephone number. Bennett & Hacker are keen to demonstrate some of the many varieties of thinking: (1) thinking as attending to a task at hand (e.g. mending a watch), (2) thinking as intelligently engaging in an activity (e.g. playing chess intelligently), (3) thinking as intelligent speech (e.g. arguing for a case in public), (4) thinking as judging (e.g. judging that something is safe to do), (5) thinking as associating (e.g. searching for an answer to where one left the keys), (6) thinking as conceiving (e.g. thinking of something as something), (7) thinking as meaning something (e.g. expressed in statements such as "when I said 'him', I meant Freud") and (8) thinking as reasoned problem-solving (e.g. finding a solution to a problem).

Although most psychological literature on thinking defines the concept narrowly (e.g. the Danish *Gads psykologileksikon*, which views it exclusively as problem-solving), we should be careful not to take one of these (or some other form of thinking) as *the* example of thinking. It may be that there is very little – if anything – in common across these different examples of thinking. To quote Wittgenstein again: "A main cause of philosophical disease – one-sided diet: one nourishes one's thinking with only one kind of example." (1953, §593). By thinking about a wide variety of situations that involve what we would call 'thinking', i.e., by acknowledging the polymorphous nature of what it means to think, psychologists could contribute with much more interesting studies than standard laboratory settings that often investigate thinking in a very narrow sense. The main problem with many laboratory studies is that a problem has already been identified for the subjects, who, then, have to engage in problem-solving behavior (i.e. thinking), but this overlooks the important point that in real life, a major part of thinking concerns how to identify and frame situations as problematic – asking: what constitutes the problem? – rather than simply looking for a solution to a well-defined problem. This was particularly pointed out by Dewey in his writings on thinking (e.g. Dewey, 1910).

Thus, I endorse Jytte Bang's statement that thinking is "part and parcel of almost all human activity", in very many different ways, which is why the question - what *exactly* is the process in humans called thinking - seems to me to ask for more than we could reasonably provide. Thinking regarded as "*a functional aspect of practical life* and of humans trying to actively manage their environments, and to participate by producing and reproducing those shared conditions of life" is a very relevant call for studies of situated human activity, preferably interdisciplinary studies, and I believe we should be careful not to draw up the boundaries of the concept of thinking in terms of necessary and sufficient conditions for something to count as 'thinking', and this, in fact, could be said of most other psychological categories as well.

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