The Ownership of Thoughts and the Comparator Model

Gottfried Vosgerau, Albert Newen
Philosophisches Seminar, Universität Tübingen, Bursagasse 1, 72070 Tübingen, Germany; vosgerau@uni-tuebingen.de, newen@uni-tuebingen.de

Self and Thoughts

One of the classical features of self-consciousness is the feeling of ownership. This involves several levels: the feeling that the own body including its limbs is the subject’s own body, the feeling that movements of the own body are the own movements, and the feeling that the thoughts one entertains are one’s own thoughts. It is often thought that the phenomenon of ownership occurs at a very basic level and is constitutive for the self. Accordingly, Campbell (1999, forthcoming) proposed a theory of the ownership of thoughts that is based on the Comparator Model by Frith (1992, 2000). In this account he characterizes thoughts as motor processes and argues for a very basic mechanism producing the feeling of ownership of thoughts.

We will show, that Campbell’s picture leads to various problems and should hence be rejected. We will give an alternative picture of thoughts, that relates them to motor processes in a different way. Moreover, we argue for a different view on how the ownership of thoughts occurs.

Schizophrenia is often thought of as an impairment of the self. Indeed, especially the ownership of thoughts seems to be lost in the case of the delusion of thought insertion. Therefore, this positive syndrom of schizophrenia gives us valuable hints on how this feeling of ownership arises. For this reason, a big part of the discussion will be dealing with the delusion of thought insertion.

The Comparator Model

Frith, Blakemore & Wolpert (2000) propose a model of motor control which contains a variety of abnormalities. The model: 

- The intentional or goal leads to a representation of the desired state. On the basis of this desired state the movement is specified, thereby producing a representation of the predicted state. The actual movement results in some actual state of the system. Three comparators monitor the relevant processes by a comparison of (a) the desired state with the predicted state, (b) the predicted state with the actual state, and (c) the desired state with the actual state.

Interpretation: When the actual movement is suppressed, the system will engage in some mental practice. The predicted state can hence serve as an imagined movement.

Thoughts as Motor Commands

Campbell (1999, 2004) develops a theory of thoughts that is based on Frith’s theory of motor processes. He characterizes thoughts as motor commands, that are triggered by an intention to think. In his picture, he assumes other inner comparators, i.e. a comparator that produces the feeling of ownership. If this comparator is impaired, patients suffer from the delusion of thought insertion. The normal function of the comparator is to “keep thinking on track”, i.e. to allow goal-headed thinking.

However, there are some general problems with this picture (see also Gallagher 2004) and some more specific problems when Frith’s full theory is taken into account.

General Problems:
- Intention to think and unbidden thoughts
- Misattribution cannot be explained
- Episodic and content-specific nature of thought insertion
- Source of ownership for first thought in a thinking process that is kept on track
- Infinite regress: in order to be comparable with the thought, the intention already has to have the content (qua being a thought)

Specific Problems:
- The actual thoughts in consciousness are not processes or actions (but products of thinking)
- Imagination of thoughts

These problems point to the conclusion, that thoughts cannot be characterized as motor processes. However, they give rise to some constraints for a theory of the ownership of thoughts: there are no intentions to think (or at least, they don’t play any role for the ownership). The lack of ownership does not suffice to explain misattribution: a two-factor account is inevitable (see Davies, Coltheart, Langdon & Breen 2001). There is no simple “detector” for the ownership of thoughts: there is nothing else that has the content of a thought besides the thought itself (this rules out any form of thought-comparators). Thoughts are products of processes of thinking, there is no way to imagine a thought without actually thinking it.

A Two-Factor Account

Thoughts (tokens of attitudes) like “I want to eat that apple” can trigger behavior, i.e. motor action. Therefore, thoughts should be characterized as being possible intentions for motor processes. The realm of thoughts is to be distinguished from the realm of motor processes, the first being the locus of thinking, the second being the locus of acting. They are connected by those thoughts that trigger actions qua being intentions. Of course, not all actions are triggered by thoughts. There are various other triggers for movements like reflexes and automated actions. On the other hand, not all intentions lead to movements. Indeed, a lot of thoughts “merely” enter into other thinking processes.

The crucial point for our discussion is that the comparator (a) creates the feeling of agency. If for some reason the formation of the predicted state is impaired, patients are not only worse in on-line corrections of their movements, but they also suffer from delusion of control. Because their comparator (a) works normally, they will experience their actions as theirs rather than the actions of somebody else. However, since there is no match at comparator (a), they will not have the feeling that they can control their action, henceforth they will attribute the control of the action delusively to an external force.

“False” cases of thought insertion: We assume that thoughts can trigger motor processes without actual movement. This leads, much like mental training, to imagination (a predicted state) or “inner speech”. Because of this intimate connection between thoughts and “inner speech”, some cases where thought insertion is reported may be cases of inner speech hallucination, which can be explained by Frith’s model of action. (In some rare cases, the “inserted thoughts” are spoken out unconsciously.) The two factor account of thought insertion: However, true forms of thought insertion have a content-specific cause: just like in normal subjects, unbidden thoughts pop up in the schizophrenics’ mind. Again quite normal, these thoughts have sometimes unpleasant contents. Schizophrenics, however, show a very strong emotional reaction towards these unbidden thoughts, since their emotional evaluation is impaired and only allows for extreme good/bad judgments.

The first factor of delusion of thought insertion can hence be explained with a comparator breakdown in the “false” cases of inner speech hallucination (and unconscious outer speech) or with an impairment of the emotional system in the true cases of thought insertion.

The second factor, the misattribution, includes the rationalization module which integrates different data about the self into a coherent self-image. The importance and functioning of such a modul has been shown by Festinger (1954). Whenever there is a contradiction between two beliefs (dissonance), people employ one of three strategies: change one of the beliefs, attribute the source of one belief to some external force, or repress one belief. Since in the true and false cases of thought insertion the same dissonance occurs over and over again, schizophrenics are only left with the second possibility, i.e. they misattribute their thought.

Conclusion

We have characterized thoughts as possible intentions triggering motor processes. The phenomenon of delusion of thought insertion can then be explained with 1) an impairment of the emotional system and 2) a normal rationalization mechanisms. This picture fulfills all the constraints derived from the discussion of Campbell’s picture.

It follows that the ownership of thoughts relies on a complex cognitive mechanism of evaluation and rationalization. Although the ownership of actions and movements may be constitutive for primitive self-consciousness, the ownership of thoughts is not. It is an effect of the high-level comparator of an intellectual self-image which integrates the own thoughts and actions into a coherent image of the own motives, dispositions, and so on.

The ownership of thoughts is hence the effect of the highest form of self-consciousness, the intellectual self-image or self-theory, which is needed to establish long-term plans and personality. A loss of the ownership of thoughts is therefore often accompanied with what psychiatrists call depersonalisation.

References

Campbell, J. (1999), 'Schizophrenia, the space of reasons, and thinking as a motor process', The Monist 82(4), 609–625.
Campbell, J. (2004), 'The first person, embodiment, and the certainty that one exists', The Monist 87.

www.uni-tuebingen.de/sebstbewusstsein