

Neurophilosophical Perspectives on Wittgenstein's Puzzles of the Will

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Abstract

Wittgenstein's reflections on the nature of the will were motivated by the effort to combine two philosophical approaches: one in the empiricist tradition and the second based on Schopenhauer's philosophy. The philosophical paradoxes that he encountered are described in *Philosophical Investigations* and in several of his other works. Although Wittgenstein's claims are not meant as empirical statements we believe that several of his questions can be enlightened by comparison to a neurophilosophical approach. We focus primarily on analysis of the relation of the will to wishing, experience and action. The text also provides a short commentary on the complexity of the problem of the voluntary control of body movements from the point of view of philosophical phenomenological analysis as well as from a neurophysiological point of view.

1. Introduction

The philosophical problems that surfaced when different authors tried to think about the nature of the will have resulted in the constitution of two elaborated concepts of will at the beginning of the 20th century: one in the empiricist tradition (Hobbes, Locke, James, Russell) and the second in the tradition of Schopenhauer. While the concept of the will in an empiricist tradition was closer to empirical science, the Schopenhauerian concept of the will captured certain important phenomenal intuitions at the expense of not being easily reconcilable with scientific observations. The philosophical paradoxes that emerged as the result of the effort to combine these two concepts were well expressed in the remarks formulated by Wittgenstein in his *Philosophical investigations* (PI 2009) and in a number of his Whewell's Court lectures that were only recently collected and published (WCL 2017). Although Wittgenstein's claims presented in these works are not meant as empirical statements, we believe that comparison to a neurophilosophical approach may enlighten several of his questions.

2. The will and the motions of the body

The will is usually considered to be related to the motions of the body because it is difficult to think of the will in the case of non-moving living beings, such as plants (as Aristotle already noted, see Bos 2010). It is the fact that the relation of movement to the will is accepted as important by many existing studies, therefore if we are to study the will from neurophilosophical perspective it is useful look at the brain structures related to movement – see overview provided by Walter (2005). The study of these brain structures and their activation patterns can be then matched with philosophical observations, such as those provided by Wittgenstein.

The account of the will by classic empiricist philosophers and psychologists is an obvious precursor to the contemporary neurophilosophical approach. James, a psychologist carefully read by Wittgenstein (Hyman 2011, Wenzel 2016), already at the end of 19th century stated: "Every pulse of feeling which we have is the correlate of some neural activity that is already on its way to instigate movement" (James 1890: 526). These feelings are comprised of external perceptions but also kinaesthetic impressions, i.e., impressions that originate in organs that participated in the movement (enervated muscles, tendons, ligaments, articular surfaces, and skin about the joints). Today, Fuster (1996) speaks about the perception-action cycle; however, he emphasizes external perceptions and does not pay much attention to kinaesthetic impressions. On the contrary, we have argued that kinaesthetic impressions (discussed

also by Wittgenstein – PI II 2009: 56) have primary importance in forming phenomenological perception of the will (Vacura 2018). Walter (2005) relates the idea of the perception-action cycle to von Weizsäcker's (1950) idea of a Gestalt circle – an elaboration of works by Gestalt psychologists of the 19th century.

Nevertheless, the idea of the perception-action cycle is today understood to be much complex than James imagined. Cycles operate at several levels. At the lowest, these are simple reflexes that match external stimuli that are not immediately conscious. We realize them backwards after they have passed, partially based on sensory inputs, partially based on our own reflections of our kinaesthetic perceptions. At a higher level, cycles are conscious but automated by constantly repeating the same actions in response to similar stimuli. Only at the highest level can we probably speak of the will in the full sense of the word. In this case, the response to sensory input is not automated, but is the result of certain internal process with a nature that is, however, itself problematic.

3. Willing and wishing

One of the problems related to the will is the relationship between wishing and willing. It may seem that these two are somehow connected, that both willing and wishing occur before an event or action, so maybe the willing is a type of wishing. Wishing is a mental act, an imagination (not necessarily visual) of a non-existing situation. Wittgenstein disagrees that such a mental act is a necessary precondition of an action: "Wishing to do it is certainly in no way a condition preceding the doing of it" (WCL 2017: 261), and already in his *Notebooks*: "Wishing is not acting. But willing is acting" (NB 1979: 88). So, Wittgenstein believes that willing and wishing are two different phenomena. Neurological evidence suggests this assumption is correct. Wishing as an imagination of a non-existing situation is closely related to contrafactual thinking. Contrafactual thinking can be thought of as imagining possible alternatives to events and actions that have already taken place, while wishing is imagining possible future alternative events that may occur. There is evidence that contrafactual thinking activates right occipital cortex (cuneus) and right basal ganglia (caudate nucleus). This activation is apparent during counterfactual sentence processing – initiated by both visual and auditory stimulus presentation (Kulakova et al. 2013). The location of this activation is completely different than the activated areas of the cortex related to motoric functions. There are three parts of the brain related to body movement and participating in motoric functions: the primary motor cortex, premotor cortex and anterior cingulate cortex (Walter 2005).

We may think about another difference between the will and the wish: the latter is a kind of thought and a thought must be conceptual. If one is wishing something, they know “what” they wish, e.g., “that it stops raining”. Such a wish is always conceptual – it is never some non-conceptual feeling of discomfort. At the same time, wishing does not require immediate action. In various cases, one wishes for something that is not possible to achieve by any of their actions at the given time; maybe it will be achievable in the future or may be achievable by luck (e.g., one may wish to win lottery).

In contrast, if one is thinking about action and not acting at the same time, can they really say that they have a “will” to act? Would it not be more appropriate to describe such a situation as contemplating an action, or merely wishing one can act? One may contemplate an action in a situation where they are not sure whether that action will be successful. Only after deciding that taking the action is worthwhile may the will to act (and the action) occur. Wittgenstein’s discussion of will in *Philosophical Investigations* (PI 2009: §615) can also be understood as an observation that wishing as a kind of thinking is a conceptual mental act while willing is non-conceptual.

4. Willing and experience

There is another concept of the will that Wittgenstein explores: the will as an experience. He presents this questionable claim for further analysis: “Willing – wanting – too is merely an experience” (Wittgenstein 2009: §611), and encloses it in quotation marks to emphasize its role as a starting point for further research, not as a conclusion. It is based on the hypothetical claim that both will and perception “come when they come” and there is no difference in “bringing them about”. When someone has their eyes open, perceptions just arrive and there is no bringing them about. Similarly, it might be said that when one sits quietly without any movement, then at some point, the will to do something just comes and they (if there are no obstacles) perform some movement; there was no bringing about or anything similar.

In juxtaposition, Wittgenstein asserted that this is not the usual way to describe such phenomena. He observed that it is unnatural to say about movement of the arms that it takes place when it takes place and that there is no bringing it about. On the contrary, it is natural to distinguish between two domains: the domain of experience and domain of the will (PI 2009: §612). In the domain of experience, we may say that something simply happens to us and it makes no sense to speak of “doing experiences” or anything similar. In the domain of the will, the situation is just the opposite - it makes no sense to say that rising of one’s arm just happened, while it makes perfect sense to say that one carried it out. He concludes with another sentence put in quotation marks to emphasize its first-person character – each of us would agree to such a claim: “I don’t need to wait for my arm to rise – I can raise it.”

However, today, we know that there are cases of people that have different types of first-person experiences. There is a well-known phenomenon called “alien-hand syndrome” (sometimes called “Dr. Strangelove syndrome” or “anarchic hand syndrome”) – in the most typical cases, affected patients experience one of their hands is out of the domain of their own voluntary control, acting seemingly on its own or being “disobedient” while the second hand acts normal (Scepkowski 2003). Sometimes, the hand is even personified – patients give it a name as if it were an independent agent (Doody 1992).

The patterns of activation of brain areas under normal conditions during the movements of a healthy hand under voluntary control and accompanied with a sense of agency have to be studied by utilization of brain imaging techniques sensitive to temporal (EEG, MEG) and spatial (fMRI) differences. The activation is interpreted as being related to forward and inverse internal models, which represent one’s own body and its possible interaction with the affordances of the external world (Blakemore 2002). This theory assumes that only certain component processes of internal models of motor control are available to consciousness. Under normal conditions, we are aware of goals and desired states underlying most movements we make, but not of all the fine adjustments in muscle contraction. Hence, only the results of a forward model are available to consciousness – a comparison of actual outcomes perceived by senses, the outcomes predicted by the model and desired outcomes. This enables modification of motoric output accommodating perceived differences between predicted and desired states. Conscious movement encompasses this kind of feedback loop and there is continuous modification so there is a complex pattern of brain areas activated during episodes of conscious voluntary movement.

Assal et al. (2007) compared functional neural correlates of healthy hand movements with damaged hand movements in patients with alien hand syndrome using fMRI. They observed that the contralateral primary motor cortex (M1) area was activated similarly during voluntary or alien movements. On the contrary, right premotor and left prefrontal areas were activated selectively during voluntary movements. While premotor cortex was partially active even while involuntary alien hand movements, the prefrontal areas were very active during voluntary movements and not active at all during involuntary alien hand movements.

It turns out that in order for a person to feel that they are controlling their hand, it is necessary to activate a specific pattern of brain regions: the motor, premotor and prefrontal cortices along with the anterior cingulate cortex. Only then will the phenomenological experience adhere to Wittgenstein’s “I don’t need to wait for my arm to rise – I can raise it”.

5. Conclusion

The will is fundamentally interconnected not only with movement but also with consciousness. If we accept perception-action cycle theory, then a portion of voluntary actions are somehow also processed such that they interpret sensory inputs. Moreover, if we also accept the theory of forward and inverse internal models, then the will requires also complex processing in prefrontal areas. It turns out that voluntary processes are extremely complex and include many other subordinate processes of different kind. However, as Wittgenstein has observed at the phenomenological level, the will is different from mere experience and wishing. We believe that research which combines deep philosophical insights from philosophers such as Wittgenstein with the latest neurophysiological and cognitive investigatory techniques can contribute to overcoming the gap between our understanding of processes in the brain and phenomenological perceptions of our inner mental life we all experience.

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Deutsch English

- BBB** BBB *Das Blaue und das Braune Buch* (1958, 1960, 1969, 1970, 1998) [TSS 309–310]
- BGM** RFM *Bemerkungen über die Grundlagen der Mathematik* (1956, 1967, 1974, 1978) [TSS 221–224, MSS 117, 121–122, 124–127, 164]
- BT** BT *Big Typescript* (2005) [TS 213]
- BÜF** ROC *Bemerkungen über die Farben* (1977, 2007) [MSS 172–173, 176]
- LSPP** LW *Letzte Schriften über die Philosophie der Psychologie* (Zwei Bände 1982 und 1992, 1993, 1998) [MSS 137–138, 169–171, 173–174, 176]
- PB** PR *Philosophische Bemerkungen* (1964, 1975, 1998) [TSS 209, 214a, 215a, 215b, MS 109]
- PG** PG *Philosophische Grammatik* (1969, 1974, 2005) [TSS 211, 213, 214a–214c, MSS 112, 114–116, 140]
- PU** PI *Philosophische Untersuchungen* (1953, 1958, 1967, 1968, 1997, 2001, 2003, 2006, 2007, 2009) [TSS 227, 234]. [Kritische Ausgabe 2001: TSS 227, 234, MSS 142, 144, TSS 225, 220, 221, 239, 242]
- PT** PT *Prototractatus* (1971, 1989, 1996) [MS 104]
- TB** NB *Tagebücher* (1960, 1961, 1979, 1998) [MSS 101–103]
- TLP** TLP *Tractatus logico-philosophicus* (1921, 1922, 1933, 1955, 1961, 1963, 1972, 1989, 2003, 2004, 2009) [TSS 202–203]. [Kritische Ausgabe 1989: TSS 202–203, MSS 101–104, 301, TSS 201a–b]
- ÜG** OC *Über Gewißheit* (1969, 1971, 1974, 2006) [MSS 172, 174–177]
- VB** CV *Vermischte Bemerkungen* (1977, 1978, 1980, 1984, 1994, 1998, 2006) [MSS 101, 105–113, 116–138]
- Z** Z *Zettel* (1967, 1981, 1984, 1998) [TS 233]

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