

# Chomsky, Knowledge of Language and the Rule-Following Considerations

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## 1. Introduction

According to Noam Chomsky, speakers of a language have a substantial body of propositional knowledge of that language that they draw upon in language production and comprehension. Since the late 1950s Chomsky's project has been to characterise that knowledge and give an account of its acquisition. Arguably, one of the most powerful philosophical challenges to Chomsky's output is generated by the rule following considerations of *Philosophical Investigations* §§ 138-242. My aim in this paper is to characterise the nature of this challenge, a topic that, rather surprisingly, has received relatively little attention in the philosophical literature.

## 2. Chomsky and the problem of rule-following

Despite significant changes in his position over the last forty years, Chomsky's core ideas have remained constant. His central idea is that we have a body of knowledge of language, a body of knowledge that we draw upon in producing and comprehending sentences and which allows us to routinely produce novel sentences and understand sentences that we have never encountered before. This is a species of propositional knowledge rather than a skill or ability. The particular body of knowledge that an individual has of her language will be rich and multifaceted. It will include lexical, phonological and syntactic knowledge. Chomsky has been primarily concerned with our knowledge of syntax and I will focus on his views of syntax in what follows. This syntactic knowledge includes rules for constructing phrases and sentences and rules for transforming sentences (for example, passives into actives and declarative sentences into questions). Prominent examples of rules that Chomsky has claimed are known by speakers of English include the following: (a) the head of a phrase comes before its complement (Chomsky, 1986); (b) an anaphor is bound in a local domain (Chomsky, 1986); and (c) a question can be derived from a declarative sentence by moving the auxiliary immediately following the subject to the front of the sentence (Chomsky, 1988). An important point about such rules is that our knowledge of them is conceived as being unconscious or tacit so that a typical speaker is unable to state the rules that underlie her linguistic behaviour. Moreover, there is an important distinction between competence and performance (Chomsky, 1965). An individual's competence is her knowledge of language. Her linguistic performance will not perfectly reflect this competence. For example, due to time or memory limitations she might reject as ungrammatical a perfectly legitimate sentence of her language or be unable to make any firm judgement as to the grammaticality of such a sentence.

In the rule-following considerations Wittgenstein's attention focuses on what might be called the problem of rule-following. This problem is constituted by the following questions. How is it possible to grasp a rule or for one's activities to be governed by a particular rule? What determines the demands of the rules governing an individual's activities or, alternatively, what determines the iden-

tity of those rules? Given Chomsky's commitment to our having knowledge of syntactic rules, he is faced with versions of these very questions. How can an individual know or grasp a particular syntactic rule or be governed by that rule especially when the demands of the rule will far outstrip her linguistic performance? What determines which syntactic rules belong to an individual's language or what those rules demand?

The existence of the problem of rule-following need not in itself cause the Chomskian any great worries. The problem only becomes a genuine cause for concern if there is reason for thinking that the Chomskian is distinguished from advocates of alternative visions of language in not having access to the resources needed to solve the problem. So the question that arises is this: are there reasons to think that the Chomskian is peculiarly ill-equipped to solve the problem, so ill-equipped as to imply that it is impossible for the rules that Chomsky identifies to belong to an individual's language, or be known by her? My claim is that the rule-following considerations contains an explicit line of thought that does indeed threaten to deliver an affirmative answer to this question.

## 3. The challenge of the rule-following considerations

Mentalism is the view that the mind is an inner theatre within which mental phenomena reside. Mental phenomena are thus set apart from the world beyond the individual's outer surfaces and lie behind her observable behaviour, typically causing that behaviour. Chomsky is explicit in his commitment to mentalism. For him, to describe the mind is to describe the brain at a higher level of abstraction and the rules of an individual's language are encoded or represented in her mind-brain and have no existence outside of that system. Thus, what an individual knows about her language is a matter of what is represented in her mind-brain. (See Chomsky, 2000, for a recent statement of this point of view.)

A hostility to mentalism is one of the major themes of Wittgenstein's later work. A significant part of the rule-following considerations comprises of an attack on mentalist attempts to solve the problem of rule-following. One such attempt involves an appeal to interpretations and this attempt resembles Chomsky's view of the rules of language in such a way as to imply that Wittgenstein's critique of it directly impacts upon Chomsky. In order to substantiate this claim I shall begin by rehearsing Wittgenstein's critique of the appeal to interpretations.

In *Philosophical Investigations* § 201 Wittgenstein writes 'we ought to restrict the term "interpretation" to the substitution of one expression of the rule for another.' Hence, when an individual interprets a rule she entertains some expression of that rule in her mind. Now consider the familiar example of an individual being instructed to continue the numerical series 2, 4, 6, 8 according to the rule '+2'. There are any number of different ways in which the rule that the individual is instructed to follow could be interpreted. However the series is continued there is some way of interpreting the rule such that that continuation is

correct or in accord with the rule. For example, there is a way of interpreting the rule so that 1002 immediately follows 1000 and, equally, there is a way of interpreting it so that 1004 immediately follows 1000. Interpretations mediate the link between a rule and its correct applications. Without such a mediating link anything and everything, and therefore nothing, would be in accord with the rule. Suppose that the individual interprets the rule such that 1004 immediately follows 1000 and, acting on that interpretation, she writes '1004' immediately after '1000.' Then she has continued the series correctly on her interpretation of the rule. Insofar as she has made a mistake this is because her interpretation is not in line with that of the individual who laid down the instruction to continue the series in accord with the rule '+2' in which case she has failed to grasp the relevant rule. All this suggests the following answer to the problem of rule-following. Grasping a rule is a matter of providing an interpretation of the target rule; no interpretation, no grasping. What determines the demands of the rules that govern an individual's behaviour or the identity of those rules are her interpretations of them. In short, what connects an individual to a rule that makes determinate demands on how she behaves in circumstances that she might encounter is an interpretation of the rule, an expression of that rule existing in her mind.

Wittgenstein's objection to this appeal to interpretations echoes a complaint he frequently directs at mentalistic moves: the appeal gets us nowhere as it is either circular or threatens infinite regress. What determines the demands of an individual's interpretation of a rule or the rule under that interpretation? Given that when an individual interprets a rule she provides an expression of that rule, that expression, or what she does in interpreting the rule, is as open to interpretation and as much in need of interpretation as the rule itself. If there is a problem that interpretations are needed to solve then precisely that problem arises in connection with interpretations. For anything is in accord with a rule under a given interpretation on some interpretation of that interpretation. All this is brought out in *Philosophical Investigations* § 201 when Wittgenstein writes:

This was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule. The answer was: if everything can be made out to accord with the rule, then it can also be made out to conflict with it. And so there would be neither accord nor conflict here.

It can be seen that there is a misunderstanding here from the mere fact that in the course of our argument we give one interpretation after another; as if each contented us at least for a moment, until we thought of yet another standing behind it. What this shows is that there is a way of grasping a rule that is *not* an *interpretation*, but which is exhibited in what we call "obeying the rule" and "going against it" in actual cases.

Wittgenstein's point here is that we get the paradoxical conclusion that there is no such thing as rule-following if we invoke interpretations to solve the problem of rule-following. For, interpretations alone cannot connect us to rules that place determinate demands on us as their significance is as up in the air and in need of interpretation as that of the rules that they are invoked to interpret.

Chomsky isn't explicitly concerned with solving Wittgenstein's problem of rule-following and he doesn't invoke the term 'interpretation' in accounting for our knowledge of language. Nevertheless, I think there are close enough

parallels between the appeal to interpretations in attempting to solve the problem of rule-following and Chomsky's core claims to imply that Wittgenstein's attack on the former equally applies to the latter. To see why, consider the following.

Chomsky is an unabashed mentalist who believes that the identity of the rules belonging to an individual's language is determined by how things are in her mind-brain. Thus, his implied answer to the question of how it is possible for an individual to grasp a linguistic rule and that of what determines the demands of the rules of her language or the identity of those rules involves an appeal to the state or contents of her mind-brain. More precisely, Chomsky holds that the rules of an individual's language are encoded or represented in her mind-brain in a manner analogous to that in which information is encoded in a computer and the rules have no existence independent of that representation. Such representations are causally implicated in language comprehension and production. (Chomsky offers one of the most explicit statements of this line of thought in his 1980.)

It should be clear that Chomsky's representations of rules are analogous to the interpretations that Wittgenstein discusses. Both exist in the mind, constitute an individual's grasp of the rules that she grasps and serve to determine the demands or the identity of those rules. Consequently, Chomsky is faced with a version of the challenge that Wittgenstein directs at the advocate of interpretations. That challenge can be characterised in the following terms. Mental representations of linguistic rules are invoked to explain how it is possible for an individual to grasp or know the rules of her language. These mental entities are conceived as being such as to determine the demands or the identity of those rules. For example, they are supposed to be such as to determine which collections of words are grammatical (and so can legitimately be produced by the individual when engaged in linguistic activity) and which are not (and so ought not be produced and ought be rejected as ungrammatical). But how can these mental representations play that role? For, the very questions that they were invoked to answer arise in connection with them. What determines the demands or the identity of the rules represented in the individual's mind-brain as those representations can be interpreted in many disparate ways. Suppose that a representation of a rule is causally implicated in the individual's producing a particular collection of words in a linguistic interchange. Did she produce a sentence of her language, did she apply the rule as represented in her head correctly? Just as the representation can be interpreted so as to deliver an affirmative answer to this question, it can equally be interpreted to deliver a negative answer. What Chomsky needs to do is provide some principled reason for preferring one of the competing interpretations of the representation over all the others and that reason had better not give rise to the same problem all over again one step further down the line.

#### 4. Conclusion

Wittgenstein's attack on the appeal to interpretations generates an analogous challenge to Chomsky's attribution to speakers of mentally represented rules. Meeting that challenge involves explaining in such a way as to avoid circularity or infinite regress, how an individual's linguistic behaviour could be governed by determinate linguistic rules and how she could know such rules in virtue of the state of her mind-brain. Despite the power of this challenge, I am optimistic that it can be met by developing the following idea. What rules are represented in an

individual's mind-brain is a matter of the nature of the causal structures underlying her linguistic behaviour and the generalisations concerning linguistic behaviour that they ground. Developing this idea is a project for another day and one that faces several prominent obstacles. For example, there are the objections that Kripke (1982) directs at dispositionalism and the problem of squaring the idea with the competence-performance distinction.

## Literature

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