

# The Rule-Following Problem Problem and Its Solution

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## 1. What does it mean to be guided by a rule?

One of the overarching problems Wittgenstein struggled with is the question of how language is related to the reality that it can represent. In the *Tractatus*, his answer was the so-called picture theory. By 1933-34, he had changed his mind. The language-world links were now created and maintained by rule governed human activities which he later called language-games. This led him to a new problem: What does it mean for an activity to be governed by a rule? One can scarcely hope to develop a viable philosophy of language without answering the question.

The problem of rules thus came to play an important role in Wittgenstein's philosophy at large. But what precisely is the problem? This is the problem figuring in the title of this paper.

Wittgenstein explained his problem almost as soon as he began to expound his new way of thinking. This he does in *The Blue Book* pp. 12-14. Unfortunately, his explanations pose more questions than they answer.

Following a rule can apparently mean two different things. It can perhaps mean simply acting in accordance with the rule. But if so, following a rule is merely a fact about the rule-follower's behavior. The only questions that can be asked about it concern merely the causal antecedents of such behavior. For instance, teaching one to follow a rule in this sense is a drill, a training to act in a certain way. It has no necessary connection with one's actual awareness of the rule.

Hence something more is required for us to be justified in speaking about authentic rule-following. This additional requirement according to Wittgenstein is that an actual physical expression of a rule must play a role in the process of rule-following. Wittgenstein's rule-following problem is to understand how a rule does so. To put the same question in somewhat

more colloquial terms, he is asking how a rule can guide its follower. And he obviously takes this guiding in the most concrete sense, which includes guiding one's actions, not only guiding one's thoughts.

Indeed, Wittgenstein repeatedly discusses the phenomenon of being guided and its phenomenology, for instance in *PI* I, secs. 170, 172-3, 175, 177. These are all passages that go back to Wittgenstein's earlier period (1936-37).

But if this is what Wittgenstein's rule-following problem is, several questions arise. The first strange thing about Wittgenstein's problem is brought out by asking: What more can there conceptually speaking be then in acting in accordance with the rule? If so acting is not enough, what more is needed? How else can rule-following manifest itself? Wittgenstein is the least likely philosopher to require that some mental event or state is required. On the contrary, for him it is the "inner process" that needs external criteria. Wittgenstein argues at some length against the idea that there are characteristic experiences of rule-following. And even if there were, he argues, having those experiences is not what rule-following means.

Also, most importantly, what does he mean by a rule's playing a role in rule-following? Suitable examples can give you an idea. An especially instructive one is Wittgenstein's thought-experiment of a language community in which color words are used only by means of a color chart, whose color samples a language user compares with the colors of objects. Here the rule codified in the chart plays a concrete role in the use of color language. (A color aphasiac patient is like a member of this Wittgensteinian tribe who has lost his color samples.)

Such examples show some remarkable things. They show that the rule-following problem in Wittgenstein has nothing to do with intentionality or knowledge. It is natural to ask here: Why does Wittgenstein require this kind of participation of a rule-expression in the acting in accordance with the rule? It is natural to require that following a rule requires more than going through certain motions. But the requirement that most philosophers undoubtedly would think of here is a knowledge of the rule at least in the sense of awareness of it. This interpretation of Wittgenstein's meaning is in fact accepted tacitly or in so many words by many commentators from Saul Kripke down. Yet it goes against Wittgenstein's way of thinking. His discussion is predicated on the assumption that rule-following is a public

process, not a private mental one. Whatever happens in my consciousness is as such irrelevant to the connection between the rule and an action guided by it. Much of Wittgenstein's so-called rule-following discussion in the *Philosophical Investigations* is calculated to make this point, to illustrate it and to emphasize it. As Wittgenstein puts it, a rule does not act at a distance.

Undoubtedly what is involved in full-fledged rule-following is an understanding of the rule. But that understanding must itself be guided by a concrete expression of the rule: As Wittgenstein expressed this point, if I am asked how I can understand what you mean, since I only have your symbols (words), I can answer: How can I understand what I mean, since all I have to go by are my symbols? Hence the problem about understanding a rule is essentially the problem of how a rule-follower's actions are guided by an actual physical expression of the rule. As Wittgenstein says, "we can for our purposes, imagine the calculation being done entirely on paper." (Wittgenstein 1980, 13)

What Wittgenstein is puzzled by is not the connection between what takes place in my consciousness, my thoughts, and their symbolic expression. The problematic relation is the connection between the symbols and the action. Of course, I can know what a rule is in the vulgar sense. I can even have the right formula or recipe in mind or on paper. The problem is how those symbolic expressions guide my actions.

Hence, Wittgenstein's rule-following problem does not involve anything intentional. The problem is for Wittgenstein the same as the problem of how the blueprint of a machine determines its movements. He uses in fact machine analogies in trying to understand human rule-following.<sup>1</sup> What is for instance the real connection between the software of a computer and the mathematical operations it performs? Today, many people are inclined to ask: Does a computer *think*? Wittgenstein asks instead: Does a computer *compute*? Less provocatively, a Wittgenstein redivivus might ask: Does a chess-playing computer really play chess?

Wittgenstein tried to solve his problems with his characteristic intensity. But he kept running into sundry difficulties. For one thing, in order for a rule to guide my actions, it must be immediately present to me. Such

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<sup>1</sup> See e.g. RFM, PI §122-125, §193.

given objects would have to be for him phenomenological objects. They are what for him “the world we live in” consists of. And if so, I should be aware of them. But there are lots of instances of perfectly normal rule-following where the rule is not present in my consciousness. Much of Wittgenstein’s discussion of rule following is a sustained criticism of the phenomenological reality of rules. Admittedly, we have particular experiences on the different occasions when we are guided by something or somebody, but there is not a generic experience of being guided. (See *PI I*, sec. 172.)

This is connected with a significant peculiarity of Wittgenstein’s logic. The logical and mathematical expressions of rules are functions. But he has no logic of functions. Unlike properties and relations, functions are not a part of the logical language of the *Tractatus*. They are not nonlogical primitives in the kind of logically purified language envisaged there. (If they had been, Wittgenstein would have had no difficulties in solving the color incompatibility problem.)

This neglect of functions in logic might look like a harmless idiosyncrasy of Wittgenstein’s. In reality it reflects the same neglect in his ontology. Whether Wittgenstein preferred physicalistic or phenomenological ontology, functions are not part of its primitives. Hence they could not be objects of direct knowledge or otherwise play a role in Wittgenstein’s epistemology or theory of language. This matter becomes, contrary to a widespread dogma, functions cannot be fully reduced to predicates in any (conceptual) sense.

In general, Wittgenstein found it hard to avoid a dichotomy of completely automatic rule-following and rule-following accompanied by awareness of the rule one is following. In a way, his quest was for a *tertium datur*. One might say that Wittgenstein could not figure out what goes on in what might be called intelligent rule-following that is not automatic like a robot’s rule-following but nevertheless does not involve continuous attention, either. He discusses various examples, the most prominent of which is reading in the sense of reading aloud from a text. There the rule governing the process is of course the alphabet, the proverbially simplest object of knowledge. Whoever can read cannot be said to be ignorant of her or his ABCs. But I am not aware of the alphabet whenever I read from a text.

A philosophically interesting special case of rules is the rules of logic. Wittgenstein discusses them as an application of his general rule-following or rule-guidance problem. In his mind, the problem gets associated with the problem of logical necessity. This is strictly speaking a somewhat different problem. The general rule-following puzzle leads us to ask merely: “How do the premises guide us to a conclusion?”, not “How do they necessitate the conclusion?” The real issue is the relation of purely formal rules to the applications of logic in real-life language-games.

Wittgenstein thus discussed his problem, whatever precisely it is, extensively and intensively in many of his writings. In the end, something drastic happens. He realizes that he cannot solve his problem, and he comes to believe that it cannot be solved. We cannot account for how a rule embodied in a formula or recipe guides a rule-follower’s actions. Wittgenstein thus had to revert to the alternative he originally rejected in *The Blue Book* and to say that all that is involved in rule-following is acting in accordance with a rule. Logically speaking, but only logically speaking, we do follow a rule “blindly”.

How precisely Wittgenstein came to change his views and when precisely he did so calls for a separate investigation. His change of language paradigm from phenomenological to physicalistic can be dated down to the two decisive days of October 10-11, 1929. Can we date the change of his idea of rule-following equally accurately? Pending further investigation, it appears that the fundamental change took place on May 26-30, 1940. His agonizing dialogue with himself covers no fewer than 24 pages of MS 123 (in von Wright’s catalogue) viz. pages 73-97.

Wittgenstein’s words show his keen awareness of what the problem is:

We can describe purely behavioristically the mode of operation of teaching, execution and utilization of calculations. Must we use for the purpose a rule?

The appearance that one could describe these matters only in terms of the function of a rule is where my entire problem lies. (Loc. cit., pp 73-74. German text given in an appendix.)

In the end Wittgenstein endorsed the purely behavioristic conception of rule-following. This might look like the conception he had rejected in *The Blue Book*. The difference is that the teaching of a rule is no longer construed by Wittgenstein as merely causing by training the learner to behave

in a certain way. Now the teaching of a rule is at bottom still a training, as it were a drill, but now what the learner is trained to do is to play the whole language-game of which the rule-following is a part. Hence Wittgenstein's admission of the insolvability of the rule-guidance problem becomes a major shift in his philosophical views, a shift in fundamental priorities. In his middle period, rules had been the end-all and be-all of language. "Do not look behind rules, there is nothing there", he said. Now language-games claim this pride of place.

The change in the way Wittgenstein asked his basic question originally and later is brought out by *PI* I, sec. 198 (a new one)

"Then can whatever I do be brought into accord with the rule?" Let me ask this: what has the expression of a rule – say a sign-post – to do with my actions? What sort of connexion is there here?

This question of the "connexion" is Wittgenstein's earlier guidance problem. Now he gives it an answer that in a sense means returning to the alternative he rejected in *The Blue Book*. He continues

Well, perhaps this one: I have been trained to react to this sign in a particular way, and now I do so react to it.

But Wittgenstein now gives a new, different spin to this "being trained" alternative. He recalls first the old interpretation of training as merely creating causal links.

But that is only to give a causal connexion; to tell how it has come about that we now go by the sign-post; not about this going-by-the sign really consists in

The new spin is the following:

On the contrary, I have further indicated that a person goes by a sign-post only in so far as there exists a regular use of sign-posts, a custom.

Instead of "custom" Wittgenstein could have said "language-game". What Wittgenstein does not do in his position in the *Philosophical Investigations* is to allow us to ask for an analysis of that custom, for instance to ask for its rules. The weakness of his position is that he forces a philosopher to swallow an entire language-game as in one fell gulp.

Wittgenstein did not highlight this conversion in his writings. He probably saw it as a natural development of his earlier ideas, so that his earlier lines of thought were still relevant. In his expositions of the problem,

he combines material from different periods of his history of his ideas. But it is not difficult to see even in the texts the differences between his earlier and later ideas.

In any case, there are unmistakable differences between the sections from different periods. For instance, in one of the older paragraphs (*PI* I, sec. 197) Wittgenstein speaks of “the list of rules of the game”. In contrast, rules are not prominent in the new sections. For the first time training is mentioned in connection with rule-following in an isolated new section 158.

The importance of this change of mind for Wittgenstein’s philosophy in general has not been sufficiently recognized. One thing it seems to me to imply is that the *Philosophical Investigations* does not express a fully worked-out position. It is a work in progress. Wittgenstein does not there yet work out fully the implications of his new position. When he realizes these implications, he runs into further questions that prompt him to continue his lines of thought.

This, I believe, provides an answer to questions concerning the relation of the so-called two parts of *PI*, concerning the alleged “third Wittgenstein”, among others. What Part II and related writings are is a discussion of those problems that Wittgenstein’s new construal of rule-following implied but which he did not discuss there, perhaps because he was not yet aware of them. They include the idea that there are immediate links between language and reality. This is made dubious by the omnipresent language-games mediating the links between language and the world.

From all of this it is seen that Wittgenstein’s problem was not initially epistemological. In particular, Wittgenstein’s problem was not the Humean problem of induction. He is not asking how to anticipate the next step in rule-following, but how to find out how the rule that governs the entire series operates at any given step. But there is nevertheless a connection between induction and Wittgenstein’s problem, as we will find in sec. 3 below.

It still remains to see what Wittgenstein’s problem was. Once we see that we can see that the problem is not unsolvable, even though he cannot reach a solution. Hence, I do not agree with Wittgenstein’s new position. However, this does not make a difference to the rule-following prob-

lem problem. Wittgenstein's giving up the problem does not show what it was.

## 2. The logic of rule-following

What I will do next is to solve the rule-following problem problem by solving the rule-following problem itself as a conceptual problem. I will solve it by means of a method that in our day and age often seems forgotten or otherwise neglected, they are also misunderstood and abused. I will solve it by logical analysis. I propose to ask: What is the logical form of rule-following? What does it mean to know how to follow a rule? What it means is obviously to be able to answer conclusively the question "how does one follow a rule?"

Once you ask this question in so many words, you can see what kind it is logically. It is a dependence question. What an answer should do is tell the rule-follower what to do at each stage. It should tell what the right action is depending on the stage the process is at. It should make it true to say of the agent, "She or he knows, at each stage of the rule following, what actions to take". (Technically, this is called the desideratum of the question.) Its logical form is in the independence-friendly notation

$$(2.1) K(\forall x)(\exists y/K)A(x,y)$$

Here  $A(x,y)$  says that at stage  $x$  the agent should do  $y$ . You need not be scared by the independence-indicator (no doubt unfamiliar to you). It has in fact a most intuitive meaning. What a slashed variable  $y/K$  can be thought of as doing is to range over known individuals. Hence what (2.1) does is to say just what it was supposed to say, namely to say that at each stage there is an action that the agent knows she or he should do.

What does it mean to answer conclusively such a dependence question? Let us first consider the same matter in the case of a simple wh-question, for instance

$$(2.2) \text{Who murdered Trotsky?}$$

The desideratum of (2.1) has the form

$$(2.3) K(\exists x/K)M(x,t)$$



A reply “b” will make true (if correct) the statement

$$(2.4) \text{ KM}(b,t)$$

That is, “b murdered Trotsky”. But the truth of (2.4) does not mean that you know the answer for you may be ignorant of who b is. But (2.4) does imply (2.3) if the questioner knows (or is made to know) who b is, in other words if it is true that

$$(2.5) \text{ K}(\exists x/K)(b=x)$$

This (2.5) will be called conclusiveness condition. Thus answers to simple wh-questions have two components. A conclusive answer will provide a reference to the inquired-for individual, and also provides an identification of that individual.

My fundamental point here is to distinguish these two components (in an answer to a question) from each other and understand the difference between the two. This difference is logical. Reference to a right individual is a matter of fact. The identification is essentially a matter of meaning. This is seen most clearly when a proper name is offered as a reply. Then the conclusiveness condition merely identifies the bearer of the name, which in this case is a matter of mere meaning.

The same analysis applies mutatis mutandis to dependence questions. There the desideratum is of the form (2.1). A proffered reply might specify a function g (in the set-theoretical sense of a class of ordered pairs) and be of the form

$$(2.6) \text{ K}(\forall x)A(x,g(x))$$

The conclusiveness condition will be of the form

$$(2.7) \text{ K}(\exists f/K)(\forall x)(g(x)=f(x))$$

This could also be written

$$(2.8) \text{ K}(\exists f/K)(g=f)$$

In other words g has to be a known function. (Note the analogy between (2.5) and (2.8).)

These points come into play in an important and special case of dependence questions, viz. experimental questions. In such a question an experimental scientist is asking how the observed variable  $y$  depends on the controlled variable  $x$  in other words, what value of the observed variable corresponds to each value of the controlled variable  $x$ .

Nature's response to such a question can be represented as a number of points on a  $x$ - $y$  graph paper which ideally are combined into a curve. But does knowing this curve mean that I know how  $y$  actually depends on  $x$ ? It does not. What is also needed is knowledge of what the mathematical function is that the graph represents.

This is a separate question from knowing the curve. It is answered by identifying the function in question. This would be satisfying the conclusiveness conditions (2.3) and (2.7)-(2.8). It is not answered automatically by the knowledge of the graph of the function. You can look at the curve until you are blue in the face and still the identity of the function is not revealed to you. It could thus be called also the problem of interpreting the curve or of specifying its meaning. In order to avoid the misleading connotations of all these different ways of referring to the same problem, I propose to give it a neutral technical name and refer to it as the Lorelei problem in honor of Heinrich Heine, recalling the first line of his so-entitled poem, "Ich weiß nicht was soll es bedeuten." ("I do not know what it is supposed to mean".)

The Lorelei problem is like the corresponding problem in the case of simple *wh*-questions. It is conceptual, in this case mathematical, in nature. It is not solved by more observations or by more accurate observations, but perhaps by manipulating mathematical formulas as applied to the physical subject matter at hand. It shows the truly remarkable fact that even in completely factual question of the kind we ask all the time in science and in everyday life there is a tacit component of conceptual question asking for conceptual knowledge.

### **3. Wittgenstein's Lorelei problem**

In the light of what we have found out, it is possible to see what Wittgenstein's rule-following problem is. It is the Lorelei problem for rules. To say this is to pay a major tribute to his conceptual acumen. Even though Witt-

Wittgenstein did not have an explicit logical framework or a technical terminology at his disposal to spell out his insight, he realized that there are two logically different components involved in rule-following. An analogy with experimental questions shows the difference. Merely acting in accordance with a rule is like tracing the curve that codifies graphically the dependence of the observed variable on the controlled one. Hence we cannot in any direct sense see what determines the curve in the sense of knowing the function that guides the drawing of that curve. I cannot continue the curve without knowing what function it is supposed to represent. In the same way, from one's acting in accordance with a rule one cannot see what the rule is that guides the actions of following it. This is not an epistemological difficulty, but a conceptual distinction. It amounts to the question as to how the rule guides the actions of a rule-follower.

For a sufficiently abstract-minded reader, the character of Wittgenstein's rule-following problem as a Lorelei problem should be obvious. For what are the words that he uses for the step from the expression of a rule to the action it prompts? They are expressions like "guiding", "determining", "influencing" etc. In the cold eyes of an abstract mathematician, these are all expressions for different kinds of functional dependence. Hence Wittgenstein's question as to how an expression of a rule guides my actions is in effect a question as to what that function is, that is, of identifying their function, that is, the Lorelei problem.

Even the idea that an answer to a Lorelei problem must be an identification of the rule (or other function) in question seems to be present in Wittgenstein. This is suggested by the fact that identification is closely related to definition when he says that

The rule can only seem to me to produce all its consequence in advance if I draw them as a matter of course. (PI I, sec. 238.)

Wittgenstein continues

As much as it is matter of course for me to call this color "blue"

A little later he writes

"Red" means the color that occurs to me when I hear the word "red"— would be a definition (PI I, sec. 239)

In brief, Wittgenstein's brilliant insight was to recognize the Lorelei problem about rules as a problem separate from all questions of acting in accordance with the rule. "What more could there be", we are tempted to ask. But this question is merely the analogue of the corresponding question about functions where one is tempted to ask, "What more can there be to the function than the curve? Set-theoretically the function is nothing more than the class of ordered pairs of argument values and function values, which is precisely what the curve codifies. One just cannot conjure away the conceptual dimension that necessitates the identification of that function, and likewise for rules.

But don't we often in fact succeed in identifying the function, and doesn't the same hold for rules? Wittgenstein's discussion might give the impression that he is talking about epistemological difficulties of identifying the rule (function). He marshals with great glee examples to illustrate how no sequence determines its continuation and how every symbolic representation can be understood in more than one way. If this were his entire point, one could respond by pointing out that as a matter of fact we often can for instance identify without any real trouble the function (law) that governs a sequence of numbers. I can recognize the rule for the sequence of Fibonacci numbers from its initial segments, and no mathematics student will fail to realize how the sequence 314159... is determined. We have here perfectly realistic language-games which by Wittgenstein's own principles should suffice to give meaning to questions of knowing a rule. The naturalness of this idea is testified to by Wittgenstein:

When you said "I already knew at the time..." that meant something like "if I had been then asked what number should be written after 1000, I should have replied [correctly] '1002'", And that I don't doubt. (PI 1, sec. 187)

The answer is that Wittgenstein is not making an epistemological point, skeptical or not. His point is conceptual, not epistemological. It is true that an initial segment of a rule-governed sequence does not determine the rest and that there are difficulties of finding the rule from a sample of its cases. But these difficulties are different in kind from the difficulty of anticipating the next step. The 'difficulties' Wittgenstein intends are for instance not due to the finitude of the sample. Even knowing the entire infinite curve of a function does not imply knowing what function it is a curve of.

If there had not been his “horror of infinity”, Wittgenstein might likewise have pointed out that even if someone acts in accordance with a rule always, forever and to the bitter end, that would not necessarily identify the function. Wittgenstein’s apparently skeptical remarks are his way of calling our attention to a conceptual distinction. If you try to interpret such remarks epistemologically, you are missing their point, their “Witz”, as Wittgenstein might have said.

The distinction involved here does not only split philosophers’ hairs. It shows up in an important way in scientific reasoning. The difference between the two dimensions of dependence questions means that experimental induction and indeed what is usually called induction has the same two dimensions, that is, involves two different tasks. These two tasks require different modes of reasoning. The so-called inductive logic deals only with the factual component and with the confirmation of already established generalizations. In our day and age, the other component, that is, the search of the functions that govern phenomena is often brushed under the carpet called constructing “mathematical models”. In earlier times, the most prominent instances of the search of mathematical functions and other laws were attempts to extend partial laws and especially to integrate different partial laws. Indeed, such attempts were what was typically meant by “induction” or epagoge.

We can now also see interesting connections between Wittgenstein’s different views. His requirement that the rule must play an actual role in one’s act of following it is reminiscent of a requirement that knowing a function must give me a recipe for computing its value for a given argument. If so, Wittgenstein’s initial conception of rule-following would be related to his constructivistic position in the philosophy of mathematics.

Wittgenstein nevertheless realized that to ask the Lorelei question is to ask for understanding rather than for a recipe. More specifically, the Lorelei question is conceptual rather than epistemological. In the RFM, sec. 3, he poses the following question:

*How do I know that in working out the series +2 I must write “20004, 20006” and not “20004, 20008”? — The question “How do I know that this color is ‘red’ ” is similar. (Italics in the original.)*

This should also show that Wittgenstein's rule problem is not an epistemological problem of being aware of the rule. On the analysis offered here what is required for genuine rule-following is not an awareness of the rule that one is following, but being able to identify the rule. Such ability need not be actualized, but it must be there ready to be used.

This enables us to understand what a genuine or, as I will call it, informed rule-following is like. Wittgenstein himself seems never to have been quite clear about what is involved. What happens is this. We have seen what it means for someone to follow a rule in the full sense Wittgenstein was trying to capture. This full sense involves acting in accordance with the rule, but it also involves an ability to consider what one is doing in the proper conceptual framework. The important point is that a rule-follower's knowledge of the rule she is following is normally potential, not actual, most of the time. An example used sometimes in discussions of rule-following is the use of multiplication-table. It is usually taught to children as a mere rote, as a mere automatic behavior in accordance with a rule. But in fact in its normal use it is an instance of informed rule-following. Suppose that I am carrying out a multiplication semi-automatically, but suddenly have cold feet. "Seven times six – now what is it?" The chances are that I say to myself something like, "Let's see. Five times six is thirty, two times six is twelve, hence seven times six must be forty-two." And I happily go back to calculating automatically. Here we have an example of informed rule-following. One can in fact learn and internalize multiplication tables without learning them by rote. There are in Europe some progressive schools where elementary mathematics is taught without teaching children to memorize the multiplication table.

Likewise, in Wittgenstein's favorite example, in reading aloud from a text in a foreign language I may, say, suddenly hesitate regarding how to pronounce an unusual letter or letter combination. Then I can and have to resort to my conscious memory of the relevant phonetic rule.

In brief, intelligent rule-following does not involve actual awareness of the rule, but it requires potential awareness. It requires knowing what the rule is, but not being aware of it at the time.

The apparently opposite pole to informed rule-following is automatic rule-following. In general terms, one can look at Wittgenstein's development as involving an initial attempt to find a way of interpreting

automatic rule-following as being guided by a concrete embodiment of the rule. The failure of this quest led him to acknowledge the autonomy of automatic rule-following. His mistake was that this autonomy is only true of informed rule-following which can be automatic. Hence the autonomy of the automatic is only psychological, not conceptual. An apparently automatic rule-following can be autonomous only if it at bottom is informed rule-following.

## Literature

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Wittgenstein, Ludwig 1980: *The Blue and Brown Books*. New York: Harper and Row.

## Appendix

German text of the quotation above:

Wir können, rein behavioristisch, die Arbeitsweise des Lehrens und Ausführens und der Benützung von Rechnungen beschreiben. Müssen wir uns dazu einer Regel bedienen?

Diese Erscheinung des Sachverhaltes, man könne das Funktionieren einer Regel nur wieder mittels des Funktionierens einer Regel beschreiben, in ihr liegt unser ganzes Problem.