Wittgenstein on 'Primitive' Languages*

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Introduction

In *Philosophical Investigations* Wittgenstein describes a 'primitive' language of just four words, used for communication between a builder and his assistant:

> The language is meant to serve for communication between a builder A and an assistant B. A is building with building-stones *(Bausteinen):* there are blocks, pillars, slabs and beams. B has to pass the stones, and that in the order in which A needs them. For this purpose they use a language consisting of the words "block", "pillar", "slab" and "beam". A calls them out; – B brings the stone he has learnt to bring at such-and-such a call. (Wittgenstein 2001, §2)

The example dates back at least as far as the 1930s. An early version of it occurs on the first page of *The Brown Book.* My reading of these examples assumes that we are intended to interpret the builder's four words as linguistic signs. If this is incorrect, then it is difficult to make sense of calling this a 'language' at all. The point may seem trivial, but is worth making for at least two reasons. One is that it is not always taken for granted by philosophers that words are signs (cf. Grice 1989, 215) and the other is that not all linguistic elements *are* linguistic signs. (Vowels and consonants are certainly linguistic elements of some kind, but they are not linguistic signs.) Any language has more to it than signs, although signs it must have.

The communication situation described in *Philosophical Investigations* §2 is clearly meant to be unproblematic. It is remarkable how closely it corresponds to the archetypal communication situation described by Leonard Bloomfield in the early 1930s in his famous linguistic parable fea-

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* We would particularly like to thank Roy Harris for his contribution to this volume. Unfortunately, Professor Harris was not able to join the conference. He did, however, send us his text in advance. The paper printed here was read out and discussed during the conference.

turing Jack and Jill (Bloomfield 1935, 22-27). In both cases, only one participant speaks: the other merely responds by going to fetch something. In both cases, it is implied that the success of the act of communication consists in what is fetched being identical with what the speaker wanted and intended to be fetched. The main difference seems to be that Bloomfield's example is even more primitive than Wittgenstein's. Wittgenstein at least gives his language a vocabulary of four specific words, whereas Bloomfield never tells us exactly what Jill said to Jack. Secondly, Wittgenstein's scenario appears to presuppose an already established social division of labour (builder vs. assistant), which we are presumably expected to understand as partially explaining the distribution of communicational roles. Bloomfield never says anything about the social relationship between Jack and Jill, but his story implies that, whatever it is, Jack is prepared to do what Jill says, at least in this particular communication situation. So it is with the builder's assistant in Wittgenstein's example.

Wittgenstein, however, then adds the astonishing rider: 'Conceive this as a complete primitive language *(vollständige primitive Sprache)*.' In this paper I wish to ask what we are to make of this. My remarks are also intended to supplement the observations on linguistic rules in Chapter 7 of *Language, Saussure and Wittgenstein* (Harris 1988) and my paper in the volume *Linguistics and Philosophy* (Harré and Harris 1993).

The first clue Wittgenstein gives us comes a few paragraphs later (§6), when he proposes that we could imagine this language as 'the whole language of A and B; even the whole language of a tribe'. It seems important to ask exactly *what* we are being asked to imagine, and whether we *could* imagine this. What at first appeared to be a straightforward example immediately becomes highly problematic. For if that linguistic situation turns out to be unimaginable, then it seems that a large part of the plausibility of Wittgenstein's language-games approach collapses along with it. I should like to suggest that perhaps we deceive ourselves in supposing immediately that we *can* imagine it. To be sure, it is not like being invited to imagine a four-sided triangle, where straight away it is clear that we are being asked to imagine contradictory things. But a no less serious contradiction may lie hidden here, disguised from view by the vagueness of such terms as *language* and *complete.* Someone who tells us he has no trouble

imagining a four-sided triangle may deserve our admiration (for possessing a superior imagination), but he also invites our scepticism.

Problems with the builder's language

There are to begin with some obvious difficulties. What is the whole language of a tribe? By a 'tribe' I take Wittgenstein to mean a small non-Western people of the kind studied by anthropologists. In the *Brown Book* he speaks vaguely of people living 'in a primitive state of society' (Wittgenstein 1969, 81). But, as anthropologists had been pointing out long before it became politically incorrect to speak of 'primitive' societies, populations living in a very simple material culture do not speak correspondingly simple languages. It seems highly implausible that any such community would invent words just for the purpose of building, but for no other activity, or even that they might have passed through such a phase in the course of their history. For it strains credulity to imagine that a whole tribe would consist exclusively of builders and their assistants. Are there no cooks, farmers, carpenters, weavers or warriors? And if there are, what use would the builder's four words be to them? It would also be a curious linguistic community if only one class of citizens (i.e. the builders) ever spoke. In the light of these obvious objections, it seems all the more necessary to ask what exactly Wittgenstein is driving at by describing the builder's communication system as a 'complete' language.

In *Philosophical Investigations* Wittgenstein's aim in constructing imaginary 'primitive' languages and language-games seems to be to turn an analytic searchlight on features of more complex languages of the kind already familiar to his readers (German, English, etc.). But there is a serious risk that the strategy will backfire. There is inevitably a temptation to read back into these allegedly 'primitive' systems certain interpretations derived from our acquaintance with more 'advanced' systems, even when they are not supported by the semiological structure of Wittgenstein's invented examples.

In this case, for instance, Wittgenstein chooses, for the vocabulary of his primitive language, forms identical with those of four ordinary German words. This already predisposes the reader to treat these four words as nouns and names of classes. This is potentially misleading, inasmuch as

the system Wittgenstein describes as a 'complete' language has no room for a metalinguistic distinction between nouns and verbs, or between these and any other parts of speech.

One is bound to ask whether this feature of the builder's language is intended to have any ontological or conceptual implications. Some thinkers (Einstein would be one example, cf. Harris 2005, 190-191) have held that the concept of material objects is in some sense prior to the concepts of space, time and event. For such thinkers, it might seem 'natural' that a primitive language would consist just of names for material objects, since the primacy of material objects in the human understanding of the world is already taken for granted. In Einstein's thinking, the motivation for this primacy is clear enough: it enables him to treat space, time and events as abstractions or logical constructs from our more basic recognition of the existence of material objects. This is a prerequisite for his general theory of relativity. But can any such motivation be attributed to the Wittgenstein of *Philosophical Investigations?*

There seems little to indicate that. In the *Brown Book,* the builder's language is at one stage supplemented by a temporal adverb 'now'. So the builder can say, for example, 'Slab, now!'. This adverb, we are told, was introduced by a programme of training involving a clock. The learner was taught not to carry out the instruction immediately, but to wait until the hand of the clock reaches a certain point previously indicated (Wittgenstein 1969, 107). It is not difficult to see why Wittgenstein dropped this clumsy 'improvement' in the *Philosophical Investigations.* The extended builder's language is now much more sophisticated than the 'primitive' original. It presupposes that the learner already understands the somewhat complicated semiology of clocks, and in any case the new sign is not convincingly translated as 'now'.

On *Philosophical Investigations* p. 196, where time crops up again, we are told that 'Man learns the concept of the past by remembering'. This suggests that perhaps, analogously, man learns the concept of the future by anticipating. And then what does man do in order to learn the concept of the present? Whatever it is, it does not seem to involve any conceptual extrapolation from material objects antecedently 'given'.

In § 18 Wittgenstein makes a half-hearted attempted to deal with one other elementary objection. He tells his reader not to be troubled by the fact that the primitive languages so far described consist only of orders.

> If you want to say that this shews them to be incomplete, ask yourself whether our language is complete; – whether it was so before the symbolism of chemistry and the notation of the infinitesimal calculus were incorporated in it; for these are, so to speak, suburbs of our language. [...] Our language may be seen as an ancient city: a maze of little streets and squares, of old and new houses, and of houses with additions from various periods; and this surrounded by a multitude of new boroughs with straight regular streets and uniform houses.

I call this response 'half-hearted' for several reasons. In the first place, the objection to the plausibility of the builder's language of §2 could hardly be that it consists only of orders. On the contrary, it does not consist of orders at all. It affords no linguistic basis for distinguishing an order from a statement or any other type of speech act. The best analytical commentary we have on *Philosophical Investigations* tells us that the builder's language has only one mood, the imperative (Baker and Hacker 1980a: 26). But this is plainly wrong. If a language has no parts of speech, *a fortiori* it has no modal distinctions among its 'verbs'. (One might as well claim that its 'nouns' have grammatical number, on the ground that the builder needs the various items to be brought one at a time; or grammatical gender, on the ground that the items in question are inanimate objects.) To insist otherwise is to make it impossible to distinguish structural *linguistic* features from functions of discourse.

But even if the builder's language did consist only of orders, and that were the objection, that objection is not parried by pointing out that once upon a time German lacked the linguistic equipment to deal with various aspects of science and mathematics. 'So what?', the objector will immediately reply. 'Belatedly adding a symbolism for chemistry and infinitesimal calculus is *toto caelo* a different matter from introducing into a communication system the kind of linguistic structure required to differentiate orders from statements, questions, wishes and so on. In fact it would be quite pointless to add signs for chemical and mathematical items to a communication system that was in any case too impoverished to accommodate the basic speech acts that all human languages recognize.'

Linguists will recognize that Wittgenstein's unconvincing response about 'our' language in §18 relies on appealing to a model adopted in historical linguistics, sometimes called the 'organic' model, where languages are conceptualized as constantly developing accumulations of verbal materials from the past. According to this model, no current language is ever complete. What are called 'languages' in common parlance are simply transitional phases in an ongoing process of linguistic evolution, following its own laws. No dictionary can ever be complete, no grammar book final, until a language is 'dead'. This was the received linguistic wisdom of some nineteenth-century theorists.

But when Wittgenstein published the *Philosophical Investigations* that historical model had been out of date for at least two generations. It became superannuated with the posthumous publication of Saussure's *Course in General Linguistics,* which introduced a totally different approach to linguistic analysis. It is the Saussurean model that has supplied the theoretical basis for modern linguistics. Without that, we should still be living in the world of the *Oxford English Dictionary* and the brothers Grimm.

In any case, the appeal to the organic concept of languages in §18 manifestly conflicts with what we are told about the primitive language of §2. A recent comment on §2 observes that, like the primitive language of the Garden of Eden, the builder's language seems to lie outside history. It can have no history, for it is destined to remain forever the same, endlessly recycling the same set of utterances and activities. Its lack of reflexity means that there is no room for the negotiation of meaning between those who use it. The same commentator writes:

> The builders' world is a totalitarian one in which language, command and obedient act are perfectly coordinated. Therein may lie a clue to its hold over the builders: perhaps authority lies in the language itself and there is no need of law, since in the imaginary domain of the primitive language, there is no room to think outside its categories and therefore no escape from the compulsion it exercises. (Hutton 2009, 2)

Grammar and arbitrariness

I have only time to touch on one more problem with the 'primitive' language of *PI§2.* According to Wittgenstein, grammar is not accountable to any reality. Its rules are arbitrary. In *Philosophical Grammar* §133 he tells us that the rules of cookery are not arbitrary, because cookery is defined by the end of cookery, whereas language is not defined by the end of language. In this sense, however, the grammar of the builder's language is not arbitrary either. It is designed to accomplish a specific end, namely facilitation of the building operation. To that extent, if B brings a pillar when A has called for a block, it is as bad as adding salt when the recipe called for sugar. The grammar of the builder's language would be arbitrary only if it made no difference whatever which building materials B fetched in response to any call. But if this were the case, then the four calls A uses could no longer be considered linguistic signs.

Wittgenstein and Saussure

Saussure was giving his lectures on general linguistics in Geneva at the same time as Wittgenstein was studying engineering in Manchester. Some people believe, in spite of the lack of concrete evidence, that Wittgenstein became acquainted with the work of Saussure at Cambridge in the 1930s. Certainly C.K. Ogden was familiar with it, and the first German translation appeared in 1931. But it seems to me unlikely that if Wittgenstein had read Saussure he would ever have deployed the analogy we find in §18 of the *Philosophical Investigations.* Leaving speculation aside, the relevant point for present purposes is that Wittgenstein has got his strategy of argument the wrong way round. Anyone who had read Saussure should have realized that the way to defend the notion of a complete primitive language is not to fall back on the feeble line that perhaps even highly advanced languages are not complete. That simply concedes the objector's point at one remove. The way to defend the notion of a complete language, whether it be primitive or advanced, is to maintain that all languages are holistic systems; which amounts to championing the Saussurean model of semiological analysis for arbitrary signs. Only a radical holism of the Saussurean brand is going to do the theoretical job required.

It is interesting in this connexion that some commentators see Wittgenstein as having constant recourse to holistic presuppositions, and even as espousing a holism that outstrips that of other philosophers. One such commentator, for instance, seizes on the famous dictum in PI §199, 'To understand a sentence means to understand a language', and remarks 'This semantic holism is reminiscent of Quine and Davidson' (Glock 1996, 89). He goes on to elaborate: 'Taken literally, it implies that one cannot understand any part of a language unless one understands every part'. This will cut no ice nowadays with those linguists who are sceptical of the very notion of 'literal' meanings and 'literal' interpretations of utterances (Harris & Hutton 2007). Literal or not, it makes little sense to speak of understanding 'every part' of a language unless indeed the language is a whole, i.e. a complete system. There could be no question of understanding 'every part' of a language of which the structure was inherently open-ended and subject to constant change. The same commentator proceeds immediately to defend Wittgenstein's alleged holism against the objection that this makes language-learning impossible, since languages have to be learnt in segments. The defence offered is that we do not

> learn everything at once, but our grasp of each part is complete only once we have mastered the whole. Thus understood, semantic holism explains rather than ignores the fact that there are degrees of understanding. (Glock 1996, 89)

However, if that was indeed Wittgenstein's position, it appears that none of us can possibly *master* our own native language, or indeed grasp the full meaning (the literal meaning?) of any single word in it. We are condemned to struggle on as permanent apprentices. Which seems puzzling, if not downright paradoxical.

Explicating 'completeness'

In their essay on Wittgenstein's language-games, Gordon Baker and Peter Hacker emphasize, quite rightly, that 'the important feature of these primitive languages is that they are complete in themselves' (Baker and Hacker 1980b: 53). They also point out that this notion is not a late addition to Wittgenstein's thinking, but goes back at least as far as the *Brown Book.* That text in fact opens with a discussion of 'completeness'.

> Suppose a man described a game of chess, without mentioning the existence and operations of the pawns. His description of the game as a natural phenomenon will be incomplete. On the other hand we may say that he has completely described a simpler game. In this sense we may say that Augustine’s description of learning the language was correct for a simpler language than ours. (Wittgenstein 1969, 77)

This in turn takes up a remark in the *Blue Book* a year earlier.

> A treatise on pomology may be called incomplete if there exist kinds of apples which it doesn’t mention. Here we have a standard of completeness in nature. Supposing on the other hand there was a game resembling that of chess but simpler, no pawns being used in it. Should we call this game incomplete? Or should we call a game more complete than chess if it in some way contained chess but added new elements? (Wittgenstein 1969, 19)

There are two points to note here. Wittgenstein speaks of ‘a standard of completeness in nature’. It holds, we are told, in the case of describing apples. Does anything similar hold in the case of describing languages? Or are languages not natural objects? We are not told explicitly, although chess, it appears, is a ‘natural phenomenon’, or at least can be treated as a natural phenomenon for purposes of description. Unfortunately none of this tells us what ‘completeness’ consists in where languages are concerned. It seems that we are being asked to accept that *any* linguistic description, however limited, is nevertheless a *complete* description of some language or other (as in the case of chess without pawns). But does this make sense?

Saussure, one feels, would have wanted to point out to Wittgenstein that a clockmaker who describes in minute detail the inner workings of a clock, but fails to say anything about the movement of hands on the dial, has not described a simpler form of clock. He has failed to describe a clock at all.

Or, to take a linguistic example, the current edition of the *Shorter Oxford* is published in two volumes. Volume I goes from A to M and Volume II from N to Z. Now suppose I have the misfortune to lose or destroy the second volume. Should I console myself with the thought that nevertheless I still have a complete description of a simpler form of English – one in which there happen to be no words beginning with any of the letters from N to Z? The answer is ‘No’. I don’t have a complete description of a simpler form of English, or a complete description of anything else for that

matter, but an *incomplete* description of approximately half the vocabulary of English. And the reason why Volume I is incomplete, even as a description of the words it contains, is that the description it gives refers to and relies on words in the missing Volume II. Or, to put it in Saussurean terms, the vocabulary of English is not just a *nomenclature,* but a self-contained *système de valeurs.*

In the complete language-games of the *Philosophical Investigations,* as Baker and Hacker rightly observe, 'addition and modification may change the original base'.

> Adding pawns to a proto-chess is not merely expanding the game, but inventing a different game, for it changes the range of possible moves and configurations. (Baker / Hacker 1980, 53)

This is an eminently Saussurean point: in fact, it is made explicitly on p. 43 of Saussure's *Course,* if we reduce or increase the number of chess pieces, we automatically alter what Saussure calls *la «grammaire» du jeu* (the 'grammar' of the game). In other words, chess minus the pawns, or chess with sixteen extra pawns, are different games from the chess we know.

Internal and external analysis

It is on this basis that Saussure draws his famous distinction between 'internal' and 'external' analysis. The internal analysis of a game involves 'everything concerning the system and its rules' *(Course* p.43). External analysis covers all the rest, everything to do with the geographical distribution of the game, where and when it is played, and by whom, its relations with other games, and so on. This has nothing to do with the system, which follows a quite different historical trajectory. Where languages are concerned, strictly speaking, even the loss of a single phoneme brings into existence a new system, since in a language operating with one less phoneme all the oppositions must change. This will be so *even when the loss of a phoneme entails no difficulties of intercommunication for users of the earlier and the later systems.* No system can be reduced to a list of positive terms, for it is based on *differences* between terms, and these differences are more complex, both lexically and syntagmatically, than any simple listing allows. To suppose otherwise would be just as mistaken as supposing

that a currency system in use in a community could be 'completely' described by giving a list of the coins and notes issued by the Treasury.

We could, to be sure, tighten up Wittgenstein's vague notion of 'completeness' in an attempt to make it theoretically fit for purpose (i.e. fit for the articulation of an internal analysis). We could, for instance, start by stipulating (i) that the items the builder calls for, and his assistant brings, are items having no other function than as materials required in the building operation, and (ii) that A and B have no *other* language available in which to describe or refer to these objects.

Some such stipulations seem to be necessary if we are going to set aside – to the extent that we can as 'outsiders' – any preconceptions about what these four words mean *for A and B.* We shall also have to set aside Wittgenstein's explanation (§6) that this language-game has been learnt by a systematic programme of 'ostensive teaching', involving a teacher who utters the words and points to the relevant objects. For this presupposes that there was a prior language-game (the teaching game) on which the language of A and B was based, and that at least one other person (i.e. the teacher) could play. And then there is the question of how the teaching game itself was learnt. We seem straight away to be led into a regress of primitive language-games incompatible with the notion that any of them is 'complete' in itself.

So let us shortcut these problems and postulate that we are dealing with a language-game already in operation (we don't know anything about its antecedents or how it was learnt) and complete in the sense stipulated above. Let us for convenience give it a name: *Constructionese.* Here we approach Saussure's conception of a synchronic *état de langue.* Our concern henceforth is with the semantics and semiological structure of Constructionese *as seen from the viewpoint of the builder and his assistant.* In other words, with what Saussure would have called its 'internal' linguistics.

If we now propose to ask what linguistic competence is required for A and B to communicate successfully in Constructionese, we, as literate and numerate investigators, are looking 'from the outside' at a semiological world which is quite different from our own. We shall find ourselves constantly in trouble when trying to describe a situation in which A and B, *ex hypothesi,* just do not have the resources that we habitually rely on. (Oddly, Wittgenstein tacitly credits A and B with a grasp of the type/token

relationship in roughly the sense defined by C.S. Peirce. This is presumably one of the things carried over from the previous teaching game. But we can dispense with it for our present purposes. It simply obscures the relevant issues.)

Operational discriminations and proto-numeracy

It seems clear that A and B, as thinking creatures, do need quite a number of operational discriminations of some kind, and that these are indispensable to the successful execution of the building programme. But does this include any kind of numerical competence – being able to count (as we would call it)? Clearly not, since Constructionese – their *only* language – has no counting words. (In an elaborated game introduced in §§ 9 and 10, the players do have primitive number-words, but this does not apply to original primitive language of §2.) Nevertheless, even if they have no numerical concepts, the builder and his assistant need a grasp of what I shall call 'proto-numerical' discriminations.

Thus A and B will need to grasp that each of them has a role that is complementary to the other's, but separate from it. They have to understand that – as we might put it from an outsider's perspective – what they are engaged in is 'a two-person job'. But we cannot on that account attribute to them any notion of duality – which is an explicitly numerical concept. However, they do need to grasp a discrimination of some kind which corresponds to their perception of the individuality of their different roles as agents, of the fact that the operation divides into two parts accordingly (although again we must not allow that latter description because it lets in the banned numerical concept 'two'). What we are groping to describe here is a proto-numerical concept ('proto-two', if you like) implicit in A and B's recognition of the bi-partition of roles and the non-identity, non-interchangeability, of the activities which each must perform.

A and B will also each need four classificatory discriminations, corresponding to the four different kinds of building material they are called upon to handle. They must be able to distinguish blocks-from-pillars-from-slabs-from-beams, a quadruple division. But again we must not say that they need the concept 'four'. Nor, it should be noted, do they both need to have 'the same concepts' of the different classes of object. *How* they draw

the mental-cum-perceptual discriminations between classes of objects does not matter. What matters is that in practice B always brings the kind of object that A called for, regardless of whether they are using criteria of size, shape, weight, colour, or any other differentiae.

They will also need four classificatory discriminations corresponding to the word-forms in their language. Here the same proviso applies. The way these word-forms are differentiated does not have to be ‘the same’. B needs only auditory criteria, since he never speaks. A needs both auditory and articulatory criteria, since he has to utter the words. All that matters for communicational purposes is that neither of them ever confuses, say, the call ‘Block!’ with the call ‘Beam!’, or the call ‘Pillar!’ with the call ‘Slab!’.

So far all this seems fairly straightforward. Let us now examine their operational discriminations in greater detail. When dealing with slabs, for instance, they seem to need to differentiate between ‘one-slab’ and ‘more-than-one-slab’. This is demanded by the requirements of the building operation. (Wittgenstein stipulates that B must fetch the individual items in the order in which A needs them. So it will not do for B to fetch two slabs when A calls ‘Slab!’, since at that point in the proceedings A does not need *another* slab.) But likewise B must not return empty-handed: so he needs to grasp the difference between ‘at-least-one-slab’ and ‘no-slab’. It would already be an over-generous interpretation to say that A and B distinguish in general between ‘one’ and ‘more than one’: all we can say if we take a parsimonious view is that they must distinguish ‘at-least-one-block’ from ‘more-than-one-block’, ‘at-least-one-pillar’ from ‘more-than-one-pillar’, and so on. For it is possible – even likely – that they may be using different operational criteria for each class of item.

It is important to note that if we speak of distinguishing, for instance, between ‘at-least-one-pillar’ and ‘more-than-one-pillar’, these descriptions have to be understood as ‘hyphenated’ expressions. The purpose of these hyphens is to remind us that *as soon as they are removed* full-blown numerical concepts sneak in (‘one’, ‘more than one’). *Ex hypothesi,* speakers of Constructionese have no such concepts. For them Constructionese is a *complete* language and their *only* language: their grasp of operational discriminations is in every case bound up with the particular operations in question. So ‘more-than-one-pillar’ is not on a par with ‘more-

than-one-block'. The difference might be pragmatically realized in a variety of ways, e.g. B finds that whereas he can carry several blocks if need be, he cannot manage more than one pillar at a time.

The point is not trivial, since we are focussing here on what is *needed* in the way of linguistic competence for a *complete* primitive language; and this makes a difference. That is to say, part of the understanding necessary for dealing with blocks will have to *include* discriminating between 'at-least-one-block' and 'more-than-one-block', which may in turn involve different criteria from those relevant to pillars. Likewise it is going too far to say that either A or B has the concept 'one', which would indeed be a numerical concept. For the concept 'one' as we understand it – from the perspective of those accustomed to a far richer language than Constructionese – is part of an extended system of numeration (which includes contrasting it with 'two', 'three', etc.). All of this is beyond the reach of the resources of Constructionese.

Temporal segmentation

The discriminations A and B need are also tied in with another aspect of the whole building programme. We have not described the situation adequately by indicating what is needed to underpin the quadruple classification of building materials on which the whole collaboration between A and B is based, or the quadruple classification of calls. That is only part of the story. For B has to be able to put A's calls into appropriate *temporal* correlation with the fetching and carrying that he is being called upon to perform. If he could *not* do that – for whatever reason – the system would break down. That temporal correlation has *nothing to do* (from our 'external' perspective) with being able to recognize the differences between the various building materials. When A calls 'Block!' he is not only saying – in our terms – that he wants an item of a certain kind, but that he wants it brought *now* in the sequence of operations. It is a call for immediate action on B's part. B 'responds' by going to fetch a block. This 'you-then-me' aspect of the communicational process requires operational discriminations which set up a segmentation of the temporal continuum into potentially denumerable parts. The temporal segment that is identified as 'now' at any given point needs to be distinguished from immediately preceding and

immediately following segments. So, from an 'outside' point of view, there must be at least three such segments (the current one, the preceding one and the following one). They 'would be' countable if A and B could keep count; but speakers of Constructionese have no resources for counting. So here proto-countability resolves itself into a sequence of operational discriminations involving correlating calls from A and corresponding fetching-and-carrying by B. It is the succession of these A-B correspondences one after another that structures the concatenation of the communication process. A and B have to grasp *that* structure for their collaborative work to proceed at all. B, for instance, does not 'save up' a sequence of calls from A and then fetch those items all in one journey.

All that has been said so far might be summed up 'from the outside' by saying that this primitive communication system is based on a combination of just two semiological archetypes. One is the sign functioning 'atemporally' as a classifier. The other is the sign functioning 'dynamically' as the initiator of another stage in the building operation. The words in this language have to fulfil *both* semiological functions simultaneously. That is, every time the builder utters a word, that utterance has to function as a prompt to his assistant to *do something:* but *what* the assistant will do depends on *which* of the words is uttered. The dynamic function anchors the operational discriminations to the here-and-now, alerting the assistant to the need for immediate action. It allocates the utterance (e.g. 'Slab!') to a place in a temporal sequence, in which the *next* place has to be occupied by B going off to fetch a slab.

How are these two functions related? Unless we understand this, we shall never make sense – *from the inside* – of the primitive language that A and B are using. The answer is that 'from the inside' those two functions *are indistinguishable.* What accomplishes one automatically accomplishes the other. There is *no way* of separating out the dynamic semiological function from the classifying function. Here at last we can put our finger on what makes Constructionese a semiologically 'primitive' language.

Operational discriminations and reasoning

By Aristotelian standards, the builder and his assistant are neither literate nor numerate. *A fortiori,* they are incapable of reasoning. They cannot ar-

ticulate the proposition that this 'follows from' that; they have no words for 'not', 'because', 'therefore', etc. Nevertheless, they communicate successfully.

Furthermore, their system provides a form of communication radically different from any implied in Aristotle's account. There is no room here for supposing that when the builder calls 'Block!' the assistant thinks to himself 'Ah! That means he needs a block.' Even less 'Ah! That means that if I don't go and get one I shall be breaking the rules.' *Ex hypothesi,* the assistant cannot think such thoughts, for their articulation in that analytic form presupposes more linguistic resources than Constructionese possesses. The assistant just thinks 'block' (where thinking 'block' means both recognizing the call in question and initiating the action required to respond). Is then *block* in Constructionese a kind of homonym? Is it the name of a certain class of building materials *plus* an instruction to fetch one, both having the same form? No, since a separate identification of those two words is again beyond the resources of Constructionese and the proficiency its use requires.

The proficiency A and B have is an integrational proficiency, an ability manifested pragmatically by integrating one's actions systematically with those of another person. The words of Constructionese are integrational signs, not Aristotelian *sumbola.* The latter are deemed to fulfil their semiological function *whether or not* the hearer takes appropriate action in accordance with the speaker's utterance. The *sumbola* have already done their job when the hearer has heard and understood what was said. Not so in the case of A and B: they are not using Aristotelian *sumbola,* but signs of a different kind. In their world, there is no room for 'understanding a sign' as an independent psychological state or event – not even as a fleeting 'Eureka!' experience that intervenes between B's hearing the word and taking action.

Given all these caveats, we nevertheless recognize that what A and B are engaged in *is* a rational activity and that A and B are acting as rational agents. But it is a quite different level of rationality from Aristotle's. It does not depend on the agents being able to give *reasons* for what they do. It is a rationality which consists in grasping how to partake meaningfully in a joint programme of co-ordinated activity. Aristotelian rationality tacitly presupposes that ability, but fails to acknowledge it *as rationality*

until it can be translated into a language fully equipped with *ands, ifs* and *therefores.*

Rationality and 'rules'

Wittgenstein would probably not have wished to develop the parable of the builder in the way that I have proposed here. For Wittgenstein it is important to retain, come what may, an appeal to grammatical 'rules'. Without it, he cannot muster a coherent account of what a language is.

According to Gordon Baker, the later Wittgenstein's notion of the 'autonomy' of grammar has two striking features. First, it implicitly rejects the whole notion of 'a system or calculus of rules'. Instead, 'it might be called a *motley* of rules' because the rules in question 'are not uniform in form or application' (Baker 1986, 301). Second, in virtue of this autonomy

> explanations of meaning cannot be justified (and hence cannot be faulted). They are free-floating creations like the planets. Nothing holds them in place. There is nothing behind the rules of grammar, there is, as it were, no logical machinery. (Baker 1986, 301)

If this is right, for Wittgenstein 'rules of grammar' mark the *nec plus ultra* of linguistic explanation. The notion of a 'motley of rules' is profoundly anti-Saussurean. (The same phrase also occurs in Baker / Hacker 1985, 37, 39.) Furthermore, for Wittgenstein, logic does not 'explain' grammar (as many thinkers in the Western tradition had supposed): grammar just *is.* Logic itself (e.g. as articulated by Aristotle) presupposes grammar.

By the time he wrote *Philosophical Investigations,* Wittgenstein seems to have abandoned his earlier belief in 'logical form' (Glock 1996, 212-6). But the ghost of logical form survives in his distinction between 'depth grammar' and 'surface grammar' (§664), a distinction which seems to anticipate that between 'deep structure' and 'surface structure' popularized by post-Saussurean grammarians after Wittgenstein's death. It is the same ghost that haunts the terminology employed by Chomsky in the 1980s, where the meaning of a sentence is designated 'LF', standing for 'logical form' (Harris 2009, 144-5).

Conclusion

It is interesting to note that Wittgenstein, like another influential figure in modern linguistic thought, Benjamin Lee Whorf, never seems to have read Saussure. This is perhaps more surprising in the case of Whorf (Harris 2009, 55-60), since Wittgenstein never professed any interest in linguistics. Both Whorf and Wittgenstein are sometimes presented as pioneers of linguistic relativity, but neither deals with the objections that Saussure had raised to relativistic assumptions years before. Although Wittgenstein eventually abandoned the calculus model, he never managed to break free from the intellectual tyranny of 'grammatical rules' in the way that is accepted today in integrational linguistics. We are told that Wittgenstein in the end realized that rules of grammar are 'in a deep sense, arbitrary' (Baker and Hacker 1985, 40). Quite so. But it was Saussure who had originally proposed the arbitrariness of the linguistic sign as the first axiom of modern linguistics, and set about showing how everything else in linguistic structure follows from this axiom, including the principles of linguistic change – another task that Wittgenstein never attempted.

Saussure's premature death left Saussurean linguistics with a holistic framework, but no explicit account of how *all* parts of the language were holistically interrelated within it. Chomsky attempted to resolve this seemingly intractable problem mathematically, i.e. by construing the entirety of rules of grammar as a single interlocking generative system of algorithms. To consider to what extent that reconceptualization of grammar was successful would require an excursus into linguistic theory that there is no time to embark on here. Suffice it to say that neither Saussure nor the mature Wittgenstein had any such conception of languages, and that is the principal criticism that generativists brought – and still bring – against the way both approach linguistic questions.

In all this it is important not to confuse rules with regularities, as both Chomsky and Wittgenstein seem at times variously prone to do. In Wittgenstein's case, the discussion on pp. 12-13 of the *Blue Book* would be one example, and §54 of *Philosophical Investigations* another. Although Wittgenstein is constantly warning us to be on our guard against the confusions caused by words, it seems that he has sometimes fallen victim to the morphological connexion between *Regel* and *regelmäßig,* which has no

counterpart in English. An interesting illustration of this occurs in *Philosophical Investigations* §§ 207-208, where the discussion of how to teach someone a rule ostensively reads far more persuasively in German than it does in the English translation. If we read the English translation alone, without reference to the German text, it immediately strikes us that Wittgenstein is blurring the difference between rules and regularities. What his learner ends up grasping is a regularity, not a rule.

According to Hans-Johann Glock, the characterization of a language that we are given in the *Philosophical Investigations* 'fits de Saussure's conception of *langue* as an abstract system of rules which underlies *parole'* (Glock 1996, 68). But the comparison falls far wide of the mark. In Saussure's final reflections on the subject, his Third Course of lectures at Geneva in 1910-1911 (Komatsu and Harris 1993), *la langue* is not presented as a system of rules at all, but as a holistic structure of *differences.* In this there is no room for a concept of rules, and all Saussure's remarks on the subject of rules are highly critical. Grammatical rules he sees as belonging to an outdated approach to the study of languages: they perpetuate what Saussure describes as 'fictions' derived from the confusion between a language and its writing system (Komatsu / Harris 1993, 47). In this respect at least, Saussure was the first 'rule-sceptic' of modern thinking about language.

Declaring A and B to be acting *rationally* on the basis of Constructionese – as opposed to *deterministically,* in the manner of the similar language-game played by Bloomfield's Jack and Jill – is not a conclusion reached by confusing the regularities of Constructionese with rules. But it does require opting for a different interpretation of rationality from Aristotle's. The rationality of what A and B are doing *consists in* the reciprocal integration of their activities by means of signs. Furthermore, these signs are based solely on operational discriminations. Nothing more is required, no more sophisticated level of mental activity, no higher-order conception of communication.

According to the account I have given, A's actions anticipate B's, which in turn presuppose A's. *That* is what makes their signs part of an integrated language-game. What each of the participants does is contextually and systematically relevant to what the other does *within the same temporal continuum and the same programme of activities.* It has nothing to do

with truth. It has nothing to do with following rules. It proposes a semiology of human interaction that is radically different, in theoretical basics, from any other account that has been proposed in the Western tradition.

Some theorists, undeterred by Wittgenstein's sad example, still go on constructing 'primitive' languages and language-games, in an effort to 'explain' how more complex languages operate. Invariably they proceed by copying what they take to be simple analogues of 'real' linguistic structures, or parts thereof, into the Mickey Mouse models they have set up to throw light on the more profound workings of verbal interaction between human beings. What they fail to realize is the complete futility of proceeding in this way. For the mini-models they construct invariably have a semiology which bears no relation to the complex semiology of communication operative in human communities. The error consists in supposing that the structure of German, English, etc., can be projected back piecemeal, without distortion, on to those allegedly 'primitive' languages that the theorist's misguided quest for explanatory simplification has left standing.

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