

Predication*

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1. The predicate

In the sentence ‘Tom sits’, the name distinguishes Tom from anyone else, whereas the predicate assimilates Tom, Theaetetus and anyone else to whom the predicate applies.¹ The name marks out its bearer and the predicate marks together what it applies to. On that ground, his name is used to trace back Tom, and the predicate is used to describe and classify him. Here, I’ll minimally sketch a picture of predication, which deems this notion a primitive semantic one along with reference, and the first differing from the second by one trait. Predication is proper to predicates playing their role, i.e. predicating predicates, rather than to nominalized ones (such as ‘talking’, in ‘Talking is something I like to listen to’).

Besides, I’ll discuss one or two aspects of two most famous almost contemporary or contemporary views of the predication, Gotlob Frege’s and Donald Davidson’s.² I’ll devote no attention to issues, such as whether a property, a relation, a concept, or the like, match a predicate,³ or to topics, like that of the unity of the sentence.⁴ About properties and the like, I take semantic grounds be too thin for ontological posits. Hence, no call for properties and the like, without excluding that there be properties and the like.⁵ Ontological posits, moreover, require a

* This paper, as all the papers in this collection, is dedicated to Kevin Mulligan, whom I met a first time in Friburg, Germany, just when he was moving to Geneva. Kevin contributed to turn Geneva’s into the best Philosophy Department on Continental Europe, influencing the work of most of us Analytic European on the Continent. Reflective and passionate he was then, and always later.

1 Of course, if the predicate ‘sits’ assimilates Tom and Theaetetus, it distinguishes them from Socrates and Theodorus who are standing.

2 For two very different and limited surveys on predication see Gibson 2004 and Meixner 2009.

3 I am interested in *application* as a semantic relation different from *reference*. I’m inclined to think that by predicating we attribute a property to a thing or a relation among n things. But I don’t think that’s what our semantics involves, and though I believe interesting an investigation on the nature of properties and relations, I think the issue to be a second further topic.

4 As I would prefer to term it, rather than ‘the unity of the proposition’.

5 Some arguments can be provided for my stand. One, we need language to assess most issues, and any extra-linguistic assumption made in fixing the language evades assessment. Two, we master the same language even though some of us believe there to be properties and relations, other people believe there to be only concepts in the common, non-Fregean, understanding, and

theory, which at its turn needs a language to be formulated.⁶ About the unity of the sentence: such a unity looks problematic because of a regress. A regress indicates the need to acknowledge something suitable as primitive, and as I said, I take predication to be primitive, and a proper appreciation of its workings to dispose of any need for extra elements accounting for the unity of ‘Tom sits’, and of any other sentence.

A caveat. My picture of predication is proper to simple, primitive predicates. A compound predicate, like ‘being Adelaide’s first child’ describes uniquely Marco, and thereby distinguish him from anyone and anything else. Simple and primitive predicates are the warp and woof that make up compound predicates, which can finely classify any thing. Anyway, notice that a compound predicate that uniquely describe an individual is one anchored to another individual – in the example, above the predicate uniquely describing Marco is anchored to Adelaide.

a. *A name and a predicate as marks, but marks added to play two different roles – marking together vs. marking out.* Assume that a name mark a thing. If we had a very limited number of names, one or two – for instance, just ‘this’ and ‘that’, as Bertrand Russell once suggested – names wouldn’t mark out a thing but for the occasion, more or less as a demonstrative does, and we could use names to refer only in the same way we do with demonstratives. Alternatively, we would stably point out two things and no more. Actually, we have enough names to mark out many a thing. Assume that a predicate too mark a thing. Again, if we had a very limited number of predicates, say ‘is as this’ and ‘is as that’, our classification of things would be very poor, and constrained to the context in which it were articulated. Our description too would be restrained to the context of its delivery. Alternatively, we would be able to run a partition of things into two groups and no more, and to describe any thing only in one of two ways. But we have indefinitely many predicates, simple and compound ones, and can therefore run taxonomies at every degree of sophistication, and describe in detail any thing whatever.

Applying different predicates to one and the same thing – ‘sits’, ‘is a skier’, ‘is a lawyer’, ‘is a human being’, etc. – we link a thing with as many

some other people believe there to be only words and objects. Then, language by itself doesn’t force to choose the ontology we speak of by means of it.

6 We need a language, with a semantics, before running any inquiry, metaphysical or of any other kind. Perhaps, that makes philosophy of language into first philosophy – first in a rather humble sense.

different networks of things as we like. In the ‘is a human being’ and ‘sits’ networks there are both Tom and Theaetetus, but only Tom belongs to the ‘is a lawyer’ and to the ‘is a skier’ networks too, as only Theaetetus belongs to the ‘is a mathematician’ and to the ‘is a Greek’ networks too. As a lawyer (and as a human being) Tom is classified together with Abraham Lincoln. As a mathematician (and as human being) Theaetetus is classified together with Georg Cantor. Tom and Theaetetus, Tom and Lincoln, Theaetetus and Cantor share a set of marks, and that there are marks that Tom and Theaetetus don’t share. The predicate marks what it applies to, grouping all what it applies to – indeed, the predicate *marks together* what it applies to.⁷ Sharing one or more predicates may be some of the features things partake. Both Tom and Theaetetus are human beings, both sit, etc. – as Theaetetus and Cantor and as Tom and Lincoln. Adding the same mark to things highlights their similarities, and a specific mark can be specialized to highlight a specific aspect – ‘sits’ stresses sitting, ‘is a human being’ being a human being, ‘is a lawyer’ being a lawyer, etc. I can fancy the development of predicate markers as follows: a proto predicate marker amounts to ‘is like this’, and it refines shifting to ‘is *F* like this’ and finally becomes ‘is *F*’, as in ‘is like this’, ‘sits like this’, ‘sits’ – at the end, we have a (*predicative*) *name* for (*having*) *that feature!*⁸

Linguistic items, both names and predicates, are *objects*, I surmise, spread out through the environment and added to other objects, thereby marking them. So far they do not differ, and both are direct links. They diverge on how the two marks are used (which is a good reason for having distinct forms for the kinds of mark). The name mark adds to the particularity of the object, ideally being an exclusive. The predicate mark by being repeatable, and mostly repeated adds to the similarity of the object. This way each kind of mark fulfills a *cognitive aim*, respectively distinguishing and likening (and distinguishing) objects, i.e. grouping them. Upon this cognitive role, linguistic items come to other roles, names stand for or represent (as a lawyer may represent a company) and predicates (and sentences) classify and describe. Once a linguistic item marks out a thing or indicates a thing with a specific aspect, it can be reproduced respectively to trace back the thing and to describe or

7 A relational predicate marks *n*-uples of objects. Not to get confused we may imagine that the mark keeps trace of the *n*-adicity and of the specificity of the *n*-uple.

8 *Prima facie* a predicate describes a thing under an aspect, or classifies the thing by means of an aspect of its.

(explicitly) classify a thing with that same aspect. This way, the semantics of the language is the outcome of language use.⁹

b. *An expression and its semantic value.* Marking an object establishes and refreshes the link between a predicate and what it applies to. Whereas a name marks its semantic value, a predicate marks an element of its range – and it can be debated whether it thereby marks its semantic value or an element of its semantic value. Indeed, the element anchors the predicate, in whose range fall other elements, if any, which are *like* this one. ‘Tom’ has Tom as semantic value, and Tom sitting anchors ‘sits’. Tom instantiates sitting in full, so to speak. If there are other people sat, that might help in understanding sitting, but what the predicate marks out can be fully grasped in that one instance. If Theaetetus sits, Theaetetus is as good a representative of sitting as Tom is – indeed, he too instantiates sitting in full. And for this reason I am inclined to think that the instance provides the semantic value of the predicate.

Our competent use of names is linked with knowledge of their semantic values. At the origin of the use of a name there are people who know whom or what it names, i.e. its semantic value, though many and perhaps most of the names we use we have picked up from other people, not directly knowing whom or what they name. I have never been on the Himalaya, but I use the name ‘Mount Everest’ (and the name ‘Himalaya’ itself) with enough appropriateness. In many a case, as with historical characters like Plato and Octavianus, we can’t anymore directly know whom they name. Aristotle is one of many sources through which we have learnt to use the name ‘Plato’, and Aristotle directly knew Plato. If a name marks out a thing, it is easy to see that the proper use of the name comes out of directly knowing whom or what it names. With predicates things are slightly different. Simple predicates that are not abbreviations (that are not introduced to abbreviate complex ones) may apply to indefinitely many things,¹⁰ and possibly in no circumstance everything they apply to is known, and if everything is actually known,

9 Two side remarks: (i) As the above remark on individual predicates might have suggested, things are pointed out by name as well as by description – ‘*Adelaide’s first child* is sleeping’ –, and are classified by names as well as by comparing them directly with other individuals – as in ‘She is *like Adelaide*’ or ‘She is *another Adelaide*’. Actually, in most cases, the description we successfully use isn’t an individuating one – ‘*Adelaide’s child* is sleeping’ very often can do. (ii) A proper name ideally distinguishes a person from anyone else. Actually, there are homonyms. We solve our individuation problems adding other marks, be those other proper names, for example family names added to first names, or expression built on a predicative core such as a description. We need a balance between being able to finely distinguish what we want to distinguish and use a finite vocabulary.

10 ‘Is identical to Tom’ clearly does apply to only one thing if any.

possibly it isn't known to be known. Hence, the semantic competence in using a predicate doesn't consist in knowing all the things it applies to. Knowledge of *some* thing(s) it applies to is what grounds predicative semantic competence, and perhaps it is knowledge of a predicate's semantic value – because the thing fully instantiates the predicate. As with proper names, there are predicates we have picked up from other people, without directly knowing what they apply to – though because predicates have a general dimension (they might apply to *many* things) and names don't, of many a predicate we directly know instances. I do not know any aardvark, nor its look, its habits, its habitat, etc. I have picked up the name from people and am capable of using 'aardvark' with very limited appropriateness – I know it is an animal, somehow resembling an anteater, an animal you can find in Africa, and very other few things. At the origin of the use of the predicate *F*, here again, there are people who have, or had, knowledge of representatives of its range. I know the meaning of 'sits' because I know that Tom is sitting, and that enables me to tell that Theaetetus sits too and to learn other people about the use of 'sits'.

Through instances we anchor a predicate and come to know (part of) its range. When we pick up names and predicates from other people, words, pictures and other representations mediate our knowledge of their semantic value or of what anchors them. It is mediated, i.e., by words or by things. If it is mediated by words, if we know what they refer or apply to, we can ask, eventually getting to words we know what they refer or apply to. If it is mediated by things, such as pictures and other representations, these things portrait or represent what the words relate to.

An argument against the suggestion that the semantic value of a predicate be fixed via instances can be derived from views about predicates applying to nothing. 'Tom is 'Tom''s semantic value if and only if Tom is the individual the name marks out. If 'Tom' were no one's name, it would have no semantic value. If Tom sits, he instantiates 'sit' and anchors the predicate's semantic value. But if 'sit' didn't describe or classify anybody, we might resist claiming it has no semantic value, as if there could be an aspect even if it were no one's or no thing's aspect. Perhaps, we would deny a predicate a semantic value, if it were *impossible* for it to be a thing's aspect, as it is the case with 'is a round square'. In general, if we attributed a predicate a semantic value, different from an instance, we would either assume new kinds of entity, or concoct special assemblages of old ones. If the semantic value of a

predicate were the set of things that it applies to, the null set could be the semantic value of a predicate that applies to nothing, as a matter of fact or as a matter of principle. Whereas, if names are projected to elements of sets that are not sets themselves, an empty name would not have any semantic value at all.

Here is a counter suggestion. A predicate with no instances is either simple or compound; if it is compound, its range is either contingently empty – as ‘is a golden mountain close to Ravello’ – or necessarily empty – as ‘is a roundsquare’. In either case, we seem to grasp the predicate’s semantics because we grasp the semantics of its components (which have instances). If the compound predicate is contradictory it is not clear whether it can be conceded a grasp of the predicate, since there is no grasp of what it would be to satisfy it. The semantics of a simple empty predicate doesn’t even start, because the mark has never been posted – hence, the predicate is vacuous as an empty name is. And it is not clear whether grasping an empty set provides more than what no grasp at all supplies.¹¹

Summing up, the semantics for predicates I advocate anchors them to one or more instances.¹² As we have only glimpses on individual things that are the semantic value of names, we have only glimpses at the more articulated semantic values of predicates, often knowing a limited number of instances.¹³ This excludes neither there being simple predicates that are true of only one individual nor there being compound individual predicates, such as ‘being Adelaide’s first child’ – a predicate I discussed above. The difference is that in the first case the predicate is shareable, but not shared, and in the second the composition in principle excludes sharing. Individual predicates are not like proper names – they classify and describe an individual, and its components often assimilate that individual to other items or distinguish it from them. (There are, perhaps, predicates like proper names, such as ‘socratizes’. Indeed, if there are not, we can concoct them. ‘Socratizes’, when isn’t understood as ‘imitates Socrates’, just distinguishes the individual it

11 A third world entity would perhaps offer a better grasp, if it were graspable at all, but its application to standard objects is, as everybody knows, problematic.

12 There is very little literature on the semantics of exemplifying. See Austin 1953 and Goodman 1968. None is satisfying, because both assume there to be the example and the predicate, and what worries them is matching examples and predicate, i.e. they do not see the match as constitutive, ever.

13 If we know the semantic value of a predicate by means of one or more representatives, our judgments in acknowledging a new element as one to which it applies may vary depending on the different representatives we know that value from. This does not make predicates very different from names. If I had been to London in the sixties and you five years ago, I may claim a picture from London not to be one and you argue it is, or viceversa.

applies to from anything else. And if we reflect on the case and judge an expression by its role, we would call ‘socratizes’ a proper name in disguise.¹⁴⁾

In my view, as naming starts from the thing to be named, so predication starts from the thing, or the things, to be classified. Applying a predicate turns the thing it marks in a standard sample – of sitting, being human, being a friend of, etc. Actually, this is likening the thing to something else, and always also, as I just said, adopting a standard. What resembles the model sample is naturally marked the same way and thus further assimilated to the sample. Being classified and described as the original sample is, it itself becomes another model sample.

2. Two different views of predication

a. A metaphysical understanding with a proper notation.

According to Gottlob Frege, predicates are unsaturated expressions, which voice unsaturated senses that determine unsaturated entities, entities which the expression denotes. An unsaturated expression has one or more gaps eventually indicated by a placeholder (a variable). A saturated expression saturates an unsaturated one by filling its gap. Unsaturated senses and entities are like unsaturated expressions and are saturated respectively by saturated senses and saturated entities. A concept is an unsaturated entity, and an object a saturated one. A concept is the denotation of a predicate and an object that of a name.¹⁵ Predication is the saturation of a predicate, for instance, by a name.

The application of the predicate to the name is a one-step business, whereas the application of the denotation of the predicate to the denotation of the name is a two-steps affair. The name denotes an object; the predicate a concept, the concept determines an extension, which the object denoted by the name falls within. This makes evident a main difference with my view of predication. Frege’s solution rests on a ontological assumption, positing concepts as entities of a second kind not to be confused with the kind of objects. One such assumption

14 For a different stand, meticulously argued for, see Fara (forthcoming).

15 If we are inclined to see a concept as a property or a relation, since these can also be taken as the denotation of the nominal developed out of a predicate, and hence an object, better say that a concept is, with an ugly phrase and a neologism, a properting property or a relating relation. Object and concept, Frege repeatedly reminds us, have never to be confused.

contrasts with the idea that semantics is too thin a ground for ontological posits, or at least it develops semantics out of ontology.

Predicates are classifiers, for Frege as for myself. Positing concepts and their extensions makes the classification itself an element of what there is, and possible the falling of an object under a concept into a matter of fact. This is at odds with viewing classification as *introduced* via predication, directly on objects, and with discriminating between natural and artificial classifications, which are clearly introduced via predication – artificial taxonomies in which we can distinguish between one dependent on performatives and verbal ones.¹⁶ A performative-dependent classification is, for instance, any legal one. A contract is the outcome of an action and introduces legal properties and relations, like ownership and marriage, proper procedures and appointments. Having a name whose first letter is an *m*, and hence any alphabetical ordering, seems a purely verbal ordering, even though a useful one at times.

Some final remarks. The unsaturatedness is a metaphor, given emphasis by Frege’s conceptual scripture where predicates are expressions with lacunas, or argument places with a variable as temporary filler. Clearly, there is no entity “trapped” within another entity, nor is the first a bare particular, and the second an entity without substance. (I do not mean that Frege ever claimed either thing, but that persons could surmise either thing as their own understanding of Frege’s metaphor.) Moreover, the distinction between sense and denotation aside, one could reserve one’s judgment on the parallelism among expression, sense and denotation.

Frege takes predication as functional application that maps arguments to truth values. This I believe to be no problem. The picture could be properly supported, allowing for very complex objects, and with a special understanding of the truth values, the True and the False. If the True were reality, and the False its complement, a true sentence would be a way to determine reality, and a false one a way to determine its complement. In the same way, we use proper names. ‘Euripides’ second daughter’ perfectly individuates a person, though she being a complex “object” a lot more things are true of her. What’s hard with the picture is that we could want to oppose deeming reality or the world to be a thing.¹⁷

16 I think defining a predicate’s semantics positing a concept conflates truth and reality – in as much as our representations are true, they represent reality.

17 Are actual and possible worlds things? Possibly they are not, see Jubien 1991.

b. Truth and predication. Donald Davidson accounts for predication taking truth as the primitive notion. He moves from Alfred Tarski's conception of truth, turns it upside down, and defines satisfaction by means of truth. With truth comes the primacy of the sentence:

As a pre-teen scholar I was taught how to diagram a sentence. At the top was the sentence [...] Our interest in the parts of sentences, unless the parts themselves are sentences, is derivative [...] Our interest in the parts springs from the need to explain important features of sentences. [...] We can think of truth as the essential semantic concept with which to begin a top-down analysis of sentences, since truth, or the lack of it, is the most obvious semantic property of sentences, and provides the clearest explanation of what suits sentences to such tasks as expressing judgments or conveying information. (2005:1-2)

The unity of the sentence is, according to Davidson, something to start from and not to yield at. A sentence is what we hold true; a predicate is what we carve out of a sentence taking out of it one or more singular terms; the semantic role of a predicate is specified by telling that it is *«true of the entities which are named by the constants that occupy their spaces or are quantified over by the variables which appear in the same spaces and are bound by quantifiers.»* (2005: 159) In this way predicates are given a semantic role different from that of singular terms, without associating predicates with any new (kind of) entity.¹⁸

Davidson semantics looks light, which is a quality. Yet, I doubt its starting point. Two problems. One. I think we grasp the notion of truth, and hence that of holding true, by grasping the notions of reference and predication. What would be grasping holding true (or, accepting) if it were not grasping that certain things satisfy a predicate? For sure, when we master a language we can use the notion of holding true for interpreting another language. Two. I think we learn our first language starting from calling someone's attention (mother's, father's, etc) and having our attention called to individuals or objects and their aspects (Tom, Euripides, soup, chair, red, round, etc).¹⁹ In either problem, we face a plurality of individuals or objects, plus names and predicates (names and predicates are objects them too). *Adelaide*, *Kevin*, *Genève*, the *White Mountain*, the *Beagle*, etc, are individuals and objects that the names distinguish. *Adelaide runs*, *Kevin runs*, *Genève is a city*, the *White Mountain isn't a city*, the *Beagle was a ship*, etc, are, or are not, instances of the predicates *run*, *be a city*, *be a ship*, etc, or are not and which the predicates group together or separate.

18 Dummett 1973 seems to attribute an analogous view to Frege.

19 See Bloom 2001 (though Bloom requires too much, entities, properties, events, and processes, besides objects).

At one remove from that starting point and in one go, we can tell the meaning of the predicate and claim the truth of its application,²⁰ suggesting a paradigm, a standard, for future uses of the predicate.²¹ A predicate's meaning gets re-fixed anytime we apply (or deny application of) the predicate to a new individual or object, because by that we provide (or deny to provide) another standard and another truthful application (or deny the application to be truthful, and consequentially to be a standard). Sometimes, two or more such standards for the same predicate don't look acceptable together, and then we re-fix the predicate's meaning, judging false something we previously deemed true and giving up at least one standard – continuously watching out and open to revise our maps by revising our previous use of any expression.

Although both originate from language use, truth and meaning relate to different aspects: truth has to do with exactness and meaning with precision. In a map precision concerns structure and scale, exactness how (some of) the details of the map match items of the territory.²² A map is the more accurate when it is the more precise and exact.²³ Almost the same can be said of a sentence or a narrative. If a mismatch comes up, the map is changed to fit the territory. With a sentence, if there is a mismatch, we reconsider its claim deeming false what we took for true, being directed in the process by exactness; and then we look for a reformulation, to regain precision.²⁴ The quest for accuracy depends on a basic task we use language for, which is the transfer of information – as for centuries visual arts, from depicting to sculpture, and more recently photography, movies, video, aimed and aim at accuracy in transferring visual information.²⁵ Besides, there are a lot of truths introduced via predication, I would say, rather than truths linguistically represented, like

20 Cf. Kripke 1975: 701. Kripke makes the use of the truth predicate dependent on a mastering of the language.

21 With language there is no priority between meaning and matter of fact.

22 Of course, there is also (urban) planning, which goes the other way, drawing a map and fitting the territory to it. Yet planning is more limited, and the action has to take care of the environment of the planning and on how it will react to our acting on it.

The disproportion between map and territory is clear when we consider that the map is itself an element of the territory. The map codes our knowledge of the territory in going through it.

23 On the difference between 'precision' and 'exactness' see Austin 1962: 127-8, and on accuracy see *ibid.*: 128-9. Sometimes to get the general shape, however, we need to give up precision.

24 Already denying the application of a predicate goes in this direction, preferring exactness over precision.

25 Instead, language transfers information of *any* kind, though coding linguistically visual information, it is of course much less efficient in transferring this kind of information than a picture or a video are.

Language, and the other means, is used also for informing of things and events to come. In such a case, we may resort to an illocutionary act which is not an expositive in Austin's terminology, but a verdictive or a commissive.

the performative and artificial cases, which I have already hinted at. Ownership, marriage, adoption, seller and buyer, extended family, etc.²⁶ Before law, there is no ownership, but possess; no marriage, but living together, etc.^{27 28}

3. A loose end

If a person believes that linguistic communication requires sentences, better she reminds herself that saying «Euripides!» is enough to call his attention to whatever has to come next, and to call other's attention to the kid running on the seashore. Or that my saying «Terrific!» while looking at the 100mt final in Beijing, August 16, 2008, is enough too, and there is nothing next to wait for. As the name is used without a predicate (which predicate would “complete” the utterance?), the predicate is used without a singular term (nor a general one at that) (which term would complete this other utterance?). The point of naming a person maybe just calling his attention; and if someone or something is absolutely salient, there is no requirement to add any redundancy to call attention to either. Most times we look for more than calling attention – we want to call attention to a specific thing or event – and most times persons or things are not absolutely salient. Then, we have to say more. Language is our tool to cognitively (and emotionally) alter a situation and we say as much as we deem relevant to the specific form that aim as in the occasion. The more ambitious the target, the more clever the telling has to be.

This suggests a nonstandard look at language and the world, which I cannot enter in now. Language cognitively and emotionally adds to a

26 The house and the car are mine. The ownership in the end come out by literally classifying, on paper, the two things by words that amount more or less to *Paolo's property*.

27 Davidson discusses repeatedly interrogatives, imperatives and other non assertive cases. There are harder cases, for instance verdictives like assessments, and exercitives, like appointments. Davidson never touches on performative properties and relations. He is dismissive also of fictional cases and the like, claiming that they are parasitic on standard cases. Maybe, but when we imagine a far-fetched situation, of which we wonder whether it is a possible or an impossible one, it is not clear to me that they are parasitic on true cases.

28 There are other arguments for not taking holding true as sufficient for accounting for meaning. (a) There are many a speech act, which do not claim anything, like directives and questions, and I do not think that all speech acts can be reduced to expositives as somehow Davidson 1979 suggests. (b) Paradoxes show us to be not in control of the expressive power of the language. Though each part of what we say is meaningful, we cannot tell whether the paradoxical sentence is true or false, and not even without a truth-value.

Besides, if it is wrong what I maintain above (see fn 10), any new meaningful sentence can be either *true* or *false*, and I don't see how we could get the meaning of the false ones following Davidson.

situation already structured on either dimension. This makes the world-language matching rather rich.

The issue concerns the relation between words and things, a relation that is for sure retrievable via true assertions but that being required by any linguistic performance does not seem to be fixed by true assertion. An idea to be refined is to view linguistic fix as a case of coordinative definition.²⁹ Coordinative definition has been investigated by Hans Reichenbach to account for physics, and the natural sciences, for instance for the introduction of a unit of measure. Writes Reichenbach:

There is a second kind of definition, however, which is also employed and which derives from the fact that physics, in contradistinction to mathematics, deals with real objects. Physical knowledge is characterized by the fact that concepts are [...] coordinated to real objects. [...] Certain preliminary coordinations must be determined before the method of coordination can be carried through any further; these first coordinations are therefore definitions which we shall call *coordinative definitions*. They are *arbitrary*, like all definitions; [...]

Wherever metrical relations are to be established, the use of coordinative definitions is conspicuous. If a distance is to be measured, the unit of length has to be determined beforehand by definition. This definition is a coordinative definition. [... For instance, a statement such as] "A unit is a distance which, when transported along another distance, supplies the measure of this distance" [...] does not say anything about the size of the unit, which can only be established by reference to a physically given length such as the standard meter in Paris. The same consideration holds for other definitions of units. If the definition reads, for instance: "A meter is the forty-millionth part of the circumference of the earth," this circumference is the physical length to which the definition refers by means of the insertion of some further concepts. And if the wavelength of cadmium light is chosen as a unit, cadmium light is the physical phenomenon to which the definition is related. [...] In principle, a unit of length can be defined in terms of an observation that does not include any metrical relations, such as "that wave-length which occurs when light has a certain redness." In this case a sample of this red color would have to be kept in Paris in place of the standard meter. The characteristic feature of this method is the coordination of a concept to a physical object. (1928: 14-15)

In XX Century philosophy a rich discussion ensued on the standard meter bar: does the standard meter bar rigidly refer to the length l which the bar had at the moment of choosing it as the standard meter bar? Is the standard meter bar long one meter? If the standard meter bar is long one meter, is so a priori, contingently a priori, etc? The point is that in order to measure the world we need to use as standard *pieces* of the world itself, and to choose length l as a standard is a coordinative definition *à la* Reichenbach. We can view speaking a language, I think, as starting the

29 The need of coordinating language and things can be better appreciated comparing linguistic with pictorial representation. A basic point is that language does not picture things. Otto Neurath, who devised an International Picture Language in the '30ies, writes: «The man has two legs; the picture-sign has two leg[-sign]s; but the word-sign 'man' has not two legs.» (1936: 20) This is a basic and undervalued feature of language.

same way, linking words and things by coordinative definitions. It is not important here to investigate any details. As the meter bar acts by measuring things as k -times long as the standard bar, a predicate acts by categorizing a thing as an F -thing as the one picked out by the coordinative definition. A problem, and a virtue, of language is that here no International Convention is called for, in Sèvres or anywhere else, but many a, if not any, use of a word have a claim to be taken as the standard. This is a first improvement on the idea. A second improvement is the acknowledgement that there are coordinative definitions of names too, because neatly distinguishing is as relevant as assimilating.

If we look at ‘Tom sits’ as fixing the meaning of ‘sits’, we would be reluctant to tell the sentence true,³⁰ or inclined to claim it true in a somehow empty way. But if fixing language and using it are not two separated moments, we can well recognize that sentence true. Speaking a language requires knowing how it is spoken, and picking up previous uses, instances, etc. But a mistaken use of ours, for example, may be properly directed at what it was taken to mean, and picked up and become a variant. Language is a collective enterprise whose owners are language users.³¹

In last sixty years of philosophy of language, indeterminacy issues have been a major concern. If we take language as starting from coordinative definitions, indeterminacy is drastically reduced because there is in any such case no problem about going from word to thing, since the links between words and things start from the things themselves. And, of course, a coordinative definition warrants that meaning be «a channel for the acquisition of knowledge.»³²

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30 In *On Certainty* Ludwig Wittgenstein seems to hold this view.

31 This is true more of predicates than of names. If it were not name wouldn't perform their distinctive task.

32 See Williamson 2004: 140.

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