

# What's a name?

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Philipp Keller\*

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## The contingent a priori

(1) Water is watery stuff.

If we assume that “watery stuff” is the reference-fixing description for “water”, these two ways of construing “water” correspond to two ways in which we may speak of ‘reference-fixing descriptions’. In one way, it denotes the description, whatever it is, that has or might have been *used* to fix the reference of a particular term within our language community. In another way, it means whatever description is reference-fixing from a God’s eye point of view, that is uniquely satisfied by the referent of the term. Reference-fixing from God’s point of view, however, is better called rigidification.

**A tension:** Take Oscar, a philosophically interested water chemist, who – having read *Naming and Necessity* – uses “water” and “H<sub>2</sub>O” interchangeably, i.e. such that, for him, “water is H<sub>2</sub>O” *is* a priori. As he has grown up in a Mary-like deprived environment, he has no other means to pick out water than by its chemical composition: it is only when he leaves his room that he discovers that the stuff previously identified as H<sub>2</sub>O has the macrophysical properties it has.

To explain why “water = H<sub>2</sub>O” is *not* a priori, even given that we know it is true, we have to consider worlds as actual where we lack this knowledge, i.e. where we take something to be water that is not H<sub>2</sub>O. To explain why “water = watery stuff” *is* a priori, on the other hand, we have to restrict the realm of actual world candidates to those worlds where we *use the language as we do now*, i.e. where our words refer to sufficiently similar things than they do in our world. In order to do this, we have to exclude worlds where we are ignorant about what our words refer to: given that “water” uniquely refers to H<sub>2</sub>O and that it is the macrophysical properties of H<sub>2</sub>O that determine what counts as “sufficiently similar”, we have to exclude worlds where we do not know that water is H<sub>2</sub>O. For if we did not know that water is H<sub>2</sub>O, we could consider a world as actual where water has quite different superficial properties than H<sub>2</sub>O actually has, thereby falsifying the claim that it is a priori that water has the superficial properties it has. We assume that macrophysical properties are more closely tied to meanings of our words than microphysical properties. Doing this, we *assume* rather than explain that we can be wrong about microphysics in a way we cannot be wrong about macrophysics.

In order to evaluate the truth of (1) in other possible worlds, we either consider these worlds as actual or as counterfactual. When we consider them as counterfactual, we are treating “watery stuff” as something like a demonstrative, a rigid designator referring to whatever has been pointed to when the reference of “water” was fixed. This is the dthat-construal of (1). Rigid designators refer in all possible worlds to the same object. So they are not epistemically transparent, for they distinguish between epistemic alternatives. If we consider these worlds as actual, however, we cannot, I will argue, pick out by “watery stuff” *its* primary intension and thus cannot capture the way in which we consider possible worlds ‘as actual’. In the first case, we have strong necessities, i.e. a posteriori necessities

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\*Département de Philosophie, Université de Genève, Switzerland, philipp.keller@unige.ch.

with metaphysically necessary primary intensions. In the second, we get  $n$ -dimensionalism and lack any justification to stop at any particular  $n$ .

## Reference-fixing by stipulation

If we understand “watery stuff” as a reference-fixing description in the first sense, we take (1) to have the following form:

- (2)  $d$ that(watery stuff) is watery stuff.

where “ $d$ that(...)” is *not* a rigidifying operator, but a directly referential singular term. This is the role Kaplan (1989: 579) originally intended for “ $d$ that”. The content of the accompanying description “the  $\phi$ ” in “ $d$ that(the  $\phi$ )” is not part of the content of the singular term: the description merely serves as a “demonstrative surrogate” Kaplan (1989: 581), completing the character and not the content of the term. It is, so to say, “off the record”, and not part of the semantics, but of the metasemantics of the referring term “ $d$ that”. I think this is the way Kripke intended his theory of the contingent a priori. I want to argue that it does not give us a substantial enough notion of the a priori to do the work Chalmers wants it to do.

The problem with this first reading is that it does not ensure that (2) is actually true. It is well known that we may fix the reference using descriptions which do not apply to the thing reference to which is fixed (Donnellan 1966). We pick out what we want to name by whatever uniquely identifying belief about it is shared among our conversational partners. It is shared belief, not shared knowledge, that is doing the reference fixing. Kripke is very clear about this in the case of proper names:

Thesis 5 says that the statement “If  $X$  exists, then  $X$  has most of the  $\phi$ 's”, is *a priori* true for  $A$ . Notice that even in a case where [“If most, or a weighted most, of the  $\phi$ 's are satisfied by one unique object  $y$ , then  $y$  is the referent of ‘ $X$ .’] and [“If the vote yields no unique object, ‘ $X$ ’ does not refer.”] *happen* to be true, a typical speaker hardly knows *a priori* that they are, as required by the theory. I *think* that my belief about Gödel *is* in fact correct and that the ‘Schmidt’ story is just a fantasy. But the belief hardly constitutes *a priori* knowledge. (Kripke 1980: 87)

A second variant of the meta-semantic route is to construe “water” as equivalent to “the watery stuff around here”. We then get

- (3) The local watery stuff is watery stuff.

“The local watery stuff”, in (3), seems to function like a complex demonstrative. The analysis of complex demonstratives is rather complex, but it seems it boils down to two options. Either we allow for the case where “this  $F$ ” can refer to something which is not  $F$ , which brings us back to the first case, or we construe it as “this, which is  $F$ ”, where we *predicate*  $F$  of the thing we refer to by “this”. This latter option incorporates  $F$  into the semantics of the singular term – competent use of it requires some prior grounds for attributing  $F$  to the thing in question; (3) becomes something like “Whoever is singing now is singing” – if this is to provide us with knowledge that there is someone who sings, it requires prior knowledge that someone is singing now.

Compare:

- (4) Julius invented the zip.

- (5) Let “Julius” denote whoever invented the zip. Then it is a priori that Julius  
invented the zip.

The crucial question now is: what does this stipulation amount to? If it does not amount to excluding any worlds from our consideration where the person who invented the zip there is not called “Julius” there, it might amount to excluding any worlds where the person *we would have called* “Julius” if we lived there did not invent the zip there.<sup>1</sup> Here we have a double modality. There are two ways to cash it out. Either we take the stipulation to fix a *two-dimensional* intension for “Julius”. This would mean that we thereby fix not only our actual language, but also the language we would speak in counterfactual circumstances. Alternatively, we suppose that the stipulation is made in any world which we consider as actual. What is meant to “keep the language fixed” and to “retain the concept of the *real* actual world” Chalmers (1995: 4), then, is to stipulate that they use the same words with the same meanings to fix the reference of “Julius” than we do:

...for this representation [of (4) as a contingent a priori truth] to be right, we must add that the stipulation in question was made in each of the worlds *i*, *j* and *k*. One who did not know about the stipulation, or did not understand it, would not know that the statement was true. (Stalnaker 1999a: 15)

## Reference-fixing by rigidification

On the second construal of the relation between “water” and “watery stuff”, (1) comes down to:

- (6) †(watery stuff) is watery stuff.

where † is a rigidifying operator that takes a description to form a singular term denoting in all possible worlds whatever uniquely satisfies the description in the actual world.<sup>2</sup> “†(the  $\phi$ )” is, in Kaplan’s terms, “a rigid description which induces a complex ‘representation’ of the referent into the content” (Kaplan 1989: 580) and thus corresponds to the semantic construal of “watery stuff”.

Unlike “ $\phi$ (dthat( the  $\phi$ ))” (??), “ $\phi$ (†(the  $\phi$ ))” (“whatever is  $\phi$  is  $\phi$ ”) is a truth of logic and can thus plausibly be taken to be a priori. The problem now is not with the a priori, but with contingency: how could “ $\phi$ (†(the  $\phi$ ))” fail to be true? Given that “water” is a rigid designator, why does it matter whether it is a rigidification of “watery stuff” and not of “ $H_2O$ ”?

In Chalmers’ framework, the difference between the two rigidifications is that the definite descriptions used play different roles in the fixation of the reference of “water”: you use “watery stuff” to rigidify its primary, and “ $H_2O$ ” to rigidify its secondary intension. So we get the following variant of (6):

- (7) †(water) is watery stuff.

where † is Stalnaker’s dagger, a function mapping a singular term *a* to another singular term †*a* denoting in every possible world the semantic value *a* would have if used there, i.e. a function projecting its diagonal intension onto the horizontal (Stalnaker 1978: 82).

<sup>1</sup>This corresponds to the ‘shallow’ notion of the a priori where a statement is a priori if it expresses a truth (as used) in every context (cf. Stalnaker 1978: 83).

<sup>2</sup>† corresponds to the ‘upside-down dagger’ of Lewis (1973: 63–64) and Stalnaker (1978: 83, n.) and to the “fixedly actual” operator  $\mathcal{F}A$  of Davies and Humberstone (1980).

For “water is H<sub>2</sub>O”, we get

$$(8) \quad \ddagger(\text{water}) \text{ is H}_2\text{O}.$$

where  $\ddagger$  is Stalnaker’s ‘upside-down dagger’, i.e. a function mapping a singular term  $a$  to another singular term  $\ddagger a$  denoting in every possible world the semantic value of  $a$  attributed to your actual use of the term, i.e. a function projecting the diagonal proposition onto the vertical (Stalnaker 1978: 83, n.).

Given that “water” has the primary and secondary intensions it is claimed to have, (7) and (8) are true in the actual world. But Chalmers claims more than this: he claims that (7) and (8) are not only true but a priori and a posteriori respectively. To be a priori, it is claimed, is to have the same primary intension. But what are the primary intensions of “watery stuff” and “H<sub>2</sub>O”?

Let there be three worlds, the actual world where water, the watery stuff, is H<sub>2</sub>O, Twin Earth where water, the watery stuff, is XYZ, and a third world where water, the watery stuff, is ABC. “Watery stuff” is stipulated to express the diagonal intension of “water” in the actual world. So it seems that “water” and “watery stuff” have the following two-dimensional intensions:

“water”	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	“watery stuff”	H <sub>2</sub> O	XYZ	ABC
	XYZ	XYZ	XYZ		H <sub>2</sub> O	XYZ	ABC
	ABC	ABC	ABC		H <sub>2</sub> O	XYZ	ABC

Given these matrices, we indeed have water =  $\ddagger(\text{water})$  and watery stuff =  $\ddagger(\text{water})$ . But wait. How can we be sure to have written down the right matrix for “watery stuff”? We stipulated that “watery stuff” should express the diagonal intension of “water” in the actual world. This was the projection of the diagonal onto the horizontal. This is what is done by Davies’ and Humberstone’s “actually”-operator  $A$ . But then we did another step, namely we applied Davies’ and Humberstone’s “fixedly”-operator  $\mathcal{F}$ , the vertical analogue of  $\square$ , and replicated the upper row on the lower two. Thereby we assumed that it does not matter for the evaluation of “watery stuff” in which world it is uttered.

But perhaps it does. Let us assume that “watery stuff”, if uttered in Twin Earth, would express the diagonal intension of *their* (possibly different) concept of “water” and so it would in the third world. I use subscripts to indicate the secondary intension of the concept Twin-Earthians use to express the primary intension of their water concept (that *we* may express by “twatery stuff”). So we get the following matrices:

“water”	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	“watery stuff”	H <sub>2</sub> O	XYZ	ABC
	XYZ <sub>1</sub>	XYZ <sub>1</sub>	XYZ <sub>1</sub>		H <sub>2</sub> O <sub>1</sub>	XYZ <sub>1</sub>	ABC <sub>1</sub>
	ABC <sub>2</sub>	ABC <sub>2</sub>	ABC <sub>2</sub>		H <sub>2</sub> O <sub>2</sub>	XYZ <sub>2</sub>	ABC <sub>2</sub>

At first sight, this does not seem to change very much. Both concepts still have the same diagonal intension and so are a priori equivalent. If we assume that XYZ = XYZ<sub>1</sub> and ABC = ABC<sub>2</sub> (as I did for the new matrix of “water” on the left side), it is still true that water =  $\ddagger(\text{watery stuff})$ . What we lost, however, is the idempotency of  $\ddagger$ , i.e. it is no longer true that  $\ddagger(\text{watery stuff}) = \text{watery stuff}$ . The new matrix for  $\ddagger(\text{watery stuff})$ , i.e.  $\ddagger\ddagger(\text{water})$  is the following, which is different from that of “watery stuff” on the right hand side:

“ $\ddagger\ddagger(\text{water})$ ”	H <sub>2</sub> O	XYZ <sub>1</sub>	ABC <sub>2</sub>	“watery stuff”	H <sub>2</sub> O	XYZ	ABC
	H <sub>2</sub> O	XYZ <sub>1</sub>	ABC <sub>2</sub>		H <sub>2</sub> O <sub>1</sub>	XYZ <sub>1</sub>	ABC <sub>1</sub>
	H <sub>2</sub> O	XYZ <sub>1</sub>	ABC <sub>2</sub>		H <sub>2</sub> O <sub>2</sub>	XYZ <sub>2</sub>	ABC <sub>2</sub>

Imagining having fixed the reference of “water” using “watery stuff”, we distinguish the primary from the secondary intension of “watery stuff”. So we get a regress, in many respects similar to the regress of Fregean senses. This has been remarked by Davies and Humberstone:

For the record, we should remark that the process which yielded 2-dimensional modal logic from the more familiar 1-dimensional kind can be iterated: truth can be triply relativized to a *real* actual world  $w_1$ , a ‘floating’ actual world  $w_2$ , and a floating reference

world  $w_3$ . (Davies and Humberstone 1980: 10)

## Morals about counterfactual language use

When we falsely take a primary intension to be nonempty we take a world verifying it to be an actual world candidate which is not such a candidate. This could be so because “being an actual world candidate” is a non-empty condition on worlds.<sup>3</sup> Chalmers agrees that we have, when evaluating apriority claims, to make sure that we are not misdescribing worlds we consider as actual.<sup>4</sup> But how can we do this? How can Chalmers avoid the objection that “the fact that  $p$  might, for all I know, be true in the actual world, is just irrelevant to the issue whether it is true in some possible world.” (Yablo 1993: 9)?

## The conditional fallacy

Ignorance about the actual world does not matter for knowledge about the A-extensions of words. For the A-extension of  $T$  at a world  $w$  is the extension of  $T$  at  $w$  *given*  $w$  is the actual world, and so does not depend on whether or not  $w$  is in fact the actual world. Or, in other words, knowledge of the A-intension of  $T$  does not require knowledge of the nature of the actual world. [...] What we can know independently of knowing what the actual world is like can properly be called a priori. (Jackson 1998: 50)

How could A-intensions not be a priori? Does not something have to ‘encapsulate’ the “way in which [its] referent depends on how the actual world turns out” (Chalmers 1995: 4). Does this not mean that our competence with such terms is *ipso facto* competence in applying it to (descriptions of) counterfactual circumstances? Chalmers seems to think so:

“Given that we have the ability to know what our concepts refer to when we know how the actual world turns out, then we have the ability to know what our concepts would refer to *if* the actual world turned out in various ways.” (Chalmers 1996: 59–60)<sup>5</sup>

And does this not mean that primary intensions are independent of empirical factors?

The primary intension of a concept, unlike the secondary intension, is independent of empirical factors: the intension *specifies* how reference depends on the way the external world turns out, so it does not itself depend on the way the external world turns out. (Chalmers 1996: 57)

Like an epistemic intension but unlike a subjunctive intension, a two-dimensional intension can be evaluated a priori. One needs no empirical information about the actual world, since all the relevant information is specified in the epistemic possibility. (Chalmers 2002b: 21)

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<sup>3</sup>This is e.g. the case in Kaplan’s *Logic of Demonstratives* where contexts of utterance are required to contain a speaker in order to make “I exist” come out as logically true. As Chalmers takes primary and secondary intensions to be (possibly partial) functions defined over the same space of possible worlds, I will not pursue this line further. Another reason for being wrong about a primary intension, however, is that we may falsely believe that something is an actual world candidate which is not even possible, but belongs to the so-called “outer sphere” of possibility.

<sup>4</sup>On this view of conceivability, the conceivability of a statement involves two things: first, the conceivability of a relevant world, and second, the truth of the statement in that world. It follows that in making conceivability judgements, one has to make sure that one describes the world that one is conceiving correctly, by properly evaluating the truth of a statement in the world. One might at first glance think it is conceivable that Goldbach’s conjecture is false, by conceiving of a world where mathematicians announce it to be so; but if in fact Goldbach’s conjecture is true, then one is *misdescribing* this world; it is really a world in which the conjecture is true and some mathematicians make a mistake.” (Chalmers 1996: 68)

<sup>5</sup>Cf. also (Chalmers 2002a: 612).

It may be that, given that we know how the actual world turns out (e.g. that water is H<sub>2</sub>O), we know what our words refer to (e.g. “water” to H<sub>2</sub>O). Does it therefrom follow that we have the *further* knowledge that, for any possible way the actual world could turn out, our words would refer to such or such things? This strong thesis is explicitly made by Chalmers and Jackson:

Possession of a concept bestows a *conditional ability* to identify the concept’s extension, given information about hypothetical epistemic possibilities (in the broad sense of “epistemic possibility”, invoking hypotheses about the actual world that are not ruled out a priori). (Chalmers and Jackson 2001: 5)

Our ability may be conditional, i.e. dependent on how the actual world turned and turns out, without thereby being an ability to determine, for whatever way the actual world could turn out, what the extensions of our concepts would be. Even if our competence with expressions and concepts is criterial and our knowledge of them in that sense conditional, this does not mean that it is knowledge of a whole array of conditionals. It is true, of course, that sufficient descriptive knowledge about a world *w* allows you to identify the referents of your terms in *w* if anything does. But this does not mean that you know to what your terms would refer to if *w* turned out to be actual.

But what would be the alternative? Here is Jackson’s argument that if Quine is right we cannot say how things are at all:

Now suppose that it is impossible to effect a partition among the possibilities independently of how things actually are. [1] No mental state, no linguistic item, no diagram, no system of semaphore, divides the possibilities, except *relative* to how things actually are. Then we can never say, diagram, depict, semaphore, think, ...how things are. [2] All we can do is say (depict, think, etc.) how they are *if* .... We are always in the position of one who only ever tells you what to do if you have high blood pressure, never what to do *simpliciter*. We can say how things are *conditional* on ..., but [3] can never make an unconditional claim about how things are. We cannot detach. This is a very radical doctrine. It is not that we cannot say with complete precision how things are. We really cannot say how things are at all. (Jackson 1998: 53)

The problem with this argument is that it equivocates on [2]. Under one reading, “All we can do is (say (depict, think, etc.) how they are) *if* ...” follows from [1]. Only the different, and much stronger, reading “All we can do is say (depict, think, etc.) (how they are *if* ...)”, however, gives us [3]. The difference, again, is between having an ability conditional on ...and having the ability to (if ..., then ...).

## The tao of metaphysics

Terminology:

- names: whatever non-descriptive and non-synkategorematic words there are (if any)
- reference: whatever relation holds between names and the world (if any)
- referent: whatever stands in that relation on the world-side (things and pluralities thereof)
- semantic value: that in virtue of which a world stands in the language-world relations it does
- rigid designation: a reference relation that is modally invariant

How do the non-synkategorematic words of our language relate to the world?

- predicates (quantifiers? mass terms?): by describing it
- names: by referring to it

Suppose word *X* has semantic value *Y*. Two different questions, two different answers:

- The predicate *X* has semantic value *Y* because *Y* effects the distinction *X* represents. Two degrees of arbitrariness: (i) Saussurean ‘arbitrariness of the sign’: another predicate *Z* ≠ *X* could

have been bestowed with semantic value  $Y$ ; (ii) world-relativity:  $Y$  could have effected another distinction than it in fact does.

- The name  $X$  has semantic value  $Y$  because  $Y$  is what  $X$  represents. Only arbitrariness of the sign, no world-relativity.

An illustration:

- ““ $F$ ” is true of all  $F$ s”: superficially contingent (we could use “ $G$ ” to talk of the  $F$ s) and deeply contingent (of there were other  $F$ s than they actually are, we would talk about them using “ $F$ ”);
- ““ $a$ ” refers to  $a$ ”: superficially contingent ( $a$  could have been called “ $b$ ”), but deeply necessary (with respect to any world, “ $a$ ” is the name of  $a$  and not of any other thing).

Thesis: If what Kripke said about the modal behaviour of names is true, it is true in virtue of the nature of names.

A rigid designator is essentially and existentially determined by its referent: the name is a *mere* tag, without descriptive content, *nothing but* a name for its bearer: two rigid designators for the same thing differ only notationally and thus ‘arbitrarily’ (de Saussure 1972: 100). The rigid designator is *determined* by its referent – it is the referent itself, not any descriptive condition, that tells us how and what the designator is. The referent of some use of a name is “the individual that enters into the historically correct explanation of who it is that the speaker intended to predicate something of” (Donnellan 1974: 229).

It seems a plausible idea that it is our use of them, and the intentions guiding that use, that make names keep their reference:

“What kind of linkage can insure that a name keeps the same reference in all possible worlds? [...] On the one hand names and other genuine singular terms must keep their reference in order for quantification to make sense. On the other hand, history is full of examples of names that due to confusion have come to change their reference. It took me many years to notice something that should have struck me immediately: What I show in this dissertation [(Føllesdal 1961)] is not that names and other referring expressions keep their reference in all possible worlds, I show only the conditional statement that *if* quantification into modal (and other intensional) contexts shall make sense, *then* names and other referring expressions have to keep their reference.

We have hence no guarantee that names keep their reference, we only know that *if* we get confused about reference, *then* we get confused about quantification. When we use a name, a pronoun or a quantificational variable, we signal that we intend to keep on referring to the same object, and we commit ourselves to do our best to keep track of it. [...] Constancy of reference is therefore not something which is guaranteed, but something we must strive for when we use singular terms. It is a norm that we are expected to live up to as language users.” (Føllesdal 2004: xxviii-xxix)

Intentions of coreference are sometimes even built in the very definition of rigidity:

“...the view [expressed in Naming and Necessity] supposes that a learner acquires a name from the community by determining to use it with the same reference as does the community.” (Kripke 1979: 359)

“Kripke’s point [...] was that *given* that, as a matter of fact,

(2) Water is  $H_2O$

[...] and given that (Kripke points out) speakers *intend* that the term ‘water’ shall refer to just those things that have the same lawful behavior and the same ultimate composition as various standard samples of actual water (i.e. speakers have such intentions even when talking about hypothetical cases or ‘possible worlds’), it follows that (2) must be true in

every possible world...[...] this ‘metaphysical necessity’ is explained by mundane chemistry and mundane facts about speakers’ intentions to refer.” (Putnam 1981: 46–47)  
 “Someone uses a substance term rigidly if, in talk of any counterfactual or hypothetical situation, she uses it to refer to whatever in that situation the same substance as the substance referred to by the term in the actual situation.” (Putnam 1990: 57)  
 “...a name is initially bestowed on a thing specified by description, and on each subsequent occasion is used with the intention of continuing to refer to what it has been being used to refer to.” (Burgess 1996: 20)

## Types and tokens

### 1. What are types?

The type, it is often said, is abstract, a ‘form’ of some kind, while the tokens are spatio-temporal particulars, consisting of chalk or ink or sound-waves, sufficiently demarcated from each other and their surroundings. But in what sense are types ‘forms’ of their tokens? Some authors take types to be geometrical patterns or shapes exhibited by their tokens, while others have taken them to be sets.

Some problems with the view that types are somehow built up from their tokens:

1. untokened types: are they all identical? are there enough of them?
2. possible tokens?
3. dependence: sets depend on their members, shapes on what has them, but tokens are individuated by their types.
4. generation: the most important fact about types, if there are any, is that they can be used to generate new tokens, both of their own and of new types; sets, sequences and shapes do not generate in this way what they are sequences and shapes of.
5. if types are abstract objects, how is it that we can pronounce, learn, manipulate and invent them?

### 2. What is the relation between tokens and their type?

Peirce (1932: §246) calls tokens “replicas” and “embodiments” of the type. But if tokens resemble their types, don’t they do by sharing a super-type with them?

Types are said to occur in their tokens (Wolterstorff 1970: 17). If it is the word type PHILIPP that occurs both in “Philipp” and in “Philipp” and if it is the letter type P what it is that has three occurrences in each of them, are we to say that P occurs trice in the *type* PHILIPP too? If it does not, then how do we distinguish PHILIPP from PHILIP (a very different word)? If it does, do not the three P in PHILIPP have something else, a super-type, in common, of which they are occurrences?

Types are also said to be represented by their tokens (Szabó 1999). “Zoltán” represents ZOLTÁN which in turn represents Zoltán. If all we manage to do by our linguistic acts is representing abstract types, then how do *they* acquire their representational properties?

### 3. What is the relation between tokens of the same type?

If *being of the same type* stands for *being tokens of the same word*, this relation is neither reflexive nor transitive. It is not reflexive because the same marks can be used to represent different words, and it is not transitive because any word can be related to any other by a Sorites series of small changes which are compatible with the ‘adjacent’ tokens being of the same type.

The identification of word types with geometrical patterns or graphical shapes imposes rather tight constraints on the resemblance between tokens required for their being of the same type, whereas we are willing to count rather dissimilar inscriptions as tokens of the same word. As Kaplan (1990) and Bennett (1988) have argued, however, no degree of resemblance is necessary or sufficient for inscriptions and utterances being of the same word. “Sam”, e.g. a name that can be pronounced very

differently, not only by speakers of different languages, but by speakers having all kinds of speech deficiencies. Moreover, it is (a token of) a type of which we may produce several tokens during a conversation, while others might be written on the cover of a book. Words can be encoded in very different notational systems; while for each of these encodings a type/token distinction can be drawn, it seems doubtful how there could be types covering things so different as a mark on the black-board, which seems a substantial, a three-dimensional continuant in time, and the modulation of the air by my utterance, which is a process or event that has temporal parts.

In his article “Words”, David Kaplan (1990) criticised the type/token model on roughly the grounds we mentioned. Instead, he proposed what he called the “common currency model”, according to which words, and proper names in particular, are continuants, constituted by stages (inscriptions, utterances), in roughly the way different quantities of water constitute a river. Names are “natural objects”, with a birth and a life that change in time and move in space while remaining single entities, just like a person changes in time, moves in space and can be, simultaneously or at different times, a member of different language communities.

### **Towards a metaphysics of words: Names as continuants**

Names persist through links of coordination, that allow for some slack and give rise to Sorites-type paradoxes. These coordination links constitute a relation of genidentity among utterances and inscriptions: the word they are utterances and inscriptions of is nothing over and above the *ens successivum* made up by these stages. Genidentity is the existential relationship among the entia per se that grounds the persistence of the ens per alio.

Names are like viruses: they are natural objects, in space and time, which endure and move, spread and mutate while spreading. Individual viral cells stand to the virus itself in the same kind of exemplar/species relation than utterances to the words they are utterances of. Indeed, ‘viruses’ like HIV or smallpox are actually virus species. Viruses are transmitted by physical transactions, and so are words. They depend on their host cells for their existence, as words depend on their physical and mental ‘embodiments’. It is in virtue of their multiplicative strategies that viruses travel and change; in the same way, utterances and inscriptions of a word give rise to other utterances and inscriptions of the same word. Thinking of words on the model of viruses help us focus on the most important features of their nature: their ways of reproduction and their mutational possibilities. Rather than asking under what conditions some name *N* refers to some individual *X*, a question that presupposes independent means of specifying the referent, we should look for necessary and sufficient conditions on human actions to be uses of the same name. Words, like biological viruses, are dependent entities: they depend for their existence on actions of language users, as biological viruses depend on living cells for their reproductive cycle. The clue to a metaphysics of words is their epidemiology.

Both words and biological viruses are (vertically) individuated not just by their reproductive process, but also (horizontally) by their ecological niche. Both components are present in the definition of a virus species proposed by van Regenmortel (1990) and finally accepted, after years of controversy, by the International Committee on Taxonomy of Viruses in 1991: “A virus species is defined as a polythetic class of viruses that constitutes a replicating lineage and occupies a particular ecological niche”. It is in terms of their ‘niche’, i.e. their function within a representational system, that we can account e.g. for the rigidity of names.

Inscriptions, utterances and memory traces of proper names are concrete objects (cultural artefacts), entia per se, and some of them are appropriately related in virtue of the one ‘coming from’ the other. At any particular time and place where and when the name exists, there is at least one physical item having semantic properties that ‘does duty’ for it. The name that we write twice on the black-board, that both of us pronounce and that makes its way around the globe is an ens per alio, logically constructed from a vast number of concrete entities, the ‘stages’. Every stage takes part in an

application or an employment of the name that is its use at a time and in a context. Such employments are processes, typically actions, and as such characterised by the intentions of their principal agents. They may be – and typically are – spatially and temporally scattered; it is in virtue of relations holding among the concrete entities they involve that we are typically able to recognise them as re-employments *of* some previously used name.

## Linguistic Coordination

Linguistic coordination is the relation between different linguistic actions that grounds the continuity of a name and makes the actions employments of the (genidentally) *same* name. The persistence of the name, and thus its identity, is based on this relation of genidentity and not on its referent or on its syntactical-lexical form: two inscriptions or utterances are genidental not because of their having the same intrinsic properties and characteristics (or in virtue of being sufficiently similar with respect to them), but in virtue of their developing one from the other, in a genidental series.

How is coordination achieved? This is a vast, and partly empirical question. Some examples may however be useful. A first class of cases involves intentions of co-reference: two utterances are coordinated in this way if one of them essentially involves an intention to use some syntactical-lexical form, some sound pattern or some other physical item *in the same way*, whatever it is, as the salient physical item is used in the other. In typical cases when I am about to use a word, it already exists as a sequence of stages, ending in a particular stage – an intention of co-reference will then determine whether another stage is a stage of the same word or not.

Inferential dispositions of a speaker may also give evidence for coordination. Suppose that we observe two utterances of what we take to be proper names “*a*” and “*b*”, followed of what we take to be predicates “*F*” and “*G*” respectively. If the speaker is disposed to infer from them that there is something that is both *F* and *G*, this may justify taking his utterances of “*a*” and “*b*” to be coordinated.

Coordination, in its simplest form, is presupposed whenever we fuse two predications into one:

$$(\mathbf{id} - \mathbf{a}) \quad \frac{Fa}{Ga} \\ (F \wedge G) a$$

I will call an inference of the type  $(\mathbf{id} - \mathbf{a})$  an “*inference trading on identities*” or “*identity inference*” for short. The conclusion of  $(\mathbf{id} - \mathbf{a})$  is meant to rule out cases of ‘conjunction introduction’ where the proper name type is used ambiguously, as in

$$(\mathbf{id} - \mathbf{DL}) \quad \frac{\text{David Lewis is an American-born philosopher famous for his modal realism.} \\ \text{David Lewis is a Russian-born Canadian lawyer and politician.}}{\text{David Lewis is both a philosopher and a politician}}$$

That names are individuated by coordination links among utterances is not really a new idea. In retrospective, it can be seen lurking behind much of what has been said in the last thirty-five years about the rigidity of proper names, i.e. the fact that they keep their reference constant across both actual and counterfactual circumstances. The question naturally arises how proper names can be bestowed with such an amazing capacity - and it seems a plausible idea that it is our use of them, and the intentions guiding that use, that make them keep their reference:

“What kind of linkage can insure that a name keeps the same reference in all possible worlds? [...] On the one hand names and other genuine singular terms must keep their reference in order for quantification to make sense. On the other hand, history is full of examples of names that due to confusion have come to change their reference. It took me many years to notice something that should have struck me immediately: What I show in this dissertation [(Føllesdal 1961)] is not that names and other referring expres-

sions keep their reference in all possible worlds, I show only the conditional statement that *if* quantification into modal (and other intensional) contexts shall make sense, *then* names and other referring expressions have to keep their reference.

We have hence no guarantee that names keep their reference, we only know that *if* we get confused about reference, *then* we get confused about quantification. When we use a name, a pronoun or a quantificational variable, we signal that we intend to keep on referring to the same object, and we commit ourselves to do our best to keep track of it. [...] Constancy of reference is therefore not something which is guaranteed, but something we must strive for when we use singular terms. It is a norm that we are expected to live up to as language users.” (Føllesdal 2004: xxviii-xxix)

Intentions of coreference are sometimes even built in the very definition of rigidity:

“Kripke’s point [...] was that *given* that, as a matter of fact,

(2) Water is H<sub>2</sub>O

[...] and given that (Kripke points out) speakers *intend* that the term ‘water’ shall refer to just those things that have the same lawful behavior and the same ultimate composition as various standard samples of actual water (i.e. speakers have such intentions even when talking about hypothetical cases or ‘possible worlds’), it follows that (2) must be true in every possible world...[...] this ‘metaphysical necessity’ is explained by mundane chemistry and mundane facts about speakers’ intentions to refer.” (Putnam 1981: 46–47)

“Someone uses a substance term rigidly if, in talk of any counterfactual or hypothetical situation, she uses it to refer to whatever in that situation the same substance as the substance referred to by the term in the actual situation.” (Putnam 1990: 57)

“...a name is initially bestowed on a thing specified by description, and on each subsequent occasion is used with the intention of continuing to refer to what it has been being used to refer to.” (Burgess 1996: 20)

Coordination in both the temporal and the modal dimension is essential to our uses of proper names. It is *because* you are able to intend to refer to the same thing I do, whatever it is, that you are able to pick up a name from me you have never heard before and use it to make true or false assertions about a thing you have perhaps never encountered or otherwise heard of. It is *because* you can intend to use a name in the same way for the description of both actual and counterfactual circumstances that you are able to ask of this very person whether she might have won the election.

Coordination also has important epistemological consequences. In normal cases, the intention to coordinate the reference of a use of a certain name with another of its uses is self-fulfilling: Coordinating my use of “Sam”, e.g., with yours, I intend to refer by it to whatever is the referent of your utterance. My intention of co-reference is purely notional: it is not directed towards what *actually* is the referent of your utterance, but is an intention to refer by my utterance to *whatever* is referred to by yours. When I thus coordinate my use of a name with yours, I make an identity statement connecting those very uses of the names true.

To the extent my co-referring intention is transparent to me, the identity statement is not only true but a priori knowably so. This is why “Hesperus is Hesperus” and the like are, in normal – but not all! – uses, trivial. That uses of proper names can, and typically are, coordinated in this way is a general and unacknowledged presupposition of direct reference theories. It shows most clearly in discussions of Evans’ famous Julius case (Evans 1979), generally used to illustrate the contingent a priori. It is in order to achieve coordination that the stipulation that Julius is to be a proper name for the person who invented the zip “we must add that the stipulation in question was made in each of the worlds [in the context set]” (Stalnaker 1999b: 15).

I can only go wrong if I have a separate, and different, intention to use the name to refer to something independently given to me. It is only with respect to such uses that an identity statement linking my use with another one with which it shares its referent is informative. In these cases, however, my intention is not the purely notional intention to co-refer, to collaborate in whatever the naming practice of my language community is, but a referential intention, an intention to refer to some unique  $F$ . This referring, as opposed to a co-referring intention, may be unsuccessful if there is no or no unique  $F$  or, if successful, make me a deviant language user. I will count as deviant if the  $F$ , while it is available as a unique referent, is not the referent of the other uses I intend to align myself with.

Referential intentions play an important role in baptisms. In a referential use of a definite description to fix the reference of a proper name, the intention to co-refer links the newly introduced name with the referentially used description. In these cases, “ $N$  is the  $F$ ” will normally be a priori, though the intention is not self-fulfilling – if there is no unique  $F$ , the identity statement is not true. It is in such uses of names that another point of analogy between proper names and both biological and computer viruses becomes apparent: all three are just instructions, RNA/DNA, source code or instructions to get to the referent, packed in a protective envelope.

If we distinguish the different employments of a word, which are pieces of intentional behaviour in space and time, from its use which is a more comprehensive process and not itself intentional, we may *identify* names with their uses – there is nothing else to a name than its applications, their properties and the coordination relation holding between them: “Eine Bedeutung eines Wortes ist eine Art seiner Verwendung” (Wittgenstein 1969, §61), or rather a relation of coordination among some linguistic acts.

## Semantic Coordination

Kit Fine (2007) has argued that it is only by recourse to a semantic relation he calls “coordination” that we are able to explain the difference between the semantic behaviour of the free variables  $x$  and  $y$ .<sup>6</sup> To account for the facts that

1. there is no cross-contextual difference in semantic role between the variables  $x$  and  $y$ ;
2. there is a cross-contextual difference in semantic role between the pair of variables  $x, y$  and the pair  $x, x$

we must, Fine (2007: 22) says, reject semantical intrinsicism, the view that “the intrinsic semantic features of an expression, in contrast to its extrinsic semantic features, do not concern its semantic relationship to other expressions” and that “there can be no difference in intrinsic semantic relationship without a difference in intrinsic semantic feature”. We should rather develop a relational semantics, which attributes semantic values not just to sequences of expressions but to *coordinated* sequences of expressions. Whether or not two expressions are coordinated is a matter of how they represent, i.e. of whether they represent an object as the same:

“I would not wish to deny that the semantic relationship – of representing-the-same – might hold in virtue of a syntactic relationship – of the name being the same. It is, after all, a common occurrence that a semantic feature or relationship can hold in virtue of an underlying syntactic feature or relationship” (Fine 2007: 41)

This is the additional step I propose to take: two ‘tokens’ are coordinated iff they are ‘tokens’ of the same word. Coordination is identity.

<sup>6</sup>Kaplan (1990: 95, fn. 6) formulated a similar idea in terms of a *syntactical* difference: “I have come to think that two sentences whose syntax – perhaps here I should say, whose *logical syntax* – differs as much as “ $a = a$ ” differs from “ $a = b$ ” should never be regarded as having the same semantic value (expressing the same proposition), regardless of the semantic values of the individual lexical items “ $a$ ” and “ $b$ .”

But what about anaphora? Following Fiengo and May (2006: 14,52) we may distinguish between the lexicon (containing “names”) and the syntax of a language (containing “expressions”) and say that expressions have pronomial and non-pronomial ‘tokens’ (Fiengo and May 2006: 45)

## Not quite mental files

“What can be compared with a name is not the word “this” but, if you like, the symbol consisting of this word, the gesture, and the sample.” (Wittgenstein, 1965: §56, 109)

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