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Putting Language First: The ‘Liberation’ of Logic from Ontology

ERMANNO BENCIVENGA

There are two ways of conceiving the relation between language and the world: they differ by making opposite choices about which of them is to be assigned priority, and which is to be dependent on the other. The priority and dependence in question here are conceptual, not causal: at the causal level everyone agrees that certain portions of the nonlinguistic world (intelligent entities, say) must be in place before meaningful expressions come to pass, so what we are concerned with is how *the notion* of meaningful is to be understood – whether ‘meaningful’ is defined as something that *means* some portion of the world or rather as something that belongs to a self-sufficient structure of analogies and oppositions. For example, taking for granted that there would be no meaningful expression ‘John’ unless some intelligent entity came up with it, is ‘John’ a meaningful expression *because* there is a John that it means or rather *because* it is a certified component of the English language, categorized as a name and clearly distinct from ‘Paul’ – though somewhat analogous to ‘Jack’? If you go the first route, I will say that you are a *realist* at the conceptual (or transcendental) level; if you go the second one, I will call you a conceptual (or transcendental) *idealist*. ‘Realist’ is a transparent term, since ‘res’ is ‘thing,’ ‘object,’ in Latin and clearly this kind of realist puts things (conceptually) first, considers them basic in her logical space; ‘idealist’ is more controversial, since the ‘idea’ in it recalls a psychologistic jargon that is not as popular today as it once was, so one might think that some other root, more clearly expressive of the semantical, logico/linguistic character of the current analysis, should be preferred. And yet, once we are clear about its implications, ‘idealist’ remains a better choice because it lets us see the connections of this contemporary debate with other, classical ones; later I will explore some such connections. Before I do that, however, I have to explain what the contemporary debate looks like.

My example of a meaningful expression above was not chosen at random: in the case of names there is more agreement than with any other part of speech concerning *what* they mean. ‘John’ means a (male) human being, ‘Lassie’ means a dog, ‘the Queen Mary’ means a ship, and in general a name that means anything means an object – or, as people say, *denotes* it or *refers to* it (the terminology is highly unstable: ‘reference’ and ‘denotation’ are used as translations of the Fregean ‘Bedeutung,’ but ‘meaning’ is also used for the same purpose, consistently with Frege’s own suggestion, and indeed it is the most natural English counterpart of this perfectly ordinary German word). There are complications here, since names may be ambiguous and the objects meant may be past or future as well as present ones, but none of that touches the essence of names' favored condition: what *kind* or *category* the meaning of a name belongs to is hardly ever an issue, much less so than, say, with predicates or connectives. Probably because of this (and of the great importance that concrete, middle-sized objects like human beings, dogs, and ships have in our form of life), it is around names that the realism/idealism controversy has surfaced in the clearest form within contemporary logic. And *free logics* have been its most conspicuous outcome.

Standard quantification theory (SQT) lets us prove theorems like

(1) $Pa \supset \exists x Px$,

one of whose substitution instances would seem to be

(2) If Pegasus is a winged horse then there exists a winged horse.

And that would seem to be a problem, because it would seem that the antecedent of (2) is true and its consequent is false. As it turns out, no such problem arises if you are a conceptual realist; for then you are faced by a simple, unproblematic dilemma. Either, that is, Pegasus exists, and hence there does exist a winged horse after all (it is not for logic to say what the criteria for existence are, you might add: it may well be that being described in a story is a sufficient condition for existing), or Pegasus does not exist, *and then (2) is not a substitution instance of (1).* For the individual constant *a* in (1) (I will take symbols to be autonymous, that is, names of themselves) is supposed to stand for an arbitrary name, and in a realist framework nothing can be a name unless there is an object it names. Consistently with this view, in SQT *a* must receive an interpretation in all models; in every possible world there must be an object it refers to – an object *existing in that world*. If identity is added to the language, we can give direct expression to this semantical condition by proving the theorem

(3) $\exists x(x = a)$.

As for the *deceptive appearance* that 'Pegasus' is a name (and (2) is a substitution instance of (1)), that will have to be dispelled, which can be done in one of two major ways. You can either assign to 'Pegasus' a *conventional* reference, thus *making it* a name (Frege (1893) used this strategy for his formal language, and Carnap (1947) generalized it to natural languages), or agree with Russell that (a) 'Pegasus' is a disguised definite description, (b) definite descriptions (disguised or otherwise) are *incomplete symbols*, that is, have no meaning in isolation but only in context, and (c) once the appropriate contextual *definiens* is provided for the sentence that has the 'grammatical form' (2), no apparent (and confusing) reference to Pegasus occurs in it (none could, because *there is* no Pegasus for anything – or anyone – to refer to).

When the models of SQT graduate into the possible worlds of modal semantics (that is, bring out explicitly what they were to begin with), one might be displeased by the provability of stronger variants of (3). For the same unobjectionable

(4) $a = a$

which lets us infer (3) by existential generalization would now (by existential generalization and necessitation) let us infer both

(5) $\Box\exists x(x = a)$

and

(6) $\exists x\Box(x = a)$,

that is, both that necessarily there is an a (*whatever* name a might be) and that there is an object which is necessarily (or *essentially*) a – that a refers to the very same object in all worlds (and, again, a could be *any* name). But there are those who are perfectly happy to live with these extreme consequences of realism: they accept the Barcan formula

(7) $\Box\forall xA \rightarrow \forall x\Box A$

and hence are prepared to admit that all possible worlds have the same domain of objects – that a 'possible world' is a particular distribution of accidental properties over *these* objects, the objects existing in *this* world, or more simply *the* objects.

If, on the other hand, you are an idealist, then you do not think that something is a name because it names an object; your definition of a name is not object-based (but language-based: a name is an expression belonging to a certain grammatical category), and it is perfectly possible that an expression satisfy this definition while there is no object that it names. So, if 'Pegasus' is taken to be one such *nondenoting name*, (2) *will* be a substitution instance of (1) and its falsity will be enough to disprove the logical truth of (1). Hence you will be forced to modify (specifically, to weaken) SQT so as to rule out that (1) be a theorem; a free logic is what results from this modification.

A (further) schematization of (1), that is,

(8) $A(a/x) \supset \exists xA$

(the Principle of Particularization) is often an axiom of SQT. When it isn't, some equivalent basic assumption is present – most typically, either the Principle of Specification

(9) $\forall xA \supset A(a/x)$

or the already cited Rule of Existential Generalization

(10) $\dfrac{A(a/x)}{\exists xA}$

or the Rule of Universal Instantiation

(11) $\dfrac{\forall xA}{A(a/x)}$.

For definiteness, I will assume a system SL containing axiom (9).

So the very first thing we need to do, to transform SL into a free logic, is to drop (9). But that is hardly enough: though from an idealist point of view it is illegitimate to infer

(12) Pegasus is not a winged horse ($\sim Pa$)

from

(13) Nothing is a winged horse ($\forall x \sim Px$),

it is perfectly legitimate to infer

(14) The Queen Mary is not a winged horse ($\sim Pb$)

from it. For, remember, this idealism is the conceptual variety; so it is not supposed to impact your ordinary, empirical sense of what does exist. The Queen Mary exists, hence whatever is true of everything existing is true of it. Therefore, (9) cannot *just* be dropped: it must be *replaced* by a weaker variant of it, saying in effect

(15) $(\forall xA \wedge a \text{ exists}) \supset A(a/x)$.

If identity is part of the language, (15) can be expressed as

(16) $(\forall xA \wedge \exists y(y = a)) \supset A(a/x)$;

if it isn't, E! is introduced as a symbol for existence and (15) becomes

(17) $(\forall xA \wedge \text{E!}a) \supset A(a/x)$.

Nor is that enough either: just as you don't want your new understanding of what a name is to force you to deny that 'the Queen Mary' does name an object, and, in general, to force you to admit fewer objects than the conceptual realist does, you also don't want to be forced to admit more. Your objects – though differently conceptualized – will be the very same ones as before, the *existing* ones; your idealism will not lead you to introducing into the world any creatures of fancy. It will continue to be true for you that all objects exist, that is,

(18) $\forall x\text{E!}x$;

and, since (18) is not provable on the basis of the axioms you have allowed so far, it (or some equivalent principle) will also have to be adopted as an axiom.

During the first phase of their history, from the mid-1950s to the mid-1960s, free logics were developed much as I did so far, at a purely proof-theoretical level. The formal systems were justified by intuitive semantical considerations, which sounded convincing to some and gratuitous to others (Church (1965), for example, pointed out that, formally, one of these systems was a simple exercise in restricted SQT and hence claimed that there was nothing 'distinctive' about it), and, because the correspondence of standard and free logics, respectively, to the realist and idealist, largely incommensurable paradigms was not perceived, inarticulate invocations of 'natural' and 'unnatural' consequences provided what little ground there was for philosophical discussion. But, eventually, the task of defining a formal semantics could no longer be postponed; and here is where the conceptual issues started (however slowly) to come to the fore.

The semantics for SQT allows for no immediate extension that would assign a truth-value to a sentence like

(19) Pegasus is white.

For, in that semantics, (19) is true if the object Pegasus belongs to the set *W* of white things, and false if Pegasus does not belong to *W*; but, if there is no Pegasus, we are stuck. Formally, a model for SQT is an ordered pair $\langle D, f \rangle$, where *D* (the *domain*) is a nonempty set and *f* (the *interpretation function*) maps the individual constants of the language into *D* and the *n*-place predicates into D^n, and an atomic sentence

(20) $Pa_1 \ldots a_n$

is true if

(21) $\langle f(a_1), \ldots, f(a_n) \rangle \in f(P)$

and false if

(22) $\langle f(a_1), \ldots, f(a_n) \rangle \notin f(P)$.

But, if some of the $f(a_i)$ are not defined, the expression preceding the membership sign is not defined either, nor is a truth-value for (20).

A simple solution for this problem (adopted, for example, by Schock (1964) and Burge (1974)) would consist of saying that, when Pegasus does not exist, it is automatically not the case that Pegasus belongs to *W*; hence (19) is false. Formally, one would consider (20) true if (21) is the case, *and false otherwise* – which includes all cases in which some of the relevant expressions are undefined. As a result, all atomic sentences containing nondenoting names would be false, and truth-values for complex sentences could then be computed in a straightforward manner. But, as an indication of how quickly dealing with nonexistents gets us into deep and controversial philosophical issues, this solution (call it *S*) forces upon us a very definite (and, to some, objectionable) view of the relation between natural and formal languages. For consider

(23) Pegasus is not white.

If (23) is paraphrased as

(24) $\sim Pa$,

then according to *S* (23) is true; but is there any reason why (23) could not *also* be paraphrased as

(25) Pa,

where *P* stands for the predicate 'not white'?

Some authors (the ones Cocchiarella (1974) calls *logical atomists*) would answer 'No': they would claim that the paraphrase of an ordinary sentence into a formal language must bring out the 'logical form' of that sentence, hence the paraphrase of (23) into the formal language of quantification theory *must* be (24) – since (23) *is* a negation. But others (the ones that in Bencivenga (1981a) I call *logical pragmatists*) would agree with van Fraassen (1969: 90) that "the symbolization of a sentence as . . . [atomic] indicates only the extent to which its internal structure has been analyzed, and the depth of the analysis need only be sufficient unto the purpose thereof"; hence they would claim that (23) can be alternatively paraphrased as (24) or (25) depending on what the context requires. If, for example, we are trying to decide on the validity of the argument

(26) Pegasus is not white.
Therefore, something is not white.

there is no reason for the relevant paraphrase to use a negation sign. Since, on the other hand, there is also no compelling reason why this paraphrase should *not* use a negation sign, the unacceptable consequence follows that (26) is valid or invalid depending on how we *decide* to paraphrase (23) – if we paraphrase it as (25) then the premise of (26) is false when there is no Pegasus, hence the conclusion follows vacuously from that premise (and of course the conclusion always follows when Pegasus exists); if we paraphrase it as (24) then the premise is true when there is no Pegasus and the conclusion is false in a world where *W* is empty. Thus the 'straightforward' solution *S* of a specific problem concerning nondenoting names would end up 'resolving' also such a general philosophical issue as the debate between logical atomism and pragmatism!

Those who find the outcome above disturbingly close to magic might be attracted by another simple way out. We have a problem here because the interpretation function of a model is not always total: it may be undefined for some individual constants. Let us agree then to make it always total, by adding to each model an additional domain (called the *outer domain*) and interpreting there the constants that remain undefined in the ordinary domain of quantification (the *inner domain*). Formally, a model in *outer domain semantics* (whose classical text is Leblanc and Thomason (1968)) is an ordered triple $\langle D, D', f \rangle$, where *D* and *D′* are disjoint sets and *f* maps the individual constants into $D \cup D'$ and the n-place predicates into $(D \cup D')^n$. The most obvious reading of the outer domain makes it the set of nonexistent objects; after all, consistency requires that

(27) $E!a$

be false whenever $f(a) \in D'$. And here again we encounter serious philosophical problems. For whether 'there are' (in whatever sense of that phrase) any nonexistent objects would seem to be a metaphysical issue, and one that logic should remain neutral about; otherwise, it is hard to see how people holding opposite positions on this issue could even reason with one another. But the current 'simple' approach to our problem decides the issue, making nonexistent objects a logical necessity. The realism/idealism controversy I placed in the background of free logics lets us diagnose the confusion from which this new bit of magic originates. Free logics only make sense from an idealist point of view; but outer domain semantics continues to think of objects as conceptually primary – it continues to think of the notions of truth, validity, and the like as dependent upon the notion of an object. So, when objects are not available, it brings them in anyway: nonexistent objects, which is as much as saying nonobjective objects, an oxymoron demanded by the awkward, brutal superposition of two distinct *and conflicting* conceptual schemes. (We will see shortly that a more careful and discriminating operation relating the two schemes has much better chances of improving our understanding.)

It begins to look as if 'simple' and 'straightforward' in this context have a tendency to keep dangerous company with 'conceptually confused.' There is a good reason for that. Formal semantics as we know it is already biased toward realism: its starting point is indeed a domain, a set of *objects*, on which nothing is said and no conditions are imposed – 'object' is a primitive notion in the realist's logical space, hence one that is going to enter into the definition of (all) others but that itself cannot be defined. Being directly expressive of the idealist's standpoint would require conceiving of semantics in an entirely new way, or maybe even challenging the very enterprise of semantics – insofar as the latter is seen as the project of accounting for central logical notions in terms of an *objective* interpretation of the various parts of speech. But, despite some vague gestures in this direction (as when Meyer and Lambert (1968) say that 'Pegasus is a horse' is true not because Pegasus is a horse but because 'Pegasus' is a horse-word), no such revolutionary work is in sight. What has happened, instead, is that a number of authors have painstakingly translated portions of the idealist framework into the realist one – which may be a more immediately useful job, given the prominence of realism in contemporary philosophy of logic, hence the expediency of gradually forcing that prominent position away from itself, as opposed to just building an alternative structure next door, where few are likely to look for it. Needless to say, the results of these translations have been anything but straightforward, which some kibitzers have considered a good ground for criticism.

The translation job was initiated (not under that description) by van Fraassen (1966a, 1966b) with his semantics of *supervaluations*. Given a partial model $M = \langle D, f \rangle$ (that is, a model whose interpretation function is partial on the individual constants), M will leave all atomic sentences containing nondenoting names truth-valueless. A *classical valuation over M* is any result of 'completing' *M* by assigning arbitrary truth-values to all those atomic sentences (van Fraassen thinks of each such valuation as the result of adopting a specific 'convention'). A classical valuation can be routinely extended to a valuation of all sentences (and we can continue to call this extension a classical valuation); the *supervaluation over M* is the logical product of all classical valuations over *M*. Thus, for example, assume that $f(a)$ is defined, $f(b)$ is undefined, and $f(a) \in f(P)$, and consider the following sentences:

(28) Pb
(29) $\sim Pb$
(30) $Pa \wedge Pb$
(31) $Pa \vee Pb$
(32) $Pb \vee \sim Pb$
(33) $Pb \wedge \sim Pb$.

In some classical valuations over *M* (28) will be true and in some it will be false, hence in the logical product of all these valuations (28) will remain truth-valueless. The same can be said about (29) and (30); but when it comes to (31)–(33) the situation is different. Whatever truth-value the second disjunct of (31) might have in a classical valuation over *M*, its first disjunct will always be true there, hence the disjunction will always be true, hence the logical product of all these valuations will make (31) true. Also, whatever truth-value the first disjunct of (32) might have in a classical valuation (over any model), its second disjunct will have the *opposite* truth-value, hence the disjunction will always be true and will remain true in every supervaluation. For similar reasons, every supervaluation will make (33) false.

The problem with van Fraassen's approach is that it is formulated at a sentential level of analysis. 'Conventions' assign arbitrary truth-values to unanalyzed atomic sentences, hence have no way of bringing out the logical structure of those sentences – no way of accounting for the specifics of *predicate* (let alone *identity*) logic. Since van Fraassen wants principles like (16) and (17) – or, for that matter, like the uncontroversial

(34) $\forall x(A \supset B) \supset (\forall xA \supset \forall xB)$

and

(35) $a = a$

to turn out logically true, his only chance is to *make* them so by imposing (*meta*conventional?) requirements on classical valuations. One can do better by developing this approach at a quantificational level of analysis; that is, by thinking not so much of arbitrary assignments of truth-values to truth-valueless atomic sentences as of arbitrary assignments of *denotations* to nondenoting names. One will then talk not of conventions and classical valuations over a model *M*, but rather of *extensions* of *M* which provide an interpretation for all the individual constants undefined in *M*; and the logical product which constitutes the final valuation for *M* (and which can still be called the supervaluation over *M*) will be defined over these extensions. Then (34) and (35) will be (logically) true for the same reason for which (31) and (32) are.

In this reformulation, the translation character of supervaluational semantics can be made clearer. For the reformulation starts, in true realist fashion, by accounting for the truth-values of (previously truth-valueless) sentences in terms of objects; but then, by playing all possible characterizations of these objects against one another, it cancels what is specific to any of them, and what finally emerges as true or false does so simply as an expression of the rules constituting *the language itself*. (31) and (32) are true and (33) is false because of how negation, disjunction, and conjunction behave, not because of what *b* is; since we are working in a realist framework, we must mobilize a reference for *b* to activate the logical behavior of negation, disjunction, and conjunction, but once we have activated it that reference can (in effect) be discounted and forgotten. To use terminology coming from a different quarter, the reference of *b* is only an *intentional object*: not the realist's object, that is, but still enough of a presence for him/her to apply familiar conceptual moves, to allow him- or herself enough maneuvering space, as it were – it is enough for concepts that he/she takes to be dependent ones (negation and the like) to be called in play. After they *are* called in play, the rug can be pulled from under his/her feet (this object by courtesy can be recognized for what it is – that is, not an object at all) and (hopefully!) the structure thus built will remain standing.

But there is a complication. Return to (1) – one of the characteristic schemes marking the distinction between standard and free quantification theories. You would expect (1) to be falsified in some partial model; so, to test your expectation, consider a model $M = \langle D, f \rangle$ where $f(a)$ is undefined and $f(P)$ is empty, and an extension $M' = \langle D', f' \rangle$ of *M* where $f'(a) \in f'(P)$ – intuitively, in terms of the substitution instance (2), a world in which there exist no winged horses and an extension of that world in which Pegasus exists and is a winged horse. To begin with, (1) is truth-valueless in *M*, but once we move to *M′* it becomes true (Pegasus is a winged horse there but also exists there, hence *there exists a winged horse*). And, since it is easy to see that the same holds for every extension of *M* (*M′* was selected as the most representative case – if Pegasus is not a(n existing) winged horse then the conditional is automatically true), the conclusion is that (1) is true in the supervaluation over *M*. And, again, *this* result can be generalized; so (1) ends up being *logically* true, and we are back in standard quantification theory.

What has gone wrong? That we have taken our maneuvering space too seriously, we have treated the objects by courtesy as fully-fledged objects. As I explain in Bencivenga (1987), the same danger arises in Kant's transcendental philosophy. Because that philosophy is a delicate combination of transcendental idealism and empirical realism, it too needs to translate from one framework into the other – specifically, to translate realist criteria of objectivity into transcendental idealism. Intentional objects are a tool that can be used in carrying out the translation; but it is important to realize that, when this task is completed, they are not to be counted as objects at all. Intentional objects are not more a *kind* of objects than *alleged objects* are; they are only a manner of speaking. The only objects are the existing ones, the objects *simpliciter*; who thinks otherwise is going to fall into the trap of assigning objective status to God, the soul, the world, and other fictional entities. The (conceptual) 'construction' of objects *simpliciter* takes time, and during this time intentional objects play a role; but by the end they are supposed to disappear. (In fact, Kant's case is more complicated: the end is never reached and all we are ever left with are objects by courtesy – *phenomena*. But here we can disregard these additional complications.)

The situation we are facing in supervaluational semantics is analogous. When evaluating a sentence containing nondenoting names in a model M, we (in effect) perform a mental experiment over M: we imagine, that is, that those names be denoting – that the relevant objects exist. We do not *believe* they do; they have only an instrumental role to play, and eventually we want to get rid of them. But (and here is where the problem arises), during the mental experiment these 'objects' will not sit quietly and let us exploit them: they will often *contradict* what real information we have, about objects in whose existence we *do* believe. If we let them do that, by the time we are ready to drop them they will have already done enough damage; hence we must prevent any such interference – never 'revise' what we already know on the basis of a mental experiment. To return to the example above, we do know that there exist no winged horses; so when we move to M' we don't expect this (imaginary) model to tell us anything new *about that*. It is Pegasus that we need to 'know' about – more precisely, it is Pegasus that we need to bring in so that our rules for conditionals can operate appropriately. We need a truth-value for the antecedent of (1), and that is why we are moving to M'; we do not need a truth-value for the consequent because we already have one, a *real* one, so whatever truth-value M' might assign it we are not interested in it. How can we formalize this distinction of levels? How can we provide a rigorous articulation of the purely instrumental role of the mental experiment – which is supposed to be canceled out at the end and in the meantime is not supposed to challenge what is the case for objects *simpliciter*, the only objects there really are? The answer is provided in Bencivenga (1980, 1981, 1986), where the main formal tool is the *valuation for M' from the point of view of M*, $v_{M'(M)}$, defined as follows (I will only give the base of the recursive definition, for an atomic A; the rest is routine; v_M and $v_{M'}$ are ordinary valuations for M and M', respectively, defined as usual):

(36) $v_{M'(M)}(A) = v_M(A)$ if $v_M(A)$ is defined;
$v_{M'(M)}(A) = v_{M'}(A)$ otherwise.

That is, this valuation gathers all the truth-values available in the real world and adds fictional ones to them *only where there are gaps*, thus implicitly resolving all conflicts in favor of reality and leaving only an instrumental role to fiction. As a result, the antecedent of (1) is true in it (because it is undefined in M and true in M') and its consequent is false (because it is false in M, hence we need not look any further). And the supervaluation is constructed over all $v_{M'(M)}$, where M' is an extension of M, thus making (1) *not* logically true. I call the fundamental assumption embodied in (36) the Principle of the Prevalence of Reality: real information is always to prevail over fictional 'data.' That such a principle be proffered in a context of transcendental idealism will be found surprising only by those who forgot Kant's relevant advice: it is precisely realism at the conceptual, transcendental level that is responsible for the *empirical* idealism of people like Berkeley – that is, for the absurd thesis that the world *is constituted by* ideas.

The deep and subtle connections between free logics (and especially free semantics) and idealism should be apparent by now; in closing, I want to bring out another sense in which free logics evoke fundamental philosophical tensions – and in this respect, too, side with Kant, though here the opposition includes not only realists but also another major brand of idealists, the Hegelian, 'absolute idealism,' variety. When motivating the enterprise of 'liberating' logic from ontological commitments, people typically voiced (more or less explicitly) such pragmatic criteria as I have myself hinted at above: logic must be a neutral tool, one must be able to use the same logic when reasoning across opposite metaphysical positions, one needs to leave the denotational character of a name (say, 'God') open while one (for example) proceeds to *prove* that there exists a denotation for it. All of that makes sense; but the 'liberation' in question involves much more than pragmatics – indeed it is liberation of a much more literal kind than one might expect.

That something which is not the case be logically possible is, as Kant (1964) noted, a main instrument of defense against the strictures of reality; and, one might add, it creates an arena for the imaginative exploration of alternatives to reality, maybe even (who knows?) for the overcoming of those strictures. The opposite tendency is expressed by those who want to make reality itself – as much as possible of it – a matter of logical necessity. Requiring that all worlds have the same domain of objects is only the first step in that direction; but the first step is also the most important one, and the one at which the most vigorous resistance must be mounted – if one is going to be unhappy with the final outcome. If no resistance is forthcoming, the fixity of 'natural kinds' and other predicates will come next; one will begin to assert that "[w]ith possibilities, less is more" (as does Almog 1991: 622, summarizing the conventional wisdom of the Kaplan school), and will find oneself agreeing in fact (if not, God forbid!, in principle) with the Hegelian reduction of history to logic – except that the old German master did a much more thorough job of it.

In light of the above, it is a sobering exercise to remind oneself of these famous words contained in the preface to Hegel (1991: 21–2): "To comprehend *what is* is the task of philosophy, for *what is* is reason. . . . If . . . [a philosopher's] theory builds itself a world *as it ought to be*, then it certainly has an existence, but only within his opinions – a pliant medium in which the imagination can construct anything it pleases." For then one realizes that the space made available by free logics to a coherent thinking and talking about nonexistents is not only of value for reflection and argument concerning mythological winged horses; the very plausibility of normative and utopian claims requires that breathing room. What sense would it make to blame some behavior as morally wrong if this were the only possible world? How could we legitimately long for a state based on 'people's rational choice' if that nondenoting singular term (a nondenoting definite description, for which free logics provide as much of an account as they do for nondenoting names) were destined to remain nondenoting? Which of the objects existing here – *the* objects, that is – do we expect to *become* a denotation for it? *Could* any of *these* objects do so? When we appreciate the point implied by such rhetorical questions, we will see that free logics are the first, still quite tentative, but also absolutely crucial step toward a logic *of the free*.

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