# THE SO-CALLED MYTH OF MUSEUM

Pavel MATERNA

Quine claims that a) considering meaning as a separate object leads to mentalism and b) to overcome mentalism we have to accept an empirical (actually a behavioristic) analysis. The paper shows that a) is wrong and not accepting mentalism we can apply a logical, i.e., not empirical approach.

## Introduction

Let us begin with Gulliver's visiting the grand Academy in Lagado (*Gulliver's Travels,* III., Ch.V):

> The other [project], was a Scheme for entirely abolishing all Words whatsoever; and this was urged as a great Advantage in Point of Health as well as Brevity. For it is plain, that every Word we speak is in some Degree a Diminution of our Lungs by Corrosion, and consequently contributes to the shortening of our Lives. An Expedient was therefore offered, that since Words are only names of *Things*, it would be more convenient for all Men to carry about them, such *Things* as were necessary to express the particular Business they are to discourse on.

An excellent squib, isn't it?

Well, no genuine scientist would be as stupid as to accept such a project. And yet a whole semantic conception has been charged with being as much stupid. The principles of this conception can be formulated as follows:

**Principles (P)**

*Expressions of a language denote primarily objects that are language independent.*

*Denoting is mediated by the meaning of the respective expression.*

*Languages are codes; they encode abstract language independent procedures that become meanings of the expressions.*

*The abstract procedures ('concepts') encoded by a language can be logically handled.*

*The use of a language is as a whole in harmony with abstract meanings attached to its expressions in virtue of a linguistic convention.*

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*Semantics** *is not an empirical discipline.*
*Semantics is distinct from pragmatics.*

One of the most explicit conceptions of this kind is *transparent intensional logic* (TIL), which does not mean that TIL is the only theory accepting these principles (to name Montague at least).

Peregrin (see, e.g., [Peregrin 2001]) would doubtless consider **P** as being characteristic of *nomenclaturism* (as against *structuralism*); according to it meanings are conceived of as 'things', which are denoted by expressions similarly as museum exhibits are affixed by labels: so nomenclaturism is a conception that is liable to *myth of museum.*

The 'Lagado scientists' above can serve as an example of genuine confessors of the 'myth of museum'. I would like to show that those who accept **P** have nothing in common with this kind of myth. To do it I have to clarify some notions uncritically accepted by 'anti-nomenclaturists' including Quine himself.

## 1. Meaning, denotation, reference

In the contemporary semantics the terms that make up the title of the present paragraph are used in an incredibly sloppy way. True, the 'father' of this kind of problem, I mean Frege, has not formulated unambiguous definitions of his *Sinn* and *Bedeutung,* but the more than 100 years since his seminal works were written are such a long period in the life of scientific theories that our disappointment is justified.

First, let us quote a typical characteristics of the present state of art:

> Since the seminal work of Gottlob Frege (1892) it has been a *commonplace* (italics ours) that the meaning of an expression has at least two components: the sense and the reference. The sense of an expression is often called the *connotation* or the *intension* of the expression, and the reference is often called the *denotation* or *extension* of the expression. The extension of an expression is the object or set of objects referred to, pointed to, or indicated by, the expression. ... The extension of 'the morning star' is a certain planet, Venus The extension of a *predicate* is the set of all objects to which the predicate truly applies. The extension of 'red' is the set of all red things. The extension of 'vertebrate with a liver' is the set of all vertebrates with liver. ... ([Kirkham 1992/1997 (p. 4)])

So we can state that the term *meaning* has got at least three semantically relevant interpretations:

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* Semanties in the sense of *logical semantics* or *logical analysis of natural language.*

a) Sometimes Frege's *Bedeutung* has been translated as *meaning*. (Variants: *Nominatum, Denotation*);

b) Usually *meaning* is understood as what enables us to understand expressions, so closely to Frege's idea of *sense*;

c) See the quotation: meaning is a pair < sense, reference>.

Ad a): We know that the German term *Bedeutung* is normally translated as *meaning*. Reading the contemporary literature (from Quine till nowadays) we however see that the German term is meant by Frege as what is now translated as *denotation*, or, unfortunately (as we will see) as *reference*. Therefore, we will use the term *meaning* in the spirit of b), i.e., as what Frege would call *sense*.

The c)-reading is a terminological compromise. If somebody wants to use *meaning* as an amalgam of 'sense' and 'reference', (s)he can do it, of course. For us, what is called *meaning* needs an explication in the spirit of Frege's intuition of *Sinn* from [1892].

The term *denotation* (see, e.g., [Church 1956]) has been later replaced by *reference*. An important distinction has been lost: Compare sentences

(1) $3^2 > 2^3$

and

(2) *Some mammals live in deserts.*

Let the meaning of (1) be anything: we will agree with Frege (in this case) that (1) *denotes* the truth-value **T**. As for (2) we can distinguish: the meaning of (2) can be similar to the meaning of (1) in that it will be structured (Tichý's 'constructions', see, e.g., [Tichý 1988], or Moschovakis' sense, see [Moschovakis 1994] ) but (2) should *denote* a proposition, truth conditions. On the other hand, we are in this second sentence interested in the truth-value of this proposition in the actual world and time. It is just this *actual value of the given intension* (here: a proposition) what deserves the name *reference*. The actual values of various intensions are, of course, beyond the competence of semantics (in the sense *logical analysis of language*), so what should be named *reference* should not be a semantically interesting entity whereas denotation – as being determined by the meaning – is surely an entity that can be logically handled (similarly as the meaning).

The distinction between (1) and (2) represents the *distinction between mathematical and empirical expressions*. The former do not denote intensions

(in the sense of PWS), the latter always denote intensions.[1] The necessity of distinguishing between denotation and reference is a consequence thereof: empirical expressions *never denote their references.*

The conception **P** requires that meanings in our sense could be logically handled, i.e., meanings are neither 'obscure entities' (Quine) nor something what can be only verbally characterized ('only verbally' = vaguely). To show that this goal is attainable I have to clarify some further points.

## 2. Meanings as language independent procedures

If denoting were a simple relation that would link expressions with objects, then unanswerable questions would come into being. First of all, the role of grammar (of the given language) could not be explained. This would be the situation of the Lagado 'scientists', since even if the communication concerned 'concrete objects' no unambiguous discourse would be possible.[2] Second, even the fact that an expression *tree* is used as concerning particular trees would be hardly intelligible: no language can be built up so that it had particular expressions for every particular thing, so that without *universalia* no language is possible. But then some general criteria are necessary, and a simple conventional link connecting expressions with their denotations, i.e., with such criteria[3] would be hardly imaginable (as being always *simple*).

(By the way, giving names to all animals (*Genesis*) cannot be interpreted as if Adam gave names to particular animals, distinct names to distinct animals: Adam had to say, e.g., "You are an elephant, you are also an elephant, you are an owl, you are a wolf,...": only in this way he would become a founder of a language...)

Therefore the second point of our **P** above is:

*Denoting is mediated by the meaning of the respective expression.*

Tichý in his [1996, 2004] formulates this point as follows:

> The notion of a code presupposes that prior to, and independently of, the code itself there is a range of items to be encoded in it. Hence...meanings cannot be conceived of as products of the language itself. They must be seen as logical rather than linguistic structures, amenable to investigation quite apart from their verbal

[1] In this respect TIL essentially differs from other intensional semantics, which frequently share the view that an expression 'possesses' an intension or an extension, dependently on context. See, e.g., [Montague 1974]. Besides, when TIL speaks about intensions, then it makes it clear that intensions are meant in the sense of PWS.

[2] This would be a genuine 'myth of museum', true?

[3] Instead of *criteria* we could say *intensions*.

> embodiments in any particular language. To investigate logical constructions in this way is the task of logic.

No doubt, this is a clear formulation of what the structuralists (see [Peregrin 2001]) would call *nomenclaturism* and what they associate with Quine's contemptuous label *myth of museum* (see [Quine 1969, p.185]). Yet consider the reason of refusing 'nomenclaturism', the reason, that is, which Quine adduces in his [1969]:

> Semantics is vitiated by a pernicious mentalism as long as we regard a man's semantics as somehow determinate in his mind beyond what might be implicit in his dispositions to overt behavior. It is the very facts of meaning, not the entities meant, that must be construed in terms of behavior.

So why is 'nomenclaturism' so dangerous? Quine answers: It leads to a kind of *mentalism*. To refuse mentalism is, of course, a duty of any logician/semanticist. Is, however, Dewey's pragmatism, behavioristic approach to semantics, the only alternative to mentalism?

The preceding quotation from Tichý cannot be accused of mentalism. Tichý speaks about meanings as "logical structures", which is anti-mentalistic enough. Could we perhaps interpret 'logical structures' as 'dispositions to overt behavior'?

First of all, if logical structures were construed as 'dispositions', then another kind of mentalism would be realized: dispositions are what a *mind* does or does not possess.

Second: logicians know that logical structures are *objective*, i.e., independent of our knowing them. (Bolzano would say that they are definable without any reference to a subject.) Now the problem with pragmatists is that they are content with *intersubjectivity* and refuse to *explain* the noteworthy phenomenon of 'intersubjective agreement' (which is essentially an empirical phenomenon).

Thus we have just two options here: either we admit that logical structures are entities of the same kind as mental dispositions, i.e., are not objective, or we insist on the objective character of logical structures, and then, of course, we cannot accept Quine's warning that nomenclaturism necessarily leads to mentalism and that the way out leads to reducing semantics to pragmatics. That our choice is the latter option is obviously clear.

But the term *logical structures* is not definite enough. So we will be more specific and explain the next point from **P**, using the approach known as *transparent intensional logic* (TIL), founded by Pavel Tichý (see [1988] and [2004]).

The respective point is:

*Languages are codes; they encode abstract language independent procedures that become meanings of the expressions.*

The logical structures encoded by language according to the last quotation from Tichý are *abstract procedures.* Here we give a general characteristics only, more will be said in the next chapter.

First some *examples.*

Consider a *computer program.* It is a linguistic entity, a sequence of expressions. A program, when executed, leads to some function (successor, factorial, characteristic function of some set etc.). This function could be semantically identified with the denotation of the program. But how come that the program as a sequence of expressions computes the given function? That function is, of course, an abstract object fully independent of language, and thus of the program. The point is that between the program and the resulting function there is a calculation, a computing procedure, an *algorithm*[4]. This algorithm is also independent of the program, the programmer *discovers* this algorithm, (s)he knows how to encode it by means of linguistic expressions. Compare now a particular execution of this algorithm with the algorithm itself. The particular execution is a spatio-temporally defined event, it is a 'concrete procedure'. The algorithm itself, on the other hand, is abstract, it is not a concrete time consuming process. The program as a linguistic entity is also abstract (unlike its particular tokens). Thus our scheme is:

**An expression (= program *in abstracto*) expresses its meaning (= abstract algorithm), which computes its denotation (the respective function).**

Similarly we can consider a *recipe.* Again, a recipe is an expression. Its denotation is the property that determines some meal. Between the recipe and the ('abstract') meal there is an abstract procedure any execution of which is a process that – on normal conditions – terminates in an instance of the respective meal.

A general characteristics of abstract procedures can be formulated as follows:

An abstract procedure is an (abstract) *instruction* consisting, as the case may be, of some other instructions some of which are simple, i.e., no more decomposable.

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[4] See [Moschovakis 1994]

Compare therewith the formulation given from an intuitionist viewpoint by Fletcher (see the remarkable monograph [Fletcher 1998], p. 51 (Fletcher uses the term *construction*):

> If one had to define constructions in general, one would surely say that a type of construction is specified by some *atoms* and some *combination rules* of the form 'Given constructions $x_1,\ldots,x_k$ one may form the construction $C(x_1,\ldots,x_k)$, subject to certain conditions on $x_1,\ldots,x_k$'.

We can see that abstract procedures are not set-theoretical objects. Let **I** be a procedure consisting of $\mathbf{i}_1, \ldots, \mathbf{i}_m$ instructions. **I** cannot be identified with the *set* $\{\mathbf{i}_1, \ldots, \mathbf{i}_m\}$. Notice that also the *meaning* $\mathbf{M}_E$ of an expression E, whose subexpressions are $e_1, \ldots, e_m$, is not the same as the set $\{\mathbf{M}_{e_1}, \ldots, \mathbf{M}_{e_m}\}$.[5]

According to TIL, expressions get their meanings *via* encoding abstract procedures that determine their denotation. The way a given language realizes this encoding is determined by its grammar.

*Warning*: Linguistic convention 'takes care of' associating expressions with meanings. The way this convention 'works', develops, changes etc. is an empirical phenomenon, and theorists of language, psychologists and other empirical researchers do their work in this area. Semantics (in the sense of logical semantics, logical analysis of language) is not competent here; we can say that for a semanticist the linguistic convention (concerning the given stage of the development of a language) is already given, presupposed. Thus the *a priori* character of semantics (shared with mathematics and logic) is explained.

Any explication of *meaning* should be able to describe and explain relations between various meanings; in general, meanings are not mutually independent. Such a theory of meaning could exactly define the distinction between analytic and empirical expressions, since this distinction is intuitively clear and should be definable, Quine notwithstanding. It can be shown that Quine's criticism of the boundary between analytic and synthetic sentences (see, e. g., [Quine 1953]) is not justified, as soon as the category *meaning* gets rid of its suspect image and becomes a normal member of the family of semantic objects.

Any such explication must be therefore able to logically handle its product – see the fourth point of **P**. This will be demonstrated in the next chapter.

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[5] Compare the ingenious remark made in [Bolzano 1837, p. 244], where Bolzano distinguishes content of a concept (in general, *Vorstellung*) from the concept itself

## 3. Abstract procedures as TIL constructions

Already from what has been said it follows that meanings – if construed as abstract procedures – are not simply 'things to be labeled', as the 'myth of museum' would require. If the mediating role of meaning is admitted then a logician should be interested in being able to derive meanings as *logical structures* from linguistic structures of expressions. We need to do it, and many attempts have been made already the most known of which are probably Montague's analyses. But if we naturally presuppose that such logical structures (NB abstract procedures) explain the way from an expression to its denotation and that they – as objective entities – can be studied from the logical point of view then we are told that we fail to respect Occam's razor, that we spoil semantics with metaphysical elements and that all what can be done does no more bear (classically) semantic character: we have to go over to pragmatics, to empirical study of behavior. (Quotations? Read Quine. But at least one quotation is symptomatic:)

> With Dewey I hold that knowledge, mind, and meaning are part of the same world that they have to do with, and that they are to be studied in the same empirical spirit that animates natural science. There is no place for a prior philosophy.
>
> [Quine 1969]

Semantics – from the viewpoint of the followers of Quine – should become a natural, i.e., an empirical science. Actually this means that for semantics there is no way out from the dilemma *mentalism – behaviorism.* All this 'gavagai philosophy' with the interesting but logically irrelevant analyses of translating and with the final replacement of the category *meaning* by the new (alas! empirical) category *stimulus meaning* makes it impossible to apply *logical* analyses. So many logically interesting semantic linkages are lost; better to say, they are suspected as being not entirely innocuous.[6] Also, some verbal 'semantic' claims are formulated whose falsity can be proved when a logical analysis is applied – one simple example: in [Quine 1969] we read that the word 'green' demonstrates a kind of systematic ambiguity. "...the objects referred to by the word are very different under the two uses; under the one use the word is true of many concrete objects, and under the other use it names a single abstract object." Quine means the contexts like *Grass is green* vs. *Green is a color.* Actually, using a logical analysis we can show that *green* denotes one and the same object in both kinds of context: a property of

[6] Recall Quine's distrust of modal logics (e.g., in [1960]), which led him to his hasty argument with mathematicians and cyclists (*ibidem* p 199).

individuals (a forbidden category for Quine, since it has been "conceived in sin"). In the former context this property is used, in the latter context it is mentioned, but the meaning – as well as the denotation – is the same in both contexts.

To make explicit the deductive power hidden in the notion *abstract procedure* we have to offer its explication. (The situation is analogous to the case of the notion *effectively computable function*, where Church has offered the definition of recursive functions as *explicans*.)

There are more possibilities here. We could use Moschovakis' work ([Moschovakis 1994, 2003]) or be inspired by Curry's combinators, or by λ-calculus. We choose the typed λ-calculus: considering the character of natural languages TIL has chosen the typed version, since the type-free version does not possess a natural interpretation (w.r.t. natural language we would hardly accept Scott's domains). We will see that TIL constructions are not simply λ-terms, but the inspiring idea connected with λ-calculus can be formulated as follows:

> *Instructions that make up abstract procedures can be nearly universally reduced to two kinds: 'creating' functions by abstraction, and applying functions to arguments.*

Besides, λ-calculus has been invented to handle *functions* (in the sense of mappings). The followers of TIL are convinced that the category *function* is universal enough to be applicable to any kind of entity. Thus, e.g., classes and relations can be dealt with as the respective characteristic functions. (After all, the simple entities like truth-values or individuals can be construed as nullary functions.)

The notion of *abstract procedure* gets in TIL a following explication (globally):

*Abstract procedures* are *constructions* as they are defined in [Tichý 1988] or [Materna 1998]. Constructions are defined for a type-theoretically classified area of objects. The set of types as well as the set of constructions can be chosen arbitrarily, dependently on the kind of problem to be solved. The prevailing problems solved in TIL have been just the problems of logical analysis of natural language; the following *types of order* 1 have been chosen:

**A.** Atomic types:

- the set of truth-values {**T**, **F**}, denoted by o;[7]

[7] Cf. Montague's t.

- the set of individuals (universe of discourse), denoted by $\iota$;[8]
- the set of real numbers, serving also as the set of time moments, denoted by $\tau$;
- the set of possible worlds, denoted by $\omega$.[9]

**B.** Complex types:

Where $\alpha, \beta_1, ..., \beta_m$ are types, the set of partial functions from $\beta_1 \times ... \times \beta_m$ to $\alpha$, denoted by $(\alpha\beta_1...\beta_m)$, is a type.

(Nothing other... .)

*Types of higher orders* are defined after *constructions* have been defined.

Applying the simple (=1st order) hierarchy of types to analysis of expressions we realize the *type-theoretical analysis.* That even this simple hierarchy covers many kinds of object we speak about can be seen from the following examples (X/$\alpha$ means "X is a member of the type $\alpha$", abbrev. "X is of type $\alpha$", "X is an $\alpha$-object"):

prime number/ $(o\tau)$, cat/ $(((o\iota)\tau)\omega)$, abbreviated $(o\iota)_{\tau\omega}$, taller than/ $(o\iota\iota)_{\tau\omega}$, number of/ $(\tau(o\iota))$, or $(\tau(o\tau))$, or $(\tau(o(o\iota)_{\tau\omega}))$, in general $(\tau\,(o\alpha))$ ('type-theoretical polymorphy'), $\forall$/ $(o(o\alpha))$, $\wedge$ / $(ooo)$, etc.

In general, the type of *intensions*, as functions from possible worlds to chronologies of a type $\alpha$, is $\alpha_{\tau\omega}$. For example, a proposition is of type $o_{\tau\omega}$. The four most important *constructions* are then:

variables (Incomplete constructions, which construct dependently on valuation, i.e., *v*-construct; the usual characters *x, y, ..., p, q, ..., f, g, ...* etc. are *names of variables.* For any type there are countably infinitely many variables available.)

trivialization (Where X is any object incl. constructions $^0$X, the trivialization, constructs just X without any change.)

composition (Where X (*v*-)constructs a function F, i.e., an $(\alpha\beta_1...\beta_m)$-object, and $X_i$ for $1 \leq i \leq m$ (*v*-)constructs a $\beta_i$-object $b_i$, the composition $[XX_1...X_m]$ (*v*-)constructs the value of F on $<b_1,...,b_m>$. Due to the partiality of functions in TIL the composition may fail and (*v*-)construct nothing; we say it is (*v*-)improper.

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[8] Cf. Montague's e.

[9] Cf Montague's non-type s

closure (For $x_1,...,x_m$ – pairwise distinct variables ranging over not necessarily distinct types $\beta_1,...,\beta_m$ – and X, a construction ($v$-) constructing $\alpha$-objects, the closure $[\lambda x_1...x_m\ X]$ ($v$-)constructs a function, type $(\alpha\beta_1...\beta_m)$: see $\lambda$-calculus or the mentioned TIL literature.)

The definition of constructions makes it possible to define *ramified hierarchy of types*, within which constructions can be not only used but also *mentioned*. Briefly:

*Types of order 1* : See above.

*Constructions of order n*: They ($v$-)construct objects of order $n - 1$; as for important details, see literature.

*Types of order n*+1: let $*_n$ be the set of all constructions of order $n$. Then $*_n$ and the types of order $n$ are *types of order n*+1. The complex types of order $n$+1: see the definition of types of order 1.

*Warning*: The preceding text cannot replace the systematic exposition of TIL, and its aim is that the spirit of the approach were understood. So do not *learn* the preceding definitions! Yet one point is important: Once more: *constructions are abstract procedures. To handle them we need, of course, linguistic means but talking about constructions does not mean talking about these linguistic means. For example, constructions cannot contain brackets or λs.*

Consider now the conceptual network as (only!) suggested above and observe the following (simplified) example:

The sentence

(S) *The oldest man loves a young woman.*

denotes a proposition. No indexicals are present, i.e., the *meaning* of (S) is self-contained, and we would like to detect this meaning without requiring the knowledge of some behavioral pattern accompanying a possible utterance of (S); we are convinced that the sentence does possess a meaning that can be detected by logical analysis alone. We will now just only foreshadow the way it can be done, see also [Duzi, Materna 2003] for more details.

I. TYPE-THEORETICAL ANALYSIS

*man, woman* / $(o\iota)_{\tau\omega}$ ; a property of individuals, i.e., a function that associates every possible world ($\omega$) with a chronology, i.e., a function from time moments ($\tau$), of classes of individuals ( $(o\iota)$ );

*a* : an existential quantifier, $\exists$ / ((o(oι))(oι)) ; a function that associates every class C of individuals with the class of those classes that share at least one individual with C;[10] *the oldest* / $(\iota(o\iota))_{\tau\omega}$ ; the world-time dependent function (i.e., intension) that associates every singleton with its member and is undefined otherwise; *young* / $((o\iota)(o\iota)_{\tau\omega})_{\tau\omega}$ ; an adjectival modifier: selects a class of individuals ((oι) )from a property of individuals ( $(o\iota)_{\tau\omega}$ ) dependently on world and time; *love* / $(o\iota\iota)_{\tau\omega}$ ; a binary (empirical) relation between individuals.

Further we will need variables: $x \rightarrow \iota$, $w \rightarrow \omega$, $t \rightarrow \tau$ („→" : ranges over).

## II. SYNTHESIS

Ideally we would need some Montague-like system of rules that would associate particular linguistic phrases with respective constructions. Here we use only some linguistic intuitions (they were exploited also in I.).

We know that the procedure-construction underlying (S) constructs a proposition, i.e., an $o_{\tau\omega}$-object. The proposition itself ("truth conditions") does not possess any parts (being a mapping only) but the construction whose result it is consists of some subconstructions the most simple of which are trivializations of the objects we have type-theoretically classified in I. Thus we have to synthesize the constructions

$$^0\textit{theoldest},\ ^0\textit{man},\ ^0\textit{love},\ ^0\exists,\ ^0\textit{young},\ ^0\textit{woman}$$

constructing objects of the types

$$(\iota(o\iota))_{\tau\omega},\ (o\iota)_{\tau\omega},\ (o\iota\iota)_{\tau\omega},\ ((o(o\iota))(o\iota)),\ ((o\iota)(o\iota)_{\tau\omega})_{\tau\omega},\ (o\iota)_{\tau\omega},$$

respectively, to get a construction constructing an $o_{\tau\omega}$-object (a proposition). First of all, to construct an $o_{\tau\omega}$-object we can use *closure*, which constructs functions, in the present case the function associates ω with (oτ), thus we get a scheme

$$[\lambda w\,[\lambda t\ X]],$$

abbreviated as

$$\lambda w \lambda t\ X,$$

where X contains only *w* and *t* as free variables and *v*-constructs a truth-value.

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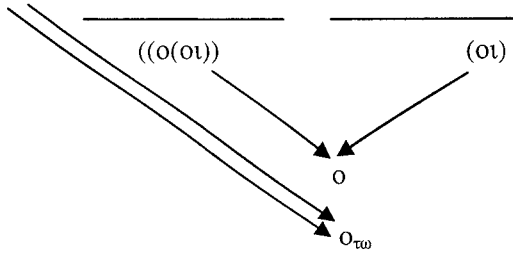
[10] Another ‚reading' is possible, here we are satisfied with this one.

The next step uses ∃ : The sentence (S) claims (for the given world and time) that the class of those individuals ($\lambda x$...) which the oldest man loves shares an individual with the class of young women, so we have (with $X_{wt}$ instead of [[X*w*]*t*])

$$[[^0\exists\ [^0young_{wt}\ ^0woman]]\ [\lambda x[^0love_{wt}\ [^0theoldest_{wt}\ ^0man_{wt}]\ x]]].$$

This construction is the X above, so we have

$$\lambda w\lambda t\ [[^0\exists\ [^0young_{wt}\ ^0woman]]\ [\lambda x[^0love_{wt}\ [^0the\ oldest_{wt}\ ^0man_{wt}]\ x]]].$$




So we have got a construction of the proposition denoted by (S). From this construction we can easily read the truth conditions: the proposition is true in those worlds W and times T where the class of those individuals ($\lambda x$...) that the individual which is the oldest man in W at T loves is one of the classes (∃...) of those individuals that are in W at T young women. Thus the meaning of (S) is a procedure (abstract! objective!) that can be synthesized from its particular subprocedures (in a compositional way).

Note that all rational problems have been solved. The problem of the *best analysis* is complicated and it can be shown that the evaluation is dependent on which *conceptual system* is considered (see [Duzi, Materna 2003]). Our simplified (and from the global characteristics of some TIL definitions hardly fully intelligible) analysis has shown, however, that the principles formulated in our schematic characteristics of **P** (and then of TIL) can be rationally followed and that no danger of 'mentalism' arises. Besides, no pragmatic factors were needed: having an insight into semantics proper we can add some 'boundary factors' and realize some meaningful pragmatic analyses. When we start with pragmatics we cannot 'derive' semantics (and it seems that the structuralists are content even so).

In any case, be our analyses more or less promising they can be hardly accused of the sin called "myth of museum". The point is that meanings are supposed to be *encoded* by the respective language: to label particular

meanings and to encode them are distinct activities. **Encoding means that the whole network of procedures is applied such that logical connections are made explicit. Labeling is well compatible with mutually *independent*, and hence isolated names for particular meanings. Thus labeling can be rightly connected with the characteristics myth of museum whereas the latter is not applicable to encoding.** The claim

*not being a mentalist = being a pragmatist*

is wrong; a logical abstraction may be not too popular among philosophers but it means a saving of semantics.

*materna@lorien.site.cas.cz*

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