Guest Editor: Martin Vacek

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Modal Metaphysics: Issues on the (Im)possible I

The first three papers published in this issue of Organon F *were presented at the Mo-dal Metaphysics: Issues on the (Im)Possible Conference I, organized by the Institute of Philosophy of Slovak Academy of Sciences in September 19-20, 2013 in Bratislava, Slovakia.*[1] *The aim of the conference was to address philosophical issues of modality, namely the meaningfulness of modal talk, its semantic analyses and metaphysical conse-quences. The idea to organize a conference on that very topic is not surprising because, as I have it, metaphysics of modality has played a central role in philosophical thinking. Every paper presents an original contribution to a still increasing literature, what only demonstrates that problems of modality, however approached, still give rise to new phi-losophical insights. Moreover, modal discourse and, possible and impossible worlds frame-work in particular, is not confined to metaphysics only. It figures in logic, semantics, phi-losophy of science, epistemology, ethics or theory of decision. Possible and impossible worlds are used to formulate theories, make claims and state supervenience theses. Since other applications are still coming, topics in the philosophy of modality are only to be expected to attract more and more philosophical audience. Let me therefore sketch at least some of the topics that philosophy of modality covers.*

The "(im)possible issues" problem

It is virtually inconceivable to engage in everyday reasoning without notions like 'could', 'possible', 'impossible', and the likes. Although Obama won the presidential elec-tion in 2012, he could have lost. Although it is sunny today it is possible that it will be raining tomorrow. But however the weather actually is we all happen to agree that it is impossible that I will fly on the moon in five minutes. And, finally, it is impossible to square the circle since to do so would contradict actually accepted geometric.

There is a plenty of possible and impossible scenarios, differing in how strong those possibilities and impossibilities are. Sure, it is impossible that I fly on the moon in five minutes, but still 'less' impossible than that I square the circle. There is an apparent hier-archy of the impossibilities that, in an ideal case, can be systematized in a unified theory.

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[1] For a full report from the conference, see *Organon F* 21, No. 1, 138-139.

In order to analyse the notions in a clear and more informative way philosophers introduced possible worlds *as a useful guide to such notions. Although the term 'possible world' has various connotations in philosophy it usually means 'a way the world might have been'. To illustrate, the world is such that I am sitting behind my desk, writing this introduction, own a pug, Bratislava is the capital of Slovakia and, naturally, many more sentences that truly describe this world. But if I were a football player I would not be writing this introduction. Rather, I would be on the football field developing my football skills. Also, it is not a necessary truth that I own a pug. If I were more demanding I could try to teach a monkey to read or train a cat to fly. There is a lot of scenarios our world could be, although some of them are 'more possible' than others.*

Interestingly, after the possible-worlds terminology was established it turned out to be difficult to pursue contemporary metaphysics unless we either implicitly or explicitly refer to it. The reason for such a turn is simple: possible worlds have been playing an important explanatory role in philosophy. In particular, the acceptance of the possible worlds talk implies the acceptance of the systematic correspondence between certain modal facts and facts regarding the existence of possible worlds, namely

> (P)   *It is possible that P* iff *there is a w such that w is a possible world and 'P' is true at w.*

Things get even more complicated when we realize that the extent of the possible does not fully exhaust the domain of our modal intuitions. For instance, however the history of any world goes there are no worlds which are such that, say, there is a round square in them. Also, however the (actual or possible) history of any world goes there are no worlds at which '2 + 2 = 5' is true. But those situations are certainly different as one might, for example, believe the latter without believing the former (and vice versa). If that is so, (P) is not fine-grained enough to systematize the datum.

A natural move here might seem to stretch an extra mile and, beside possible worlds, incorporate impossible worlds into the analysis. Surely, (P) would still hold about possibility. But when it comes to impossibility its modified version, (I), enters into the game. Thus

> (I)   *It is impossible that I* iff *there is an i such that i is an impossible world and 'I' is true at i.*

Again, (I) provides us with a systematic correspondence between certain modal facts and facts regarding the existence of impossible worlds. In this case, let suppose someone who, although highly educated, believes that '2 + 2 = 4' is true, while also believes that '$e^{i\pi} = -1$' is false. Since both of the above are examples of mathematical truths – and those

are true irrespective of any possible world! – modelling one's belief states by means of possible worlds only is too coarse grained. For, to belief in '2 + 2 = 4' would turn out to be the same as to believe in '$e^{i\pi} = -1$'. But, ex hypothesi*, one can believe in the former without believing (or lacking a belief about) the latter.*[2]

An available option is to extend our ontology by impossible worlds so that we have worlds at which '$e^{i\pi} = -1$' is false, while '2 + 2 = 4' is true. We then get:

(I')   *It is impossible that '2 + 2 = 4' is true and '$e^{i\pi} = -1$' is false* iff *there is an i' such that i' is an impossible world and '2 + 2 = 4' is true and '$e^{i\pi} = -1$' is false at i'.*

Such a biconditional says that there are worlds – although impossible – that make some necessarily true propositions false. Consequently, theories that use possible as well as impossible worlds draw the distinctions we need any theory to draw. And that's desirable.

Semantic vs. metaphysics

Granted all the above, possible and impossible worlds are worth of accepting provided we accept the benefits they bear. But to provide possible explanatory justification is one thing, to provide an informative description of their nature, secure their plenitude and fix their (logical) behaviour quite another. In other words, the acceptance of possible/impossible-worlds talk is strictly conditional at, and dependent on, a story as what *the worlds are. Therefore, if possible and impossible worlds are of non-circular use in philosophy then we should be able to find a place for them within our ontology.*

For years, there have been disputes as which ontology of possible and impossible worlds to prefer and philosophers do not seem to stop complicating the issues. Given we seriously commit to the existence of possible and impossible worlds, we have (at least) two options at disposal.[3] *Either we take them to be* abstract *entities like properties (Stalnaker 1976), sets of sentences or propositions (Adams 1974), states of affairs (Armstrong 1989), world-*

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[2]   Note, that the granularity problem is not restricted to propositional attitudes and appears in case of any necessarily false propositions. See, among others, Ripley (2012).

[3]   For now, I will deal with realistic conceptions only. According to them worlds exist, period – and some of them are possible relative to a certain world and some other are impossible relative to the world in question. There, however, are other options too. One of them, rather controversially, denies the meaningfulness of modal discourse altogether. Another option is to accept the meaningfulness of such a talk but deny that it is about something existing at all. Those theories take possible worlds to be useful fictions (Rosen 1990) or non-existent entities (Meinong 1981). See Divers (2002) for an excellent overview.

books (Plantinga 1974) etc., or we accept a more robust ontology of full-blooded con-crete *individuals. In the former case, the entities at issue* represent *various possibilities in an indirect (or ersatz[4]) way, while the theories of the latter sort take possible worlds to* genuinely be *the possibilities (Lewis 1986). Analogously, the very same questions arise when it comes to impossibility. Namely: what are impossible worlds? Were we to accept them, should they be of the same ontological nature as those possible are (cf. Priest 1997; Yagisawa 1988; Vander Laan 1997)? Or, assuming that possibility-impossibility distinc-tion curves reality into its joints, should they be of a different kind (Berto 2010; Mares 1997)?*

Let suppose that we accept a theory according to which possible worlds are abstract entities (sets, propositions, properties or whatever you have). It seems as if there is no more to be done to extend such an abstractionists' ontology by more exotic entities. For, if one thinks that possible worlds are maximal and consistent sets of proposition, she commits herself to the existence of sets and propositions. But then there is no worry in saying that besides maximal sets of proposition there are sets that does not contain every proposition or its negation. Similarly, there is no worry in saying that besides the sets containing only mutually consistent propositions there are some that do not. The reason is that the sets and propositions are already there and the set-membership relation is not restrictive in this sense. There is no principal objection against impossible worlds in the abstractionists' framework.

Consider now that we accept a strongly realistic position according to which possible worlds are as concrete as 'I and all my surroundings' is. To sustain the ontological parity impossible worlds are thought to be concrete as well. But if there are concrete worlds for every impossibility their real existence drags any impossibility to be true of our world. It's since the fact that concretists represent impossibilities in a direct way, meaning that to be impossible is to exist simpliciter. *Although some concretists are willing to bite a bullet and admit that there are concrete possible worlds and also impossible worlds in an equally re-alistic sense, others look for more modest proposals (see McDaniel 2004).*

Finally, one might think that neither option is good enough and it is the combination of the two that secures the balance between ontology and explanation (cf. Divers 2002; Berto 2010). Such a view goes along the following lines: although concrete possible worlds help us a lot when it comes to possible phenomena, impossible phenomena should be repre-sented *rather than unrestrictedly* exist. *On this approach, concrete worlds provide enough non-actual entities for us to directly represent all the possibilities – they are 'the basic stuff' of the world-building enterprise. But impossible words are rather constructed out of the concrete resources.*

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[4]   The term appears in Lewis (1986).

So far so good. Note, however, that impossibilities considered so far concerned what one might call the absolute impossibilities, including logical, mathematical or analytical impossibilities. But philosophy, especially modal metaphysics, deals with subtler impossibilities too. I will discuss some of them in turn.

Counting impossibilities

Assume that we prefer genuine modal realism to modal ersatzism. Modal realism is a theory according to which possible worlds are concrete mereological sums of spatio-temporally interrelated individuals. According to the theory, the schema (P) is understood as

(PM)   *It is possible that P* iff *there is a w such that w is a maximal mereological sum of spatio-temporally interrelated individuals and 'P' is true at w.*

As (PM) states, to be possible is to exist wholly within one world only. On the other side, modal realists commit to a so-called principle of unrestricted summation. Besides individuals existing in one world only the principle generates transworld *individuals out of individuals that exist in different worlds. But by (PM) it is impossible that such individuals exist. So how to classify such individuals on the possible-impossible scale? Are they impossible?*

Yes and no. For Lewis, no true contradictions and so no maximal mereological sum of spatio-temporally interrelated individuals contains genuine impossibilities. But what about a subtler impossibility according to modal realism, but intuitive possibility of there being spatio-temporally isolated *individuals? Such individuals, let's call them island universes, are not possible according the theory. For, if they were possible (PM') would hold. Namely,*

(PM')   *It is possible that there are spatio-temporally* isolated *individuals iff there is a w such that w is a maximal mereological sum of spatio-temporally* interrelated *individuals and 'there are spatio-temporally* isolated *individuals' is true at w.*

Assuming, for the sake of the argument, that interrelatedness excludes isolation (PM') is an inconsistent dual.

But there is apparent difference in saying that something is absolutely impossible and saying that something is impossible according to a theory. Real inconsistencies do not exist because supposing they do we commit ourselves to a plain contradiction. But assuming that island universes exist does not equal to a plain contradiction. They do not exist if modal realism is true. But were some other theory be preferred, island universes would

pass the 'possibility' test. Another example is the possibility of there being absolutely nothing. Again, modal realism does not have resources to accommodate such a possibility. For, if a world is what modal realists take it to be that makes no provision for an absolutely empty world. And although it might be disputable as how bad such a consequence is, opponents of modal realism take it as a virtues of a theory if it can account for it.

Consider now a quite different theory of possible worlds: linguistic ersatzism. This approach to modality takes possible worlds to be sets of sentences in some 'worldmaking' language. In order for the theory to be accurate such a language must be expressible enough to represent all the possible situations we want to represent (cf. Lewis 1986; or Jago 2013). And this requirement gives raise to a problem. Namely, there is a problem as how to represent possible but non-actual particulars, properties and relations without conflation. From the ontological assumptions of (at least some branch of) linguistic ersatzism[5] such entities do not exist and, a fortiori, cannot be named. And so the linguistic doctrines are alleged to misrepresent the range of possibilities by failing to distinguish indiscernible possible individuals and alien properties (such as having ¼ charge) that differ only in respect of their alien natural properties. In a word, alien properties are, according to linguistic ersatzism, impossible.

But we are still inclined to think that alien individuals, properties and relations are not impossible in an absolute (meaning logical, mathematical of conceptual) sense. For it would be too proud to think that any possible property is instantiated in the actual world and our home language contains names and predicated for every possible individual and every possible property, respectively. Moreover, other theories do have resources that enable us to distinguish such possibilities so why should we think that one metaphysical theory rather than another determines the extent of absolute possibility?

To sum up, the rejection of impossibilia may mean various things. It may mean absolute impossibilities concerning logical, mathematical or conceptual ones. But there are subtler impossibilities that may infect one theory or another. A lot of philosophers agree that at least some individuals just are impossible in order to consistently formulate their ontological postulates. But at the same time they disagree on particular cases in which it is one's metaphysical theory that provides the final verdict. The impossibility of there being island universes, the (im)possibility of there being absolutely nothing or the (im)possibility of there being alien properties are just some along many controversial cases.

Although the collected papers present just a bit of what was presented during the conference we are happy for every single piece that appears in this issue. Naturally, every pa-

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[5]   For, certain objections against linguistic ersatzism are quickly answered by taking a broad view of what counts as a sentence (cf. Sider 2002). But even if the argument challenges only some versions of linguistic ersatzism it is enough for my purposes.

per deals with some aspect of modality. Marco Simionato considered a narrower and theoretically more loaded impossibility, namely the (im)possibility of there to be absolutely empty world. In his Might There Be an Absolutely Empty World? *he offers an argument to defend absolute nihilism without appealing to (any version of) the subtraction argument. Yet another approach – Transparent intensional logic – is presented by Jiří Raclavský in* Tichýan Impossible Worlds. *In it, Raclavský reconstructs Tichý's conception of possible worlds taken as parameters of (logical) modality and suggests hyperintensional correlates of them. Finally, a position standing between the actualists and Meinongians theories of fiction and fictional names is developed by Ceth Lightfield. Namely, his* Ficta as Mere Possibilia *wonders into what's possible and impossible according to the possibilist-anti-creationist framework.*

As one of the organizers, I would like to thank to our keynote speakers, participants and audience. Their presence at the conference made the event an excellent place for discussions as well as opened new perspectives in modal metaphysics. Big thank goes also to the Institute of Philosophy for enabling the conference to happen. Without its support the conference, although still possible, would definitely not be actual. Finally, thank to the journal Organon F *for willingness to publish the selected papers and anonymous referees for reviewing these papers. That only underlines the trend that Slovak philosophical community becomes an active contributor to current debates in analytic philosophy.*

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Ficta as Contingently Nonconcrete

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ABSTRACT: Fictional realism allows direct reference theorists to provide a straightforward analysis of the semantics of fictional discourse by admitting into their ontology a set of objects (ficta) that serve as the referents of fictional names. Ficta may be modeled using an axiomatic object theory, but actualist interpretations of the formalism have been the subject of recent objections. In this paper, I provide an interpretation of object theory's formalism that is consistent with actualism and avoids these objections. Drawing on insights from an actualist semantics for quantified modal logic, a central point in my proposal is to interpret ficta as contingently nonconcrete objects.

KEYWORDS: Actualism – fictional realism – object theory.

One of the many problems facing proponents of the direct reference theory of proper names is the family of difficulties collectively referred to as the problem of empty names. That is, the problem of accommodating the intuitive truthfulness of sentences containing proper names that appear to lack a referent. A straightforward approach, and the one to be supported here, is for the direct reference theorist to endorse fictional realism and deny that fictional names are empty.[1]

I will use the label *ficta* for the objects that serve as the referents of fictional names. These ficta will be understood as objects within a more gen-

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[1] See Sawyer (2012) for an overview and criticisms of the approaches a fictional realist may take.

eral ontological and metaphysical framework, called *object theory*, from Edward Zalta.[2] The combination of fictional realism and object theory has been heavily criticized in a series of works by Anthony Everett (see Everett 2000; 2003; 2005; 2007a; 2013).[3] In this paper, I will defend this combination of views against a set of logico-ontological objections put forward by Everett. Central to this defense is an actualist interpretation of the object theoretic framework inspired by the work of Linsky – Zalta (1994; 1996). By applying their analysis of quantified modal logic to object theory, one can assert the existence of all elements in the domain of objects including both abstract objects (i.e., necessarily nonconcrete objects) and contingently nonconcrete objects. As such, the interpretation is compatible with the thesis that everything exists, so the approach defended here will be of interest to actualists as well as fictional realists. In brief, I will interpret ficta as belonging to the class of contingently nonconcrete objects and do so in a way that avoids Everett's objections.

The paper is structured as follows. In §1 I discuss the motivations for the set of theses to be defended by looking at the semantics of fictional discourse. For §2, I present the fragment of Zalta's object theory that pertains to fiction. I place the framework within the broader dialectic and highlight the points of the formalism open to interpretation. Guided by philosophical considerations, in §3 I propose an interpretation of the formalism. This will consist of combining the ficta as contingently nonconcrete thesis with anti-creationism and a rejection of impossible stories. I bring these ideas together in §4 and show how collectively they allow a straightforward response to Everett's objections. I conclude in §5 with some concerns about the implications of Everett's objections to his own account.

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[2]   Object theory comes from Edward Zalta (via Ernst Mally) and is first outlined in Zalta (1983). The theory and application of Zalta's abstract object theory can be found in the following: Linsky – Zalta (1994; 1996), Menzel – Zalta (2013), and Zalta (1988; 1992; 1993; 2000; 2003).

[3]   My goal is not to argue for any one of these theses individually. Arguments for referentialism can be found by looking at the arguments against Fregean and Descriptivist accounts of proper names in Donnellan (1974), Kripke (1980), and Salmon (1981). Arguments for fictional realism can be found in Berto (2008; 2011), Caplan (2004), Thomasson (1999; 2003a; 2003b), van Inwagen (1977; 2000; 2003), Voltolini (2006). A helpful overview of the arguments for fictional realism is given by Everett (2013, 120-139).

1. Semantics of fictional discourse

Following Everett (2000, 40), I will use the label *referentialism* for the view that a name's semantic contribution is just the object it picks out. So, regarding fictional discourse, referentialists are faced with giving an account of the ontology and metaphysics of the objects to which fictional names refer. Sentences like the following have an intuitively true reading and one's semantic theory should accommodate this, or so the argument goes.

(F)   Sherlock Holmes is a detective.

By adopting fictional realism, the referentialist has an easy answer here. The name 'Sherlock Holmes' denotes an object that has (in some sense) the property of being a detective. However, it seems less clear how this explanation would work for other types of sentences, such as sentences about fiction (metafictional sentences) or negative existentials.[4]

(M)   Sherlock Holmes is a fictional character.
(E)   Sherlock Holmes does not exist.

If the referentialists alter their position by abandoning fictional realism, then they can straightforwardly explain the truth of (M) and (E). They would be true in virtue of the fact that the names do not denote. This, for example, is the approach Everett (2000) takes. But then the problem returns when considering cases of apparent co-reference.

(R)   The names 'Santa Claus' and 'Father Christmas' are co-referential.

The truth of (R) seems to require objects for the names to refer to. It seems as though a semantic explanation of one of these sentence types will result in problems for one or more of the others.

At this point, the referentialist might accept that these cases need to be treated separately. They might give an account of why the different types should be understood differently, but this answer would not be satisfactory to critics. A recent example is Sawyer (2012) where she argues that the

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[4]   The set of sentences I will focus on in this paper come from Sawyer's (2012) presentation. This will be enough for my purposes, but there are more extensive sets of sentences. See, for example, Zalta (2000, §7.2).

challenge is to give a semantics that can uniformly explain these different types of sentences. In other words, they should be analyzed in a systematic way.[5] I will not argue for this here, but will note that I think it is reasonable to expect the referentialist to achieve this. So, the difficulty lies in explaining the set of sentences using the same semantic account. I think the most promising approach is to combine referentialism and fictional realism with an actualist interpretation of object theory. That is the approach to be defended here, but I will only be defending the view against certain logical and ontological problems.

I should briefly note what I will not do and three prominent issues stand out. First, I will not address the way or mechanism by which fictional names acquire their denotation. Second, I will not address the problem of abstract objects entering into causal relations. This is a problem for those, such as myself, that endorse the causal-historical theory of reference. Third, I will not address the problem of referring to characters that occur in more than a single story. Essentially, I will set aside issues pertaining to the act of referring and focus on problems with fictional objects as such.[6]

The combination of actualism and fictional realism results in an ontological commitment to fictional objects, but this leaves many issues unsettled. For a precise account of fictional objects, I turn to object theory, but object theory does not refer to a fixed program. Rather, it is the combination of a formal system, which is fixed, and an interpretation of the formalism. Zalta and others have successfully addressed a variety of problems by varying the interpretation of the formalism.[7] A similar strategy will be employed here, but before looking at the proposed interpretation, an overview of the formalism relevant to fictional objects will be helpful.

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[5]   For a precise formulation of what I mean by giving a systematic analysis, see Zalta (2000, §7.2).

[6]   For answers that I find plausible, the reader should consult Zalta (2003) for the first and second problems and Parsons (2011) for the third problem.

[7]   Zalta has discussed the theory and application of object theory in a large number of publications and the work is ongoing. For full presentations one should consult his early works: Zalta (1983) and Zalta (1988). The presentation in his early works is based on a Meinongian ontology. Zalta has since been open to, and employed, non-Meinongian interpretations of the view. So much so that Menzel (2013) and Everett (2013), for example, no longer consider Zalta's object theory to be Meinongian.

2. Object theory

Syntactically, object theory has three important distinguishing characteristics: a distinguished predicate, two kinds of atomic formulas, and a special definition of identity (i.e., identity is not primitive). Regarding semantics, object theory is based on quantified S5 modal logic or what is sometimes labeled the simplest quantified modal logic. It is simple for two reasons. First, because frames in S5 are symmetric, reflexive, and transitive, each world is accessible from every other. Hence, the system effectively has no accessibility relation. Second, the semantics of the quantifiers are based on constant domain models. This is sometimes labeled "constant domain semantics" to distinguish it from the more typical "variable domain semantics" often associated with Kripke. The label "constant domain" indicates that in these models, the domain of quantification does not vary from world to world. In the next section, I will discuss how an actualist can accept such a system, but the takeaway here is that there are no world-relative domains of objects or relations.[8]

Before going into more detail, the uninitiated reader will find it helpful to consider the motivation for these syntactic and semantic variations. This is best seen by considering, albeit briefly, the historical context. Alexius Meinong is famous (perhaps infamous) for his apparent commitment to nonexistent objects in what he called object theory.[9] His student, Ernst Mally, is recognized as making the initial progress on a formal logical analysis and basis for Meinong's object theory.

Mally's work is what many contemporary Meinongians base their formalizations on. In addition to the formal language of object theory, Meinongians must also explain the nature of nonexistent objects. It is expected that Meinongians give an account of how to interpret a simple subject-predicate sentence, e.g., "x is F", when x is purported to refer to a nonexistent object.

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[8]   For a helpful overview of the syntax and semantics of object theory, see Zalta's summary in Zalta (1993, §4).

[9]   My discussion here will sacrifice precision for accessibility. My knowledge of the philosophy of Meinong and Mally are based on the second-hand accounts of which there are a number of great resources. Of note are Berto (2013), Jacquette (1996; 2008), Lambert (1983), and Routley (1980).

Mally distinguished two ways to interpret "x is F" so as to make sense of how nonexistent objects could stand in relation to properties. One option was to distinguish between two types of properties: nuclear and extranuclear. On this account, nonexistent objects would bear properties in the same way as existent objects, but the type of property would be different. Existent objects would exemplify nuclear properties and nonexistent objects would exemplify extranuclear properties.[10]

A second option Mally proposed was to distinguish between two modes of predication: exemplifying and encoding.[11] On this account, nonexistent objects would encode and exemplify properties but existent objects would only exemplify properties. This dual predication object theory is the one being discussed in this paper and the one formalized and defended by Zalta (1983; 1988). In these works, Zalta uses the label abstract object for nonexistent objects and ordinary object for existent objects. In later work the meaning of these labels varies, but what remains constant is that Zalta partitions the domain of objects into abstract objects and ordinary objects. Whether this domain contains nonexistent objects, and how ordinary objects are characterized, are points on which there is interpretive variance.

Given the Meinongians inspiration and Zalta's partition of the domain of objects into abstract and ordinary objects, it's easy to see the motivation for the syntactic and semantic elements of Zalta's object theory. Syntactically, Zalta introduces a distinguished predicate '$E!$' which denotes the property of existence. For Meinongians, this is because existence is a property that objects can fail to have.[12]

Zalta incorporates Mally's dual predication thesis into the language syntactically by the distinction between two kinds of atomic formulae. The

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[10]   This dual property object theory has been formalized and defended by Terence Parsons (1980), among others.

[11]   As with the nuclear/extranuclear distinction, the exemplifying/encoding distinction is not universally accepted by Meinongian scholars. Such philosophers disagree on the labels and how to precisely make the distinction. Moreover, there is debate about whether the dual property theory is more fundamental or the dual predicate view is reducible to the dual property view. This claim was originally made by Jacquette (1989), to which Zalta responded in Zalta (1992), to which Jacquette responded in Jacquette (1996; 1997). I will set these details aside. What I'm offering here is enough to locate the reader in the dialectic.

[12]   Zalta allows the distinguished predicate to have a different, non-Meinongian, denotation. This will be addressed in the interpretation section to follow.

formula '*Fx*' asserts that object *x* *exemplifies* the relation *F* whereas the formula '*xF*' says that the object *x* *encodes* the property *F*. The semantics are modified accordingly. So, '*Fx*' is true at a world just in case the object denoted by *x* is in the *exemplification* extension of *F* and '*xF*' is true at a world just in case the object denoted by *x* is in the *encoding* extension of *F*. The context of a natural language sentence will determine which type of predication to use for semantic evaluation.[13]

The partition, and size, of the domain of objects is captured by the following ontological principles:[14]

Ordinary Objects Exist: O!x =$_{df}$ $\Diamond$E!x
Ordinary Objects cannot Encode Properties: $\forall x$(O!x → $\Box \neg \exists$FxF)
Abstract Objects are not Ordinary: A!x =$_{df}$ $\neg$O!x
Abstract Objects Exist: $\exists x$(A!x ∧ $\forall$F(xF ↔ ϕ)) (where ϕ has no free xs)

Given the foregoing, we arrive at Zalta's (1993, 404) general definition of identity which I will call general object identity (GOI):

$$x = y =_{df} [O!x \wedge O!y \wedge \Box\forall F(Fx \leftrightarrow Fy)] \vee [A!x \wedge A!y \wedge \Box\forall F(xF \leftrightarrow yF)]$$

Given that the domain of objects is exhausted by abstract and ordinary objects, GOI applies to *any* objects *x* and *y* for any expressible property *F*.

Propositions are captured as well, because in object theory, as is typical, propositions are taken to be 0-place properties. Additionally, Zalta uses lambda abstraction to generate propositional properties for every proposition. That is, he incorporates into object theory, λ-notation, such as '[λxP]' which reads: being such that *P*. With this we can formulate Zalta's (2000, 147) definition of a *situation*:

Situation(x) =$_{df}$ A!x ∧ $\forall$F(xF → $\exists$P(F = [λyP]))

Consider a situation *s*, then this reads: A situation *s* is an abstract object and for any expressible property *F*, if *s* encodes *F* then there is a proposi-

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[13]   For precise formulations and a nice overview see Zalta (1993, 403).

[14]   These are from Zalta (1993, 404-405). Additional details and proofs are to be found in Zalta (1983; and 1988). Regarding the size of the domain of objects, object theory's explanatory power is due in part to its abundant ontology. Zalta (1993, 405) writes: "for any expressible condition ϕ on properties *F*, there is an abstract object that encodes all and only the properties satisfying the condition."

tion P such that the F is the propositional property being such that P. In other words, situations encode only propositional properties.[15]

This is enough of the theory to state the principles governing fictional objects.[16] For the remainder of the discussion, I follow Zalta's presentation of the fragment of object theory relevant to modeling ficta in Zalta (2000, 123-127). There, a *story* is just a situation (as defined above) that is authored by some existing thing. This is captured by the authorship relation where 'Ayx' means y authors x.[17]

$$Story(x) =_{df} Situation(x) \land \exists y(E!y \land Ayx)$$

Given this definition, one can think of stories, derivatively, as sets of propositions. They are, after all, individuated by the propositional properties they encode, and propositional properties are, via lambda abstraction, based on propositions. In this paper, I will understand stories in this derivative sense. With the definition of a story, characters will be defined relative to them. Using the notation '$s \models P$' for story s models proposition P, then characters are defined thus:

$$Char(x, s) =_{df} \exists F(s \models Fx).$$

This reads: A character x of a story s is defined as there being a F such that the proposition that x exemplifies F is true in s.

Stories may contain a combination of characters, some of which may be ordinary while others may be abstract. To mark this distinction, Zalta defines a fictional character as one that originates in a story where *originates* means features as a character that is abstract only and is not a character of any prior stories. For the temporal ordering, Zalta uses '$P < Q$' as a primi-

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[15]   I will adopt Zalta's convention of using the label "situation" rather than world, but there is a relation between the two. Zalta, for example, defends the compatibility of situation semantics and possible worlds semantics in Zalta (1993). There he notes that states of affairs, situations, and worlds are three kinds of entity, but can be built up from his object theory (cf. Zalta 1993, 386).

[16]   For brevity, I must direct the reader to the details of the rest of the language, including precise definitions of propositional formulas, properties, and relations, in Zalta (1983, 59-60).

[17]   I continue to use $E!$ as the primitive predicate denoting existence. An alternative interpretation, one that I will adopt in this paper, will be discussed in the next section.

tive two-place relation representing the fact that proposition P occurs before proposition Q. So,

$$Orig(x, s) =_{df} A!x \land Char(x, s) \land \forall y \forall z \forall s'((Azs' < Ays) \rightarrow \neg Char(x, s'))$$

This says that for any character x, any authors y and z, and any stories s and s', a character x of a story s originates in s if x is abstract and is not a character of any prior story. So, fictional characters, what I will call *ficta*, are defined as follows,

$$FictionalChar(x) =_{df} Char(x) \land \exists s(Orig(x, s))$$

This makes ficta the subset of objects that are characterized by a story that may contain ordinary and abstract characters. For example, in the Conan Doyle stories, Holmes would be a fictional character, London a character, and the two are distinguished using the notion of origin.

Finally, Zalta uses an iota-operator as a description operator. For example, '$\iota y[A!y]$' reads, the y such that y is abstract. With this, the identity conditions for ficta can now be given:

$$Orig(x, s) \rightarrow x = \iota y[A!y \land \forall F(yF \leftrightarrow s \models Fx)]$$

This reads: If character x originates in story s, x is (identical to) the abstract object that encodes all and only the properties F such that according to s, x exemplifies F. Consequently, if x is a fictional character in story s, then x encodes property F, if and only if, according to s, x exemplifies F.

This is enough machinery for my purposes and hopefully enough to orient the reader unfamiliar with Zalta's views.[18] Much of the explanatory power is a result of the separation of formalism and interpretation which leaves open the possibility for many interpretations.[19] Philosophical consid-

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[18] I do not intend this section to be considered an argument (or even to contain the start of an argument) for Zalta's dual predication object theory. I simply will assume this framework without argument. I recognize that Everett (2013) goes to great lengths to argue against Zalta's dual predication view, but I hope this section provided enough background and motivation to at least see it through. If nothing else, the significant increase in explanatory power that the dual predication view affords is enough for me to justify its introduction. I should note that Zalta is not the only proponent of a dual predication object theory, there is also Castañeda (1974) and Rapaport (1978).

[19] I will assume, with Zalta, that the formalism of object theory is metaphysically neutral. This is a contentious issue for sure, but I will assume this here without argument.

erations guide the different interpretations, and for this paper, it's Everett's arguments in Everett (2005; 2007a; 2013) that inspire the following proposal.

3. Actualist interpretation of the framework

The foregoing account is based on Zalta's original (1983; and 1988) presentation of object theory. The proposal here centers on three points of interpretive deviation: (1) interpreting ficta as contingently nonconcrete, (2) rejecting creationism, (3) and rejecting impossible stories.[20] These three will be discussed in turn.

3.1. Ficta as contingently nonconcrete

Despite the Meinongian lineage, Zalta's abstract object theory may be interpreted in a way that is compatible with those whose auxiliary ontological ideologies are incompatible with Meinongianism. The benefit for my purposes is that object theory may be interpreted in a way that does not require a commitment to nonexistent objects, and hence, is consistent with actualism. Zalta has suggested in Zalta (2000; 2003; 1993) that it is a straightforward matter to reinterpret the system so as to avoid commitment to nonexistent objects. For an actualist object theory, the distinguished predicate '$E!$' is replaced with '$C!$' denoting concrete. Under this interpretation, ordinary objects are either concrete or contingently nonconcrete whereas abstract objects are necessarily nonconcrete.[21] Given that the

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Linsky and Zalta defend this position in Linsky – Zalta (1994). For the opposing view see, for example, Williamson's (2013a) and his extended treatment in Williamson (2013b).

[20]   It's not clear to me how Zalta would react to (2), but given what he has said in print, I think he would accept (1) and reject (3).

[21]   I will not explicitly state the distinction between abstract and concrete. This is a contentious issue that cannot be resolved here. Fortunately, a precise definition is not required. Linsky – Zalta (1994, 446) identify being concrete with being spatiotemporal and being abstract with being not concrete, so nonspatiotemporal. This is how I will understand them here, but not much depends on this claim should it turn out to be wrong. The point is to partition the domain of objects into abstract and concrete, so the reader is free to substitute whatever version of the distinction they like so long as there is a partition.

domain of objects is jointly exhausted by ordinary and abstract objects, changing the distinguished predicate this way means that everything in the domain of objects exists. Under this actualist interpretation of object theory, possible objects are interpreted as being contingently nonconcrete rather than contingently nonexistent. Thus, the proposal here is to understand ficta as objects that are contingently nonconcrete.[22]

The relevant modifications to the definition of ordinary objects are as follows:

Ordinary Objects: $O!x =_{df} \Diamond C!x$
Abstract Objects: $A!x =_{df} \neg O!x$

Thus, ordinary objects are possibly concrete. Using the possible worlds idiom, this means that contingently nonconcrete ordinary objects are concrete in at least one world, but nonconcrete in the actual world. Conversely, concrete ordinary objects are concrete in the actual world, but nonconcrete at some other world. It follows that the set of all ordinary objects is exhausted by objects that are concrete at some world.

The domain of all objects is still jointly exhausted by ordinary and abstract objects, but now to be abstract means to be necessarily nonconcrete. So the domain of objects now has a tripartite division based on these modal properties. The domain of objects is partitioned by necessarily nonconcrete objects (abstract objects nonconcrete at every world), contingently nonconcrete objects (ordinary objects not concrete at the actual world), and contingently concrete objects (ordinary objects concrete at the actual world). According to the ficta as contingently nonconcrete thesis, ficta are ordinary objects that are not concrete at the actual world. Thus, since everything in the domain of objects exists under this interpretation, the system can accommodate the existence of ficta while remaining consistent with actualism. Whether there are any ficta, remains to be discussed.

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[22] Linsky and Zalta, in Linsky – Zalta (1996; 1994), did not introduce the contingently nonconcrete thesis with the application to fictional realism in mind. Rather, they were defending the view that there is an interpretation of the simplest quantified modal logic that does not entail a commitment to mere possibilia. Consequently, it provides a way to consider actualism and the simplest quantified modal logic as compatible. Roughly, contingently nonconcrete objects serve the role of mere possibilia, and that is how I am using contingently nonconcrete objects in this paper.

3.2. Anti-creationism

Creationism is the view that ficta are created by, or ontologically depend on, the authors with which they are associated with. For example, Amie Thomasson writes: "fictional characters should be considered entities that depend on the particular acts of their author or authors to bring them into existence" (Thomasson 1999, 7). This view is called artifactualism or creationism and its denial, anti-creationism.[23]

Typically, fictional realism is combined with creationism, but that is not the approach taken here. I will not argue against anti-creationism here, but will briefly mention my motivation for pursuing the anti-creationist position. Considering the Thomasson quote above as representative, depending on how the creationist defines the notions of "dependence" and authors "bringing their fictional characters into existence", one worry, from Everett (2005), is that nothing prevents authors from "bringing into existence" problematic entities.

> [I]magine, for a moment, that God created the world so that it was completely precise and determinate, so that there was no ontic indeterminacy of any form. If fictional realism was true then human beings could still generate cases of ontic indeterminacy simply by writing fiction. This seems disquieting. Surely we do not have this degree of control over the metaphysical nature of the world. ... If God created a world in which the law of noncontradiction and the laws of identity otherwise held, we would nevertheless be able to violate these laws simply by making up stories... Surely we do not have this degree of control over the laws of logic and identity. (Everett 2005, 633)

Here I agree with the spirit of Everett's worry, but the target, I claim, is not fictional realism generally, but creationism. To avoid such worries, the creationist, it seems, needs to incorporate a principle that disallows the creation of entities when the creative act results in problematic entities, but permit the creation when the resulting entity is not problematic. To this, Everett (2005, 635) writes, "without some independent motivation this seems a terribly *ad hoc* maneuver and I doubt it could be maintained."

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23   For the creationist view see Braun (2005); Goodman (2004); Salmon (1998); Schiffer (1996); Soames (2002); Thomasson (1999; 2003a); van Inwagen (1977); Voltolini (2006). For a helpful overview of creationist arguments see Caplan (2004).

I will simply grant this point to Everett. Perhaps the creationist would be fine with accepting that an author can alter such fundamental components of reality with the stroke of a pen, so to speak. But this should not be taken lightly, and I think the burden is on the creationist to provide compelling arguments that avoid or answer these worries.[24]

I do not, however, think these worries motivate rejecting fictional realism. The creationist notion of ontological dependence is neither a necessary nor sufficient condition for fictional realism. Everett would accept this as well since his fictional realist principles, the principles which he takes to define fictional realism, do not entail creationism. So, I think Everett's mistake is conflating the two. For the anti-creationist, ficta are objects whose existence is independent of authors. As independently existing objects that are a part of the world, they obey the laws of logic like everything else.

One may wonder, then, what the role of the author is on this account. Especially since stories in object theory are defined in terms of an author. But the definition of a story in object theory allows interpretive variation on the authorship relation 'Axy'. For Zalta, the authorship relation is primitive and he takes it to be intuitive (cf. Zalta 1983, 91). Here I propose that the authorship relation be a defined notion and one that is a function of both what the author produces and whether or not this corresponds with a possible situation.[25] The idea is that an author will produce a set of sentences, call this a fictional *work*, that fallibly correlates with a set of propositions, the fictional *story*.[26]

The correlation is taken to be a mapping between the author's sentences and the propositions they express, if they express propositions at all. The notion of a correlation that I'm using will be made precise in the next section. The claim here is that, in object theory, the definition of a story is

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[24] In addition to Everett's arguments, to be discussed, other arguments against creationism that I find plausible are found in Brock (2010) and Yagisawa (2001).

[25] Everett (2013, 123) uses this label as well. The following proposal is inspired by Zalta's discussion in Zalta (2000, 125-126) where he gives a definition of the authorship relation that is consistent with pretense theory.

[26] I am assuming that fictional works are concrete objects of some kind. This assumption is shared by Zalta (2000, 126). But this isn't required. One could give a more inclusive definition of the authorship relation that incorporates, for example, intentional entities. The point here is to make a distinction between the acts of an author and the fictional stories with which the authors are associated.

based on propositions rather than sentences, so if an author produces a work where none of the sentences express propositions, then they failed to author a story. The authorship relation is defined accordingly:[27]

x *authors* $s =_{df} \exists y(x$ produces $y \wedge y$ is correlated with $s)$

One way to think of this is in terms of *selection*. When an author succeeds in authoring a story, rather than creating the ficta in the story, the author selects objects from a set of objects that already exist. This selection thesis makes explicit the ontological independence between an author and story because correlation, unlike entailment, does not preserve ontological commitment. According to the selection thesis and the authorship relation in which it figures, a fictional work is neither necessary nor sufficient for there to be a fictional story. For the anti-creationist, the object to which the name 'Sherlock Holmes' refers, exists and would have existed whether or not Doyle existed or any other author. Consequently, this is one of the ways the proposal maintains its goal of being consistent with actualism.

There has been plenty of work on combining actualism with creationism; for example, Braun (2005), Salmon (1998), and Thomasson (1999). Much work has also been done on combining Meinongianism and anti-creationism. What I take to be the best work in this tradition is what serves as the background for this paper, namely, Zalta's (1983; and 1988). All of these accounts have received plenty of criticism and there is no need to rehearse them.[28] Here I am considering the prospects for combining actualism with anti-creationism.

But a rejection of creationism does not mean that there are no occurrences of logical and ontological problems within a fictional work as it has been characterized thus far. Indeed, such a view would be obviously false. Even if there were no actual cases of fictional works that contained contradictions and indeterminacies, there is nothing preventing an author from producing a problematic fictional work. But the same worries that motivate anti-creationism are the same worries that motivate rejecting impossible stories.

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[27]   The authorship relation is adapted from Zalta's (2000, 125) presentation.

[28]   For a helpful survey of criticisms against these two versions see Sainsbury (2010). Note, however, that the debate is still active on all fronts – see, for example, Lihoreau (2010).

3.3. Rejecting impossible stories

There is disagreement as to whether stories, as sets of propositions, may be consistent, complete, both, or neither. There are plenty of advocates for the view that stories may be, and in fact are, both inconsistent and incomplete. The proposal here is one that Everett does not consider, namely, that stories are *both* consistent and complete. Fictional works are permitted to be inconsistent and incomplete, as they typically are, but the stories correlated with the work will be neither incomplete, nor inconsistent.

Being that the stories are not inconsistent, this is not an account that requires impossible worlds. To do this, I will take being possible a necessary condition for being a story. This means placing constraints on the properties from which the stories are built. In the language of object theory, stories are defined in terms of situations that are themselves defined in terms of propositional properties derived, via lambda abstraction, from propositions expressing a relation between an object and an *exemplifiable* property.

To say that properties must be exemplifiable is to place a restriction on properties as Zalta conceives them. Zalta only requires properties to be expressible in his underlying property theory (see, for example, Zalta 2000, 145; and Zalta 1993, 405). Given that I am exploring the actualist interpretation of object theory, the constraint on properties is that they are exemplifiable by a concrete object. Consequently, given that ficta are being modeled as contingently nonconcrete objects, and the proposal here is actualist, ficta cannot possibly exemplify inconsistent properties.[29]

To give an account of how fictional works may contain sentences which purport to ascribe inconsistent properties to fictional objects, but nevertheless fail to result in actual inconsistent objects, I will utilize the selection thesis and the distinction between a fictional work and fictional story. Using the exemplifiability constraint, the notion of correlation in the authorship relation can now be made precise.

Consider a canonical version of a fictional work where a set of sentences (atomic and compound) is constructed to capture the intentional and linguistic information contained in the author's work. Let Γ be this set of

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[29]   This is part of what makes this account distinctly non-Meinongian. There are excellent accounts that exclude this requirement, for example, Zalta's as noted above. Another excellent example is Berto (2008) in which he employs his own semantics of impossible worlds in his account of fictional objects.

sentences and Σ be the largest consistent subset of atomic sentences in Γ. The subset Σ may be empty. Let the set of atomic sentences $\{S_1,..., S_j \in \Sigma\}$ be the domain, then there is a bijective mapping between the domain Σ of sentences and the range Π of propositions $P_1,..., P_j$. Since the mapping is bijective, if $\{S_1,..., S_j\}$ has the property of being consistent, then $\{P_1,..., P_j\}$ will be consistent. But, Π cannot be identified with a story yet, since it is only complete relative to Σ.

A complete story s can be built up from Π using an additional notion from Zalta, namely, *relevant entailment*. The idea is that stories are closed under relevance: "All of the relevant consequences of propositions true in [Π] are true in s" (Zalta 2000, 126). Given the notation defined above, and adding $P \vdash_R Q$ which reads Q is relevantly implied by P, we have,

Rule of Closure: $[(s \models P_1 \wedge,..., \wedge s \models P_j) \wedge (P_1,... , P_j \vdash_R Q)] \rightarrow s \models Q$

From relevant entailment, then, Π has $\{Q_1,..., Q_j\}$ added as additional true propositions of the story where $\{Q_1,..., Q_j\}$ is the set of propositions said to be relevantly entailed by $\{P_1,..., P_j\}$. The remaining propositions, those not mapped from the work or closed under relevance, will be disjunctive propositions. Here, though, the disjunctive propositions will only contain disjunctive properties that are possibly exemplifiable.[30]

This can be accommodated using object theory by interpreting the disjunctive propositions in terms of encoding. For example, the number of hairs on Sherlock Holmes' head is left open in the Conan Doyle fictional works. He may have n hairs, or $n + 1$ hairs, and so on.[31] For this, object theory offers a straightforward solution, namely, to admit that contingently nonconcrete objects encode disjunctive properties of which there are many. The only limitation being possible exemplification. So, for example, Holmes encodes the property of having $0 \vee 0{+}1 \vee,..., \vee 0 + n$ hairs, for any n.

Holmes also encodes the property of being either left-handed, right-handed, or ambidextrous. And so on, for all properties that Holmes could

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[30]   I take disjunctive propositions to be the kind of propositions expressed by sentences containing disjunctive predicates. This, of course, assumes that there are disjunctive properties which is admittedly contentious. For example, see Armstong (1978, 19 ff.).

[31]   This is what Parsons (2011, 37) calls "the problem of the many Sherlock Holmes". His answer there is to allow fictional names to refer to incomplete objects.

possibly exemplify.[32] The only constraint on the disjunctive properties is that they are exemplifiable. Given that this constraint is placed on properties as they feature in the definition of a situation, a situation will be considered complete once the set of all disjunctive propositions, labeled $\{R_1,..., R_j\}$, are added.

So, a story consists of the union of three sets: $\{P_1,..., P_j\}$, $\{Q_1,..., Q_j\}$, $\{R_1,..., R_j\}$. That is, a story is built up from the set of propositions correlated with the maximal consistent subset of sentences of the work, the set of propositions relevantly entailed by those propositions, and all remaining disjunctive propositions.

This process takes place only when the author's work meets the initial conditions. Given the selection thesis and definition of the authorship relation, authors can string words, sentences, thoughts, etc., together and fail to produce a work that maps to a fictional story. Again, this is often the case, but there is no need to search for cases; examples are easy to generate. Consider a fictional work that contains only one sentence (or thought) which states that a named object has inconsistent properties. In such a case, the author produces a work but fails to author a story. This is because the work does not select or correlate with a situation. There is no mapping between such a work and a story because the domain is empty. The domain must include a non-empty maximal consistent subset of the fictional work in order for a mapping to occur.

Eliminating the ability of an author to generate actual inconsistencies comes at a cost. For example, following Zalta, I will assume that a sentence containing a proper name that fails to denote results in a meaningless sentence (cf. Zalta 1988, 123). This is not problematic for Zalta because his Meinongian account permits every name to denote, including those that would refer to impossible objects, if there were any.[33] However, under the proposal here, some names, such as the name of an object alleged to have inconsistent properties, will fail to denote. Consequently, some sentences

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[32] This is inspired by my actualist point of view. In the actual world, I accept that a causal-historical theory of reference can be maintained in spite of, for example, the number of hairs on an object not being specified at any point in the causal chain. Further, the number of hairs may be in a state of flux and the material object may not even have sharp boundaries, yet reference can still succeed.

[33] Meinongians have varying ontological commitments and I am sympathetic to the position in its contemporary variants. Excellent examples include Parsons (1980), Zalta (1988), McGinn (2000), and Priest (2005).

on this account are meaningless. I'm willing to accept this and say that sentences containing names that purportedly refer to impossible objects are meaningless. The advantage of the proposed interpretation, however, is that this account allows a straightforward response to Everett's criticisms.

4. Defense of object theoretic fictional realism

Everett and I are interested in the same project. We both want to maintain referentialism and resolve difficulties surrounding empty names. Everett, however, thinks that the referentialist must treat the names that occur in fiction as being semantically unique from names that occur in other contexts. Fictional names, Everett (2000) argues, do not refer to anything. If they did refer, they would refer to objects that are problematic for a number of reasons. This is the overall theme of Everett's objections to object theoretic fictional realism which began in (2003), and were further developed in (2005; 2007a). Everett gives the most extensive criticisms yet in his (2013).

Central to Everett's criticisms are the claim that the object theorist's identity conditions for fictional objects result in a number of problems, but his criticisms apply more generally. Everett defends his anti-realism by arguing that no fictional realist account, object theoretic or otherwise, can be maintained given the set of objections he offers.[34] The objections are based on the following two principles that Everett takes every fictional realist to be committed to:

(P1)   If the world of a story concerns a creature a, and if a is not a real thing, then a is a fictional character. (Everett 2005, 627)

(P2)   If a story concerns a and b, and if a and b are not real things, then a and b are identical in the world of the story iff the fictional character of a is identical to the fictional character of b. (Everett 2005, 627)

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[34]   As Kroon – Voltolini (2011) note, Everett's (2005) article has caused fictional realists, like Robert Howell in Howell (1979), to abandon their position. In a later article, after discussing Everett's objections, Howell writes, "Everett's problems show that fictional realism must be rejected" (Howell 2010, 176). Schnieder – von Solodkoff (2009), Thomasson (2010), and Voltolini (2010) responded to Everett's (2005) to which Everett has replied in (2013).

One immediate response by the fictional realist would be to deny one or both of these principles. To this Everett writes, "the fictional realist cannot reject (P1) and (P2) without thereby undermining our motivation for accepting fictional realism in the first place" (Everett 2005, 627).[35] Further, Everett (2013) thinks many of the responses to his (2005) presentation relied on misinterpretations of these principles. So, in response, he distinguishes between two interpretations (P2) and notes that the one he wants to use for his arguments is the following (cf. Everett 2013, 205):

(ID') If a fiction f is such that (1) in that fiction a exists and b exists, and (2) no real thing is identical to a or b, then:
  i) It is true that fictional character a is identical to fictional character b ↔ in fiction f it is true that $a = b$,
  ii) It is false that fictional character a is identical to fictional character b ↔ in fiction f it is false that $a = b$.

I will grant this point to Everett and my response to his arguments will not require rejecting his principles. Everett's general strategy is to show that for the fictional realist, these identity conditions entail serious problems.

> I will argue that these principles generate serious problems for those who accept an ontology of fictional objects. For they entail that some fictional objects are ontically vague entities, and that others flout the laws of logic and identity. (Everett 2013, 208)

My aim is to show that, for the object theoretic fictional realist, they do not entail the problems he claims. The problematic entailments are divided into two groups. The first group are what Everett calls *indeterminacy arguments* and the second, *incoherence arguments* (2013, 213-214). I will regiment the arguments and respond to each in turn.

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[35] I disagree and think denying Everett's fictional realist principles is a live option, but it will not be pursued here. Voltolini's (2006) extensive discussion of identity can be drawn upon to modify/reject Everett's principles and deny his conclusion. Voltolini's account (2006), though, has already been criticized by Everett (2007b).

4.1. Indeterminacy arguments

For indeterminacy, Everett argues that there are, or could be, stories that contain genuine ontic indeterminacy. He writes:

> it is a genuinely and ontically indeterminate matter whether character *a* and character *b* from within a given fiction are identical, for it may be genuinely indeterminate whether, within a fiction, protagonist *a* is the same as protagonist *b*. (Everett 2013, 209)

Everett considers two ways in which this can happen. He uses the labels *type A* and *type B* indeterminacy. The way Everett characterizes these different types of indeterminacy correspond to his distinction between characters within a given fiction and fictional characters. A distinction characterized by (P1) and (ID'). That is, he marks a distinction between indeterminacy within a fiction (type A) and indeterminacy not within the fiction (type B).

For type A, Everett gives an example of a story in which a woman is at a party, and then some years later a woman departs on a train. He then writes,

> The author might write the story with the deliberate intention of getting the reader to ... wonder whether the first woman and the second women are the same. And the author, herself, might intend to leave this matter open. Since the fiction depicts a world very much like the real world, it depicts a determinate world, a world in which the woman at the party is *not* indeterminately identical to the woman at the station. But the fiction itself will leave it open as to whether or not the identity holds. (Everett 2013, 209)

For the object theorist, this is unproblematic and it's typical for fictional works leave details unspecified. After the mapping from the sentences in the work to the propositions of the story, the remainder is built up from truths relevantly entailed and disjunctive propositions. Under this proposal, then, there are only two options. Either the set of properties encoded are the same or they are not. If the former, there is only one woman. If the latter, there are two. If there are no properties ascribed to either woman, then neither women is in the story. In no *story* is it indeterminate whether there is one woman or two, even though this may be left unspecified in the *work*. The proposed authorship relation precludes underspecification within a fictional work from generating the problems Everett de-

sires. Nothing in the presentation of object theory or the proposed interpretation results in underspecification in a fictional *work* entailing indeterminate objects, at least not this type of indeterminacy.

For type B indeterminacy, Everett's target is those who would respond to him by saying that his cases of indeterminacy are simply cases of semantic indeterminacy. Everett contrasts semantic indeterminacy with what he calls ontic or genuine indeterminacy. Everett writes:

> however we understand indeterminacy in the real world, in a fiction it may be a genuinely *ontically* indeterminate matter whether $a = b$ ... for any account of indeterminacy, it seems someone might write a fiction about a world in which $a = b$ was indeterminate in that way ... a fiction might describe a world in which $a = b$ was indeterminate without the fiction settling exactly how we are to understand that indeterminacy. (Everett 2013, 210)

The move Everett is making here is supposed to force the fictional realist into accepting actual indeterminacies as a consequence. Even the object theorist, allegedly, since a fictional character is just a character that originates in a fictional work and has identity conditions based on the properties they encode. So, if a fictional work explicitly states that a character a has the property of being indeterminately identical to b, then this would be a property that a encodes. Unlike Zalta's original presentation of object theory, this is more of a problem for the actualist proposal presented here.

There are two ways to go here for the actualist. One option is to accept actual indeterminacies, the other is to deny that actual indeterminacies occur. In response to the first option, Everett cites the well-known argument by Gareth Evans in Evans (1978) against actual indeterminacies.[36] The second option, however, is available. Given that the proposal here is actualist,

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[36] Using the variables under discussion, here's one way to interpret, albeit roughly, Evans' (1978) reductio:

1. Suppose it is indeterminate whether a is identical to b.
2. Then b has the property of being indeterminately identical to a.
3. But a does *not* have the property of being indeterminately identical to a.
4. So, there is a property which b has that a lacks.
5. So, a is *not* identical to b. (That is, it not indeterminate whether a is identical to b.

Using modal operators and a modal form of the indiscernibility of identicals, Evans generalizes the reductio to reach the conclusion that actual vague objects are impossible.

and fictional stories are built from possibly exemplifiable situations, a fictional work stating genuine ontic indeterminacy fails to map those statements to propositions of a story. The conclusion of Evans' argument is that genuine indeterminacies cannot be actual, so the failure of the mapping is justified by Evans' argument.

Moreover, the subset of propositions, Σ, is permitted to be empty. So, if there were no other descriptions in the fictional work beyond a statement of genuine indeterminacy, then the work just fails to correlate with a story. The interpretation of object theoretic fictional realism offered here renders Everett's type A indeterminacy harmless, and precludes the occurrence of his type B indeterminacy. A similar response is available for his incoherence arguments.

4.2. Incoherence arguments

The incoherence arguments are more brief. The idea is that some fictional works describe impossible worlds. So, unlike the indeterminacy arguments where details are left out, here the details are included but they are details that describe an impossible world. He writes, "since, by (P1) and [(ID')], what exists in the world of a story determines which fictional characters occur in that story, various impossibilities within the world of a story may infect the fictional characters that occur in that story" (Everett 2005, 633). As before, examples are easy to generate and Everett considers two fictional works where in each case some impossibility occurs.

In the first fictional work, the logical law Everett is concerned with is the law of non-contradiction, and in the second, symmetry of identity. The details for each fictional work are as follows:

[1] consider a dialetheist story involving two protagonists a and b who both are, and are not, identical to each other. Then in the fiction $a = b$ will be both true and false. So granted (ID') it follows that it will be both true and false that character a is character b. That is to say character a and character b will be both identical and distinct. (Everett 2013, 214)

[2] protagonist a is identical to protagonist b while b is distinct from a. But then in the story $a = b$ will be true while $b = a$ will be false. Granted (ID') it then follows that fictional character a is identical to fictional character b even though character b is distinct from character a. Hence, it seems, the symmetry of identity can fail for fictional characters. (Everett 2013, 214)

As with the indeterminacy arguments, the response is straightforward. If the object theoretic fictional realist has as background assumptions that the law of non-contradiction and symmetry of identity cannot actually be violated, then the occurrence of those in a fictional work will fail to carry over to a story. This applies to both cases by Everett. Given what little details are given in his examples, the maximally consistent subset of the sentences in these fictional works is empty. So, there is no story with which these fictional works correlate. The problem is not with fictional realism or the actual world, but rather the fictional works themselves.

Much of the work being done here is by the selection thesis and the authorship relation, both of which were inspired by Everett's criticisms of creationism. A creationist, according to Everett, permits an author to violate logical laws just by imagining such, and that seems drastic at best. The interpretation of object theory provided here allows fictional characters to exist and places no limits on an author's creativity. An author is free to create, write, and imagine whatever they desire, but the act itself does not guarantee that there is a mapping from the fictional work to a story. Even if Everett constructs additional examples from other types of logical problems, they will fail to "infect", as he says, the actual world.

5. Closing remarks

Whether it's Everett's ontological arguments or logical arguments, a central claim of this paper is that it is the fictional works that are problematic not the stories. The proposed interpretation of object theory is setup in such a way that the object theoretic analysis occurs on stories, not fictional works. This allows the expressive power and utility of an otherwise impressive global theory to not be undermined by the imaginative will of an author. Notice that nothing in my account explicitly contradicts or rejects Everett's formulation of the fictional realist principles. I take this to show, then, that these principles do not result in the problems he claims.

In general, the problematic cases that Everett presents, remain features of the linguistic and mental artifacts, the fictional works, rather than being inherited into the story. Anti-creationism and the selection thesis preclude stories from containing such problems. Consequently, the proposal offered here protects Zalta's object theory from being "infected" by problems cre-

ated, intentionally or unintentionally, by authors. It is in this sense, that I say philosophical considerations have guided the proposal.

However, it's not clear to me that Everett's alternative pretense theoretic account avoids his own worries. His pretense-theory relies on placing these problematic sentences within the scope of an "In the fiction" operator. As he says, these problems "exist only within the scope of certain games of make-believe and we may sometimes make-believe things that are metaphysically or even logically impossible in certain ways" (Everett 2013, 213). How does this answer the semantic argument that motivated both of our endeavors? The pretense-theorist owes us a systematic account of the intuitive truthfulness of sentences like (F), (M), (E), and (R).

Everett goes to great lengths to explain these in Everett (2013), but my point here is that the same problems he leverages against the fictional realist apply to his account as well. The idea is simple. His pretense-theoretic operator is either truth-functional or not. If it's not truth-functional, then he is not giving an account of truth which is the motivation for the project. If the pretense operator is truth-functional, then its output is a function of the truth-value of the sentence within its scope.

So, if he wants to maintain referentialism, he has two options. The sentences, like (F), that occur within the scope of pretense operator are either truth-valueless or have a truth-value. If they have no truth-value, then he is back to not giving an account that explains the intuitive truthfulness of the sentences that motivate the project. If they do have a truth-value, then he must explain how the sentences acquire their truth-value. At this point it seems that the pretense theorist must deny either referentialism or compositionality. Those unwilling to give up either are a short step away from fictional realism.

Further, critics will demand that the semantics for fiction be systematic in the sense that it applies to (F) in the same way as it applies in Everett's problematic cases. These considerations make the combination of referentialism, fictional realism, and object theory an attractive view. Combined with an actualist interpretation whereby ficta exist as contingently nonconcrete objects, this set of views offers a systematic and straightforward semantic analysis of fictional discourse. Though Everett and I share the same worries, I think his efforts are misplaced. Rather than being about what an author can write, the debate should be about what is possible, and that debate has equal significance for the fictional realist and pretense theorist.

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Everything for Nothing

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ABSTRACT: In this paper I argue that the acceptance of an absolutely unrestricted quantification implies the existence of an absolutely empty possible world. This result could be relevant because David Lewis both admits an absolutely unrestricted quantification (for example in *Parts of Classes*) and rejects the existence of an absolutely empty possible world (in *On the Plurality of Worlds*). In order to vindicate my thesis, I propose two strategies. The first is based on the assumption that the phrase 'nothing' cannot be always reduced to a quantifier phrase, as Graham Priest and Alex Oliver with Timothy Smiley have argued. This strategy consists in a paraphrase of the notion of everything that constrains us to admit an empty possible world. The second strategy mainly consists in the use of an "idealistic" principle (say «every determination is negation») and its consequences.

KEYWORDS: Absolutely unrestricted quantification – empty possible world – everything – nothing – possible worlds.

1.

In this paper I argue that the acceptance of an absolutely unrestricted quantification implies the existence of an absolutely empty possible world.[1] This result could be relevant because David Lewis both admits an abso-

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[1]   In this paper I will use the phrases 'absolutely empty world' or 'empty world', without any distinction, for referring to a world that represents no entities at all.

lutely unrestricted quantification (for example in Lewis 1991) and rejects the existence of an absolutely empty possible world (in Lewis 1986). In Lewis (1986), an empty world is not a possible world, since any world is defined as a maximal mereological sum of spatiotemporally interrelated things.[2]

2.

As Bradley affirms, metaphysics is "the effort to comprehend the universe, not simply piecemeal or by fragments, but somehow as a whole" (Rayo – Uzquiano 2006, 203). However, after the contemporary developments of logic and mathematics, the idea of an all-inclusive whole has become very puzzling. Indeed, the idea of an all-encompassing totality is based on the use of the schema of Naïve Comprehension:

(1) $\exists y \forall x (x \in y \leftrightarrow \phi(x))$ where $\phi(x)$ is any formula not containing 'y' free

In order to express the notion of totality, one can use the formula of self-identity, since *everything* is self-identical:

(2) $T = \{x \mid x = x\}$

It is well-known that (1) gives rise to a contradiction, since – as Rayo – Uzquiano (2006, 4) recall – (1) has an instance:

(3) $\exists y \forall x (x \in y \leftrightarrow x \notin x)$

Therefore

(4) $\forall x (x \in r \leftrightarrow x \notin x)$
(5) $r \in r \leftrightarrow r \notin r$

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[2]   Cf. Lewis (1986, 73): "If a world is a maximal mereological sum of spatiotemporally interrelated things, that makes no provision for an absolutely empty world. A world is not like a bottle that might hold no beer. The world *is* the totality of things it contains. ... There can be nothing much: just some homogeneous unoccupied spacetime, or maybe only one single point of it. But nothing much is still something, and there isn't any world where there's nothing at all."

A common way for overcoming this problem is the principle of Separation:

(6) $\forall z \exists y \forall x (x \in y \leftrightarrow \phi(x) \land x \in z)$ where $\phi(x)$ is any formula not
                                                                    containing 'y' free

But in this way one should give up to the notion of an all-encompassing whole, by considering just restricted totalities, *contra* the genuine metaphysical aim.

Anyway, as Rayo – Uzquiano (2006) recall, one should distinguish between the following sentences:

(AUQ) It is possible to quantify over everything, i.e. it is possible an absolutely unrestricted quantification;

(T)   There is an entity that is an all-encompassing totality.

(AUQ) implies (T) if one assumes the so-called "All-in-one principle", according to which "the objects in a domain of discourse make up a set or some set-like object" (Rayo – Uzquiano 2006, 6). The passage from (AUQ) to (T), by means of the All-in-one principle, generates a contradiction, since "the lesson of Russell's paradox is that there is no set (or set-like object) with all objects as members" (Rayo – Uzquiano 2006, 6). For my purpose, I just assume (AUQ), but I will not endorse the "All-in-one principle", therefore I will not commit myself to (T), but "only" to (AUQ).[3]

3.

So, let us assume that I can quantify over absolutely everything, by stating – for example – that everything, i.e. every object,[4] is self-identical. Let us call D the all-inclusive domain of discourse.[5] Consider the following sentence:

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[3]   There are good arguments for AUQ. For an overview see Rayo – Uzquiano (2006). Anyway, the aim of this paper is just showing that the rejection of the empty world is not compatible with the use of absolutely unrestricted quantification.

[4]   The term 'object' also ranges over the non-existent objects, if one wanted to admit them.

[5]   I use the term 'domain' by adopting the following advice of Rayo – Uzquiano (2006, 2): "[...] when we speak of a domain consisting of certain objects, we shall not assume

(E)   I am quantifying over D

Since I am really quantifying over D iff I am quantifying over *all* objects, then (E) becomes

(E*)   I am quantifying over D iff I am quantifying over a domain beyond which there are no objects at all

Therefore

(E**) I am quantifying over D iff I am quantifying over a domain of discourse beyond which there is the absence of all objects.

(E**) seems *prima facie* to presume the introduction of a strange object – identified as exactly the absence of all objects – that is paradoxically beyond the domain of all objects. The paraphrase of (E*) as (E**) seems to be afflicted by the naïve misunderstanding of 'nothing' as quantifier phrase with 'nothing' as a substantive, so that <I am quantifying over a domain of discourse beyond which there are no objects at all> would become <I am quantifying over a domain of discourse beyond which there is *nothing*> and the latter sentence – from the naïve point of view – would seem problematic in so far as it would state that there must be the object Nothing beyond the domain of all objects. But – Carnap probably would say - it is a problem for a schoolchild!

In the history of philosophy the phrase 'nothing' was often used as a noun that refers to a putative puzzling "thing", although in the so-called analytic philosophy this use has been considered wrong or senseless at least from Carnap (1931) that strongly proposed to admit the use of 'nothing' just as quantifier phrase.[6] Anyway, lately within analytic philosophy Priest

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that there must be a set (or set-like object) of which all and only the objects in question are members; the only requirement we take for granted is that there be such objects."

[6]   At least from Parmenides, 'nothing' was used as a name. Plato notoriously tried to solve Parmenidean puzzle of nothingness by distinguishing 'nothing' as absolute non-being and 'nothing' as different-being. Generally we can find three notions of nothingness, as Yao (2010, 79) exactly recalls: "Surveying the traditional classifications of nothing or nonbeing in East and West have led me to develop a typology of nothing that consists of three main types: 1) privative nothing, commonly known as absence; 2) negative nothing, the altogether not or absolute nothing; and finally 3) originally nothing, the nothing that is equivalent to being". In this paper I consider the first type of no-

(2002; 2014) has argued that 'nothing' as 'the absence of every thing' is a noun phrase and he has shown that such a noun phrase refers to an object:

> 'No' words and phrases are frequently used as quantifier phrases. When Alice says that she can see no one on the road, she means that for no person, x, can she see x on the road. But 'nothing' can also be a noun phrase. We may say that Hegel and Heidegger both wrote about nothing. Here, the word is not a quantifier phrase. This does not mean that for no x did Hegel and Heidegger write about x. It is a noun-phrase. We can say that they said different things about *it. It* is also that out of which the Abrahamic God is supposed to have created the world. It is nothing (noun phrase) that will concern us now. And by nothing, I mean *absolutely nothing*: the absence of every thing. To avoid confusion with the quantifier, I will write this in boldface, thus: **nothing**. (Priest 2014, 6)

Also Oliver – Smiley (2013) have argued that there are sentences where 'nothing' cannot be reduced to a quantifier phrase, but – unlike Priest – they propose to introduce the empty term *zilch* for accounting for 'nothing' when it is not used as a quantifier phrase. Zilch would be an empty term ("empty as a matter of logical necessity"; see Oliver – Smiley 2013, 602) that denotes the non-self-identical thing, i.e. it does not denote anything, since Oliver and Smiley certainly assume that everything is self-identical. Anyway, *also the non-self-identical thing is de facto the absence of every object*, therefore I will focus on such a notion.[7] In this paper I assume Priest and

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thingness, namely the absence of everything, since the second type (what Kant calls "nihil negativum", e.g. a round-square) seems to deal with the topic of impossible or contradictory objects, rather than the topic of absolute nothingness, and the third type – say "nihil originarium" – can be considered as the dimension from which each entity appears as in – broadly speaking – Heidegger and the Kyoto School. Anyway these topics are not the aim of the present paper. Just a brief recall about Carnap's criticism against Heidegger's use of 'nothing': According to Carnap (1931), a sentence like "Nothing is outside" should be paraphrased as follows: "There is nothing (does not exist anything) which is outside", i.e.: $\sim(\exists x).Ou(x)$.

[7]   In Simionato (2014) I argue as follows: since every relevant account for *nothing* – implicitly (as Oliver – Smiley 2013) or explicitly (as Priest 2002; 2014) – appeals to the notion of absence of every thing; and since – as I am going to show – such a notion cannot be separated from the empty possible world, i.e. from the entity that exactly

Oliver's and Smiley's premise according to which we need to account for nothing also in a different way from the quantifier phrase's strategy, when nothing explicitly or implicitly means the absence of every thing. But I assume that a good way for accounting for nothing – when it is not a quantifier phrase – is to consider it as a noun phrase that refers to an absolutely empty possible world.[8] In Simionato (2014) I have argued for the reasons of this choice, therefore I will not deal with this topic in this paper, even if I need to recall some of the above-mentioned reasons in order to make this paper autonomously understandable.

Let us return to the naïve notion of nothingness as absence of every entity. I propose to consider nothingness simply as the maximal (all-encompassing) consistent *situation* according to which there are no objects at all. Since *a maximal consistent situation according to which things could be* is – broadly speaking – a (possible) world, the maximal situation according to which there are no entities at all is what is called empty world, i.e. a world that represents the absence of all objects.[9] So nothingness is an entity – i.e. a possible world – that *represents* the absence of all objects. One should note that the absence of all objects cannot be – say – *separated* from the empty world, because the absence of all objects is represented by the maximal situation (i.e. a (possible) world) according to which there are no objects at all. But this thesis does not mean that the absence of all objects is not different from the empty world itself: as in each world, one can distinguish the world as such from its "content", i.e. from what it represents. There is a relevant difference between accounting for nothingness by means of the empty world and Priest's account. The latter identifies the absolute absence of everything with a thing, so that such a thing turns out to be a contradictory object: "it both is and is not an object; it both is and is not something" (Priest 2014, 7). Instead in my paraphrase I do not identify the ab-

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represents the maximal consistent situation according to which there are no objects at all; then every relevant account for *nothing* – implicitly or explicitly – appeals to the notion of empty world.

[8]   Hereinafter I will use 'nothingness' for referring to the noun and 'nothing' for referring to the quantifier phrase (except for the use of Priest's **nothing**, as introduced above).

[9]   In this paper I will not deal with the question of which account of possible world one should adopt in order to introduce an absolutely empty world. Certainly, Lewis's account is not compatible with it (and this is the reason why his use of absolutely unrestricted quantification could be problematic, from the point of view of this paper).

sence of everything with a (contradictory) object. Rather I propose to use 'nothingness' to refer to a (non-contradictory) entity that is the empty possible world and this entity *represents* the absence of everything. Therefore there is no contradictory identification between an object and the absence of all objects, for the empty world as world is not its "content" and the absence of everything is not the empty world itself.[10]

Let us reconsider (E**). Let us assume – following Priest – that nothingness is (also) a noun phrase and it must refer to something; let us consider Oliver – Smiley (2013)'s empty term *zilch* inadequate since it refers to no objects at all.[11] We have two options:

(*i*)   the absence of all objects is a contradictory object;

(*ii*)   the absence of all objects is the "content" of an absolutely empty possible world, i.e. what such a world represents.

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[10]   The account for nothingness as empty world is also different from the mereological account proposed by Priest (2014, 7), according to which "[nothingness] is the fusion of the empty set... **Nothing** is what you get when you fuse no things. There is nothing in the empty set, so **nothing** is absolute absence: the absence of all objects, as one would expect." And I also suppose that for Priest (2014) an empty world would contain the contradictory object **nothing**. In my proposal, the phrase 'nothingness' refers both to the empty world and to its content, for the latter – namely the absence of everything, i.e. the pre-theoretical notion of nothingness – is represented by the former, and the empty world is that world, i.e. *empty*, because it represents the absence of everything.

[11]   For example, consider the following sentence (I recall the example from Priest 2002, 241):

(*) "God brought the universe into being out of nothing"

If the term 'nothing' meant 'zilch', then there would not be any object out of which God created the universe; therefore the sentence (*) could not be distinguished from its (partial) negation, such as

(**) "The universe eternally exists"

by means of the "zilch strategy". As Priest (2002, 241) writes: "This means that God arranged for nothingness to give way to the universe. In (*) 'nothing' cannot be parsed as a quantifier. If we do so, we obtain: For no x did God bring the universe into existence out of x. And whilst no doubt this is true if God brought the universe into existence out of nothing, it is equally true if the universe has existed for all time: if it was not brought into existence at a time, it was not brought into existence *out of* anything. And the eternal existence of the universe is, in part, what (*) is denying."

In order to avoid a commitment to dialetheism and contradictory objects, I prefer option (*ii*) rather than option (*i*) – that is Priest's strategy (again, for more reasons for this choice, see Simionato 2014).

Indeed, if one chose (*i*), one should admit that there is an object beyond the domain of all objects (this could not be a problem for a dialetheist, but for a non-dialetheist this strategy would constrain to admit two contradictions: the contradictory object **nothing** and the contradictory domain D that includes all objects and it does not include all objects. But I am inclined to think that we can account for nothingness without any commitment to dialetheism). Instead, by means of strategy (*ii*), one can state that there is something – i.e. the absolutely empty possible world – that is included in the all-inclusive domain of discourse and such thing represents the absence of all objects, being an *absolutely empty* world. In this way, 'nothingness' is a noun phrase that refers to something – as well as Priest desires; but the introduction of this "something" does not imply the contradictory treatment of the absence of *all* objects as an object,[12] because it is just the empty world. The empty world *as world* is an entity, but its "content" – i.e. what it represents – is not any entity at all, therefore this notion does not undermine the genuine notion of the absence of *all* things. So, by means of (*ii*), one can both avoid the entification of the total absence and have the reference to a thing.

Therefore, I propose to replace (E**) with the following:

(E***) If I am quantifying over D, then I am quantifying over a domain of discourse beyond which there are no objects at all and this absence of all objects is represented by an absolutely empty possible world, included in the domain itself.

So, if one accepts the absolutely unrestricted quantification, then one should accept the existence of an absolutely empty possible world.[13] Indeed, since the notion of *everything* is strictly linked to the absence of every thing, given the paraphrase (E*) or (E**), without an empty world one cannot re-

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[12]   As Priest himself notes, holding that the absence of all objects is an object generates a contradictory object. Of course, contradictions are not a problem for Priest, but they are for me.

[13]   In fact it seems reasonable that an empty world could not be an impossible world, because it cannot realize explicit contradictions or – broadly speaking – non-standard logical situations, since it does not represent anything at all.

fer to the absence of every thing since there would not be any entity at all over which one can quantify, whereas by means of the empty world one can quantify just over it and at the same time one can refer to the absence of everything (i.e. the "content" of the empty world).[14]

One should note that my strategy also works without passing through (E**); since (E*) states that I am quantifying over D iff I am quantifying over a domain beyond which there are no objects at all, (E*) is exactly introducing the maximal consistent situation according to which there are no entities at all, i.e. an absolutely empty world. Therefore one can directly paraphrase (E*) as (E***).

4.

At this point I am going to propose an alternative strategy for showing that the use of an absolutely unrestricted quantification implies the acceptance of the absolutely empty world. At this end, I introduce the following principle:

(ODN) Every entity is determinate only in virtue of a difference with other entities (every determination is negation, *omnis determinatio est negatio*)

I would call this strategy: "idealistic way", since (ODN) is a typical principle that occurs in Fichte's and Hegel's metaphysics.[15] One should also note that this approach to negation derives from Aristotle, as Redding (2010) notes:

Such a method invoking "determinate negation" is often described as deriving from Spinoza's claim that "all determination is negation", but it can be just as readily seen as a consequence of Hegel's use of Aristotle's term logic. In term logics, negation is understood as a relation existing primarily between *terms* of the same type: a colour concept such as "red,"

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[14] Quantifying over the empty world is not contradictory since it – as *world* – belongs to the domain of absolutely every thing.

[15] See for example Inwood (1992, 78): "Hegel endorses Spinoza's claim that 'determination is negation', that is, that a thing or concept is determinate only in virtue of a contrast with other things o concepts, which are determined in a way that it is not". See also Melamed (2013).

for example, will be understood as meaningful in as much as it stands in opposition to an array of contrary colour terms such as "blue" "green", and so on. In contrast, in logics which take the *proposition* as the fundamental semantic unit (such as the classical predicate calculus deriving from Frege and accepted by most analytic philosophers), negation is typically regarded as applying primarily to whole propositions rather than to sub-sentential units. (Redding 2010)

I will show that from the set of two premises as (AUQ) and (ODN) one can *prima facie* derive a contradiction; then I will introduce the existence of an absolutely empty possible world in order to make consistent the above-mentioned set.

By (ODN) let us derive the following:

(M1)   Entities that fall under the same concept all differ from same common entities, i.e. for each domain of x, for all x there is a y such that $y \neq x$

It is already clear that we will obtain a contradiction, since (M1) is not consistent with (AUQ).[16] Anyway, I will show how the introduction of an empty possible world allows us to avoid the contradiction. Let us consider again the domain D.

By (AUQ) and (M1) we obtain:

(M2)   Each object of D is different from something – say k

Since k is a thing or entity, it belongs to D. Therefore, by (M2):

(M3) k is not k

(because k, being an entity of D, is different from k, since *every* entity of D is different from k) By the identity principle:

(M4) k is k

Therefore, from conjunction of (M3) and (M4), we obtain the following contradiction

(C) k is not k and k is k

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[16]   In fact, (M1) is equivalent to saying that every quantification is restricted.

(Certainly, (M3) is also a contradiction.)

I think this puzzle can be solved by introducing the existence of an absolutely empty world. As I said before, such a world is an entity that represents the absence of every entity. Let us replace (M2) with (M2*) in order to avoid the rise of the contradictions (M3) and (C):

> (M2*) Each object of D is different from the absence of every entity and this absence is represented by an entity, i.e. an absolutely empty possible world

Therefore each entity is different from what the absolutely empty possible world represents. In this way, one can state that each entity of D is different from the absolute absence, but – as in the strategy that I proposed in the previous section – one does not need to quantify over this absence, since one just needs to quantify over the empty possible world that – in turn – represents the absolute absence.

Since the introduction of an empty world allows us to make consistent a set of two very reasonable premises, it is more reasonable to admit it rather than to reject it.

However, one could object that the empty world must be different from itself, since *every* entity (including the empty world) of D is different from the absence of every entity. However I would reply that it is opportune to distinguish between the empty world and the absence of everything. The empty world is not the absence of everything, rather it is an entity that represents the absence of everything. Therefore my strategy is not undermined by a situation like (M3), because – by means of the empty world – one can state that the empty world is not the absence of everything (as well as each world is not its "content", i.e. what it is represented).

Finally, one could object that there is a paradigmatic counterexample to (ODN). If one adopted a sort of "existential monism", according to which there is exactly one *concretum* (say e), ODN would fail in that case because the only one entity would not be different from anything. Anyway, in this case one should admit that a sentence like "There is only one entity e" should be understood as "There is only one entity e iff *there are no entities at all* besides e". Similarly to the passage from (E*) to (E***), one should admit that "If there is only one entity e, then it is different from the 'content' of the empty possible world, i.e. from what such a world represents (the absence of every entity)". Therefore (ODN) would not fail because

e would be different from the absence of every thing that is represented by an empty possible world.[17]

5.

In this paper I have argued that the use of an absolutely unrestricted quantification implies the acceptance of an absolutely empty possible world. In order to show the reason why (AUQ) implies the existence of an absolutely empty possible world, I have proposed two strategies. The first is based on the assumption that the phrase 'nothing' cannot be always reduced to a quantifier phrase, as Priest (2002; 2014) and Oliver – Smiley (2013) have argued. This strategy consists in a paraphrase of the notion of *everything* that constrains us to admit an empty possible world. The second strategy mainly consists in the use of the idealistic principle (ODN) and its consequences. Therefore my paper shows the *incompatibility* between the acceptance of an absolutely unrestricted quantification and the rejection of the existence of an absolutely empty possible world.[18]

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[17] Maybe one could object that the existence of an empty possible world would be inconsistent with a sort of existential monism, if such a world did not coincide with *e*. I would reply that this is a problem for the existential monism, rather than a problem for (ODN): how could the existential monist affirm the existence of exactly one entity, without referring to the absence of every thing besides such an entity? If the existential monist refers to the absence of every thing – as she should do – then she needs to introduce the empty world (if we assume that the best paraphrase for *nothing* is the empty world's account). From this point of view, the existential monism is maybe an inconsistent thesis; but – again – this seems to be a problem for existential monism, rather than for (ODN).

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Tichý's Possible Worlds

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ABSTRACT: Pavel Tichý originally published his interesting conception of possible worlds in 1968. Even though he modified it over the following twenty five years, its core remained unchanged. None of his thirty journal papers or books containing the notion of possible worlds was a study in metaphysics. Tichý (and most of his followers) always introduced the notion in the context of other investigations where he applied his Transparent intensional logic either to the semantic analysis of natural language or to the explications of other notions. Tichý presented his conceptions using rather short descriptions occurring on a number of places; his proposal appears not only fragmentary but also somehow incoherent. The main contribution of this paper is thus not only a complete survey of Tichý's development of his conception but also a certain completion of the very proposal.

KEYWORDS: Actualism – combinatorialism – possible worlds – possible world semantics – Transparent intensional logic.

1. Introduction

It is well known that the modern story of possible worlds began with Wittgenstein's states-of-affairs (see Wittgenstein 1921/1922). Carnap (1947) introduced a linguistic mirror of this conception (viz. state-descriptions) to formal semantics. Through a development best summarized elsewhere (e.g. Copeland 2006), Kripke (1963) and others supplemented formulas of modal logic with model-theoretic semantics based on the no-

tion of possible worlds. During the 1970s, Lewis proposed basics of his theory (1973); Plantinga (e.g. 1970), Adams (1974), Stalnaker (1976) and others significantly contributed to the debate. As the reader will be aware, the contemporary debate revolves around Lewis' landmark monograph (1986); further notable books include Armstrong (1989), Divers (2002), Nolan (2002) and Yagisawa (2010).

The present paper deals with a remarkable conception of possible worlds developed by the post-Prague Spring refugee Pavel Tichý (1936 Brno – 1994 Dunedin) who moved to New Zealand where he became a professor of philosophy. Tichý never wrote a systematic paper on possible worlds, nor a book, which is one of the reasons why his conception is not well known. Another reason might be simply that he exposed the notion outside metaphysical debate, in the context of different investigations – where he applied his system of intensional logic.[1]

My main objective is to present Tichý's proposal, while focusing on its recent version. Though his conception of possible worlds is shared and sometimes discussed by his sympathisers (cf. below), the present paper provides its first complex survey.

Tichý developed his views in four stages:

1) around 1969 (the papers published in 1968, 1969 and 1971)
2) 1971–79 (especially the unpublished book 1976 and a number of related papers mainly in the late 1970s)
3) between 1980 and 1988 (partly in cooperation with G. Oddie)
4) 1988 and after (his supreme proposal published mainly in 1988).

However, such division is somehow artificial because the stages are overlapping and a number of ideas persisted throughout. One of my main goals then is to show a unity of Tichý's conception – even if there is an apparent incompatibility between its historical variants.

None of Tichý's expositions of the notion is extensive: it is usually less than half of one page. Tichý's most comprehensive treatise can be found in his excellent monograph *The Foundations of Frege's Logic* (see Tichý 1988), but the core part of its section '36. Possible Worlds' covers only three pages. If we compare Tichý's presentation with rivalling proposals of 1970s and early 1980s, we may say that it is likewise brief. After Lewis' monograph

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[1]   As remarked by one of the reviewers, there is also a reason that Tichý took possible worlds as primitive; however, this is not so simple (cf. below).

(1986) and subsequent philosophical debates, however, such proposals seem sketchy. Though I fill some gaps in presentation of Tichý's position, limits of the paper format force me to omit an extensive discussion of his conception. Recall also that Tichý as well as his followers are more interested in logical matters than in philosophy, which is why there has been no philosophical elaboration of Tichý's conception so far.

I will, of course, add explanatory remarks that should help the reader to compare Tichý's conception with other proposals. But it should be kept in mind that the contemporary understanding of possible worlds and the classification of their conceptions was proposed later (cf., e.g., Haack 1978, Menzel 2014) than Tichý developed his views. Since Tichý is a distinctive thinker, his conception is sometimes difficult to subsume into one particular category.

In the following Section (2), I explain Tichý's first conception followed by an immediate assessment (Section 3). In Section 4, I introduce its second and third stage. Then, in Section 5, I describe Tichý's supreme conception. In Section 6, I briefly explain his intensional logic and semantics and provide a conclusion (Section 7).

2. The first stage: procedures and intensional basis

During the late 1960s, Tichý faced limits of analysis of our conceptual scheme by means of classical extensional logic. Being well acknowledged with algorithms and related problems, he proposed in his textbook introducing logic as a framework of science (1968a), to enrich predicate logic by means of higher-order logic developed by Church (e.g., Church 1940). From a debate between Tichý (e.g., Tichý 1966) and Czech extensional logicians it follows that he knew Tractarian/Carnapian ideas concerning the content of empirical/non-empirical sentences, whereas the latter ones are valid in all circumstances.

Tichý's paper "Intensions in Terms of Turing Machines" published in *Studia Logica* (see Tichý 1969) benefited from his previous thoughts; a shorter version already appeared in a Czech philosophy journal (see Tichý 1968; for its English translation, see Tichý 2004). Tichý presented there his first compact conception of possible worlds.

As Tichý (1969, 7–9) explained, the aim of empirical investigation is to provide results of tests or *procedures* examining which *attributes* (i.e. proper-

ties and relations) are possessed by investigated objects. The sentence such as "The object *A* is heavier than *B*" is a *record* of this: it amounts to saying that *A* was positively tested on having that attribute.

To verify the sentence, one executes the procedure consisting of testing *A* on being such and such. The meaning of the sentence is identified with a complex concept – the procedure. Procedure is an older term for *algorithm*. Procedures split into two kinds, empirical and non-empirical. For an execution of any empirical procedure, one has to introduce state of the external world.

According to Tichý (1969, 9), language is based on an *empirical system* which consists of a particular fixed finite set of individuals and a fixed register of elementary tests, such as BE HEAVIER THAN *B*, called *intensional basis*.

Tichý always repeated this idea, only deleting "finite" and replacing "empirical system" with "*epistemic framework*" and "set of individuals" with "*universe of discourse*". He admitted *partial attributes* to be in intensional basis (cf., e.g., Oddie – Tichý 1982, 234, 3.1.a). Tichý also dismissed the idea of *intensional independence* of tests employed in Tichý (1969) because he soon realized (though he did not mention) the force of Kemeny's (1951) objection to Carnap (and Wittgenstein) according to which some intuitive attributes depend on others; in other words, that atomic facts are not necessarily independent.

Possible worlds are systems of possible outcomes of applications of procedures collected in intensional basis:

> each combinatorial possibility as to the outcome of applications of all the tests in the intensional basis to all individuals (or to couples of individuals etc.) must be regarded as a conceivable state of the external world. Let us call these possibilities briefly *possible worlds with respect to the empirical system*. (Tichý 1969, 9)

Tichý also counted the number of possible worlds, which reminds us of Wittgenstein's counting in Wittgenstein (1921/1922, 4.42). Tichý added that pure semantics cannot decide or assume which world is the actual one.

The rest of Tichý's paper focuses on defining *intensions* as classes of equivalent procedures (procedures are equivalent if they yield the same outputs for the same systems of inputs and states of external world). Inten-

sions were thus not functions from possible worlds (*W*s) as we know it from possible world semantics and Tichý's later writings.[2]

In the subsequent paper "An Approach to Intensional Analysis" published in *Noûs* as Tichý (1971), he reminded the reader of his definition of intensions in Tichý (1969) and proposed his novel method of using Church (1940)'s typed λ-calculus for analysis of natural language (cf. Section 6).

3. Brief characterization of Tichý's conception

Since Tichý never made a substantial change to the above picture, we may already briefly compare it with rivalling proposals.

Despite being inspired by Tractarian/Carnapian *combinatorialism*,[3] Tichý does not subscribe to its contemporary Armstrong's (1989) version (the differences between the two will be more evident from the next two sections). Since Tichý's worlds are external to language (though they are linked to epistemic base of a language), his conception of possible worlds is not *linguistic 'ersatzism'*[4] as, e.g., Hintikka's (1969) conception.

Though Tichý's views seem to contain some ideas of *abstractionism*,[5] Tichý maintained that the mathematical nature of the combinations leads to the conclusion that *logical space*, i.e., the set of possible worlds, has to be *homogenous* (see Tichý 1988, 179). He thus rejected Stalnaker's idea (1976) to set apart our actual world from the other possible worlds, which are only admitted as (useful) fictions. Modal *fictionalism* was dismissed by Tichý before it came into existence:

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[2]   In intensional semantics and logic, *intensions* are functions from possible worlds (*W*s). Intensions include *propositions* whose values are truth-values, *properties* whose values are classes of objects, *relations* whose values are classes of *n*-tuples of objects, etc. That an object *instantiates* (exemplifies, possesses) a property in (or: at) a given possible world *W* means that the object occurs in the *extension* of that property in (at) *W*.

[3]   The view that (alternative) possible worlds are results of recombination of metaphysical elements.

[4]   The view that (alternative) possible worlds are mere maximal consistent sets of sentences.

[5]   The view that alternative possible worlds are mere abstractions from the actual (real) world.

> If unrealized determination systems [i.e. 'possible worlds'] are mere fictions, then so is the realized one. (Tichý 1988, 179)

Obviously, Tichý is an *actualist* about possible worlds: all possible worlds exist (yet only one of them is actualized).

Tichý's worlds are not concrete entities, they are classes of tests and each test is distinguished from its empirical execution (compare it with a computer program as such and its concrete execution). Tichý's conception is thus not (Lewisian) *concretism*. Tichý sharply rejected Lewis' conception as an absurdity (cf. Tichý 1988, 177-180).[6]

Lewis proposal is the only rival conception of possible worlds Tichý discussed and explicitly referred to.[7] In Tichý (1975, 91-92), he objected also to Lewis' construal of actuality. According to Tichý, the word "actual" stands for the identity function on worlds; this explains why an addition of the word to a descriptive phrase is redundant. He maintained that we, ignorant of many facts, are not omniscient, thus we are hardly capable to identify the *actual possible world*. Tichý repeated this idea in a number of places.

In Tichý (1971, 274-277) and also in Tichý (1988, 180-183), he passionately argued against *varying domains* and possible individuals. Without a demarcation of a domain, quantification over x cannot be logically satisfactory. The alleged examples of *possible individuals* (Kripke's Pegasus, 1963) are only examples of this or that individual concept – Tichý instead used his terms *individual role* or *individual office* (an entity an individual can occupy). Tichý explicated individual offices as intensions having individuals as values. He elaborated and generalized the theory of offices to interesting heights.[8]

Tichý was a strong *antiessentialist* and *'haecceitist'* (cf. Raclavský 2008; 2011). Though individuals do not have a genuine essence (but see Cmorej

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[6]   According to Tichý (1988), Lewis' worlds are not in space, since they are causally unrelated to our world. Thus, they are simply nowhere because space is by definition all-embracing. The 'newspeak' Lewis proposed does not help explain modality as appearing in everyday sentences.

[7]   The other metaphysical conception Tichý provably knew was Plantinga's early theory (1970), but he criticized Plantinga (1972)'s essentialism.

[8]   See Tichý (1987), which is an adaptation of his introduction to Tichý (1976). For its application see Tichý (1978d); for his analysis of Anselm's ontological proof see Tichý (1979).

1996; 2001), individual offices do have *essences* (an essence is a unique sum of defining properties called "requisites"). Tichý quantified over all individuals there are and, with the help of another variable, over all individual offices. Tichý is thus an *actualist*, though not a paradigmatic one: alleged possible individuals, excluded by a paradigmatic actualist from quantification, are treated by Tichý as individual offices and these are in the domain of quantification.

According to Tichý, the kind of *existence* which is applicable to individuals is *trivially* applicable to them. But he introduced (e.g., in Tichý 1979; or Tichý 1988; 1976) a kind of existence *nontrivially* applicable to offices; to say that the Pope exists in a given world W amounts to saying that the Pope-office has a holder in W. Nontrivial existence ascribable to properties (relations) says that the property has an instance in W (cf. e.g. Raclavský 2010 for more).

4. The second and third stage: intensions, primary / derived attributes, nexuses

The second stage of Tichý's considerations on possible worlds begins after the 1971-paper. At that time, Tichý (1974) disproved Popper's definition of *verisimilitude* (likeness of theories of truth) and worked on a positive proposal within the framework of his intensional logic, which he published in Tichý (1976a). This was followed by its slightly modified version in Tichý (1978d).[9] Recall that truthlikeness measured within the framework of intensional logic (Tichý, Oddie, Niiniluoto and others) is closely related to the topic because it deploys possible worlds underlying scientific theories.

Especially in Tichý (1978d), he focused more on entities in intensional basis. He emphasized the difference between *primary attributes* which are collected in the intensional basis and *derived attributes*. The idea is explained further in his unpublished book Tichý (1976) where he remarked that to find out whether Xantippa is a widow one has to ascertain some more basic facts, e.g. that Socrates is dead. The idea goes back to the

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[9]   Tichý's former pupil Graham Oddie wrote a whole book (see Oddie 1986) elaborating on and defending Tichý's approach to truthlikeness. In Oddie (1987), he indirectly supports Tractarian inspiration for Tichýan worlds.

aforementioned Kemeny's criticism of Carnap and it seems to be a predecessor of Kim's idea of *supervenient properties*.[10]

The second feature distinguishing the second period from the first is that *intensions* are not equivalent classes of procedures, but total or partial functions (as mappings) from possible worlds (cf. footnote 3).

A significant Tichý's work of this period is an extensive unpublished monograph "Introduction to Intensional Logic" (see Tichý 1976) written between 1973 and 1976. The book contains the first main, atemporal, version of his logical system (see Section 6) and its applications to natural language. Its important part is a large chapter on *subjunctive conditionals* and related phenomena, which makes a third distinctive feature of this stage.[11]

Most of Tichý's papers published between 1975 and 1979 are nothing but selections from this book. Needless to say that his Czech and Slovak namesakes Pavel Materna (known for his later popularization of Tichý's logic) and Pavel Cmorej (who also utilizes his system) persuaded Tichý to adopt *temporal parameter* and most of his papers published at that time already contained its adoption in a rudimentary form. A typical example of a brief exposition of possible worlds in such a paper can be found in "New Theory of Subjunctive Conditionals" (see Tichý 1978). Note the similarity with his first stage proposal:

> The aim of the investigation delimited by an epistemic framework is to determine exactly how the attributes from the intensional base are distributed through the universe of discourse at various moments of time. Before the investigation gets off the ground, the investigator faces a range of possibilities on that score. These possibilities are usually called, somewhat dramatically, *possible worlds*, and the totality of possible worlds is known as the *logical space* of the framework. (Tichý 1978, 435)

A feature more characterizing the third stage is Tichý's emphasis on *nexuses* (*connections*), i.e. higher-order relations such as cause-effect relation

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[10] Later, Tichý wrote a paper (co-authored by Oddie, 1990) on resplicing properties over a supervenience base.

[11] Tichý published three papers on subjunctive conditionals. The first one (Tichý 1976b) disproves Lewis-Stalnaker's theory. The last one (Tichý 1984) disproves, among others, Tichý's own theory from (1978). In Tichý (1984), the truth of subjunctive conditionals depends, *inter alia*, on a certain unarticulated, tacitly assumed parameter (such as usual laws of nature).

(or even attitudes), as discriminating between possible worlds. He puts them in an intensional basis:

> We thus see that a possible world is not fully described in terms of observable events such like X's being dry, X's being stuck, and X's burning, taking place at definite times. What makes a world the world it is are also *connections* which hold between such events. Worlds differ from one another not just in what observable events take place in them, but also which events have the power bring others about. (Tichý – Oddie 1983, 136)

However, we may find that Tichý already considered nexuses to be among the main characteristics of worlds in his (1978, 435).

Thus, the only decisive feature differentiating the third stage from the second one is Tichý's stress on *temporality*. In the third stage, he significantly employed verb tenses and also events/episodes for characterizing possible worlds.[12] Here is an illustration from the introductory parts of the papers which utilize temporality in explication of ability and freedom:

> worlds must be allowed to *branch*: there must be worlds which are populated by the same individuals and whose histories are the same up to a certain time, and different after that time. (Tichý – Oddie 1983, 135)

> As the possession of an attribute by an object is a time-dependent affair, the possibilities are, more particularly, *possible histories* of the distribution. (Oddie – Tichý 1982, 228)

5. Tichý's late conception: determination systems

Tichý's late conception is clearly recognizable from its stress on the idea of determination systems. These are discussed only in his masterpiece *The Foundations of Frege's Logic* (see Tichý 1988) and in Tichý (1994), which is a posthumously published introduction to his just written, but unfinished, book *Meaning Driven Grammar* which aimed to provide a highly ambitious semantic analysis of natural language. In his explanations, Tichý presup-

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[12]   See mainly his excellent analyses of verb tenses and temporal adverbials in (1980) and analyses of episodic verbs and verb aspects, as well as *events* and *episodes*, in (1980a). See also his philosophical defence of temporal dependence of truth (1980b).

posed a reader who has only a cursory knowledge of possible worlds; he even cited no his earlier relevant paper.

To introduce determination systems, Tichý deploys the notion of fact:

> What are facts? The notion of fact is correlative with that of determiner. To each fact there corresponds a determiner in such a way that the fact consist either in determiner's singling out a definite object or in its failing to single out anything at all. The fact that Scott is the author of *Waverley*, for instance, consists in determiner A's [= THE AUTHOR OF WAVERLEY's] singling out Scott. The fact that the author of *Waverley* is a poet consists in the proposition P's [= THAT THE AUTHOR OF WAVERLEY IS A POET's] singling out [the truth-value] T. (Tichý 1988 178)

Obviously, this is nothing but Tichý's 'tests-on-individuals' story. Instead of "attribute" or "office", Tichý uses the term "*determiner*"; determiners are explicated (in Tichý 1988, 198) as possible world intensions. Instead of "test with a positive/negative outcome", Tichý says *fact*; facts are actual (i.e. obtaining) or possible. Tichý explicated the notion of fact as proposition because he considered A IS GREATER THAN B and B IS SMALLER THAN A being one and the same intuitive fact. Tichý's most elaborated view on the notion of fact appears in his re-examination of Wittgenstein's *Tractatus* (cf. Tichý 1994a).

Intuitive possible worlds are *total* (i.e. maximal) collections of facts:

> Thus the determiner's [= THE AUTHOR OF WAVERLEY] picking out George IV is a *possible* fact and so is its picking out nothing at all. Hence a possible world, if conceived as a totality of possible facts, will be fully characterized by an assignment of objects (of appropriate kinds) to some determiners. Let us call such assignment a *determination system*. A determination system is thus any many-to-one correspondence associating (some) individual determiners with individuals, (some) truth-value determiners with truth-values, etc. (Tichý 1988, 178)

> Briefly, a determination system specifies one combinatorial possibility as to what objects are determined (or singled out) by what intensions at what times. (Tichý 1988, 199)

The determiners involved in intensional basis can be of various types:

[determiners] may come classified into categories, like colours, heights, propositional attitudes, and the like. (Tichý 1988, 199)

Realize that every combinatorially possible association of determiners with determinees is a determination system only *relative to a given epistemic framework*.

Let us assume an illustrative epistemic framework with a universe only containing *A*(lan) and *B*(arbra) and intensional basis only containing attributes (determiners) MAN and WOMAN. When ignoring partiality, there are exactly 16 mappings associating the determiners with their possible values (cf. Tichý 1988, 178), i.e. 16 determination systems:

	MAN	*WOMAN*			*MAN*	*WOMAN*
1.	$\{A, B\}$	$\{A, B\}$		9.	$\{B\}$	$\{A, B\}$
2.	$\{A, B\}$	$\{A\}$		**10.**	$\{B\}$	$\{A\}$
3.	$\{A, B\}$	$\{B\}$		11.	$\{B\}$	$\{B\}$
4.	$\{A, B\}$	$\emptyset$		**12.**	$\{B\}$	$\emptyset$
5.	$\{A\}$	$\{A, B\}$		**13.**	$\emptyset$	$\{A, B\}$
6.	$\{A\}$	$\{A\}$		**14.**	$\emptyset$	$\{A\}$
7.	$\{A\}$	$\{B\}$		**15.**	$\emptyset$	$\{B\}$
8.	$\{A\}$	$\emptyset$		**16.**	$\emptyset$	$\emptyset$

As Tichý explains in (1988, 178-179), since determiners are not always mutually independent, not every combinatorially possible determination system is *realizable*. The two determiners MAN and WOMAN cannot pick out overlapping classes of individuals. Thus, not every determination system is a possible world. On the other hand, every possible world is a determination system. Given our intensional basis and universe of discourse, only the determination systems whose numerals are written in bold (4, 7-8, 10, 12-16) count as (intuitive) possible worlds; we therefore have 9 possible worlds altogether.[13]

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[13] In Tichý (1988, 179), Tichý speaks about 8 worlds but, when discussing an entirely analogous example in his (1994, 60), he mentioned the number 9, which is, I maintain, the correct one (my reason occurs in the next paragraph).

Before proceeding further, I should state a few remarks explaining Tichý's position. The possible world no. 16 seems to be a suspicious *empty world*. However, this idea is mistaken. Firstly realize that Tichý's worlds are not individuated by a certain population of individuals.[14] The possible world no. 16 is simply a world in which A and B are tested on instantiation of the properties MAN and WOMAN with a negative result. The individuals have different properties than the two primary ones contained in our miniature intensional basis, e.g. the property BE NOT A MAN.[15]

Unrealizable determination systems in some ways resemble *impossible possible worlds* which are discussed so much today (cf., e.g., Berto 2013; Vacek 2013). Impossible worlds are proposed for a variety of reasons, none of them are important for Tichý. For instance, he prevented the problem of logical omniscience by employing hyperintensional entities (cf. Section 6). Recall also that Tichý proposed possible worlds in connection with the idea of subject investigating the external, empirical reality. Both empty and impossible worlds are beyond such considerations. In other words, they are excluded on the basis of Tichý's pre-theoretic motivation.

Surprisingly, Tichý (1988) did not employ and develop an idea which suggests itself, viz. that a determination system is only a single '*slice*' (or 'time point', Kuchyňka – Raclavský 2014) of a possible world, which is thus a sequence of such slices. However, an anticipation of this idea can be found in (Oddie – Tichý 1982, 228, cf. the quotation above), its full expression is this:

> we must think of it [i.e. possible world] as a world *history,* a whole course of events unfolding in time. In other words, a world must be conceived of not as a single distribution of the traits from the intensional base through the universe of discourse, but as a series of such distributions, one for each moment of time. (Tichý 1994, 62)

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[14] Vladimír Svoboda (2001) imagined that individuals may escape 'our world', moving thus to the world no. 16, by losing any (remarkable) property and reaching a kind of 'limbo'. A closer examination of this idea (e.g. Raclavský 2008b) leads to the conclusion that such proposal contradicts Tichý.

[15] Some metaphysicians reject 'negative' properties but Tichý belongs to the opposite camp: BE A NON-FERROUS, for instance, is a good property the possession of which can be sensibly empirically tested. When properties are explicated as possible world intensions (cf. Raclavský 2011, I.2) any trace of negativity evaporates, because no intension displays any mark of negation.

So far, we have an intuitive notion of possible world as an entity which contains facts whereas a fact consists in that a determiner picks out a determinee. What then are the logically simple entities W_1, W_2,..., W_n which are the arguments of Tichý's intensions?

The question is very important because Tichý's construal appears to be incoherent: Tichý often speaks about possible worlds in the spirit of combinatorialism but then he says that in his type-theoretic logical framework possible worlds are members of the type ω, which is an atomic type thus its members are primitive – this seems to mean that they do not possess combinatorialistic features.[16]

Oddie (1986, 125) first reacted to the problem and suggested to call these Ws *proto-worlds* and assumed their correlation with the 'thick' possible worlds. Tichý in (1988, 194-200) enlightened us of the link between the two kinds of worlds as follows. (The following explanation appeared firstly in Raclavský 2009, 9-11.)

Firstly recall Carnap's notion of explication: it consists in the replacing of an intuitive notion – here the notion of possible world as a collection of facts – by its rigorous mate, its explicatum. Now there is a small complication. Tichý explicated facts as possible world propositions, which are classes of world/time couples. As noted already by Stalnaker (1976) and even Adams (1974), neither mentioned by Tichý, there is a question how can possible worlds be classes of propositions when propositions are classes of worlds (or world/time couples).[17]

Tichý realized this *circularity problem* (cf. Tichý 1988, 194) and solved it by carefully distinguishing between logically primitive and complex entities and their role in explication.[18] For Tichý, propositions are the primary goal of his investigation, thus possible worlds must be taken as *logically primitive*, while propositions will then be defined in terms of worlds.

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[16] As Pavel Cmorej reminded me in personal communication, these possible worlds are not quite pure entities because a system of functions based on such worlds encodes the properties of intuitive determination systems. Thus, they are rather surrogates of 'full blooded' worlds as we will show in our argument.

[17] Oddie (1986, 125) considered a slightly different puzzle: possible worlds have to be specified even by some functions defined on worlds (e.g. nexuses between propositions); but how then can one specify a single world? Oddie's solution anticipated Tichý's.

[18] A logically primitive entity differs from another entity of the same sort only by its different numeric identity.

But to explain anything, propositions must be tied into the system of *explication* to the intuitive notions because it does matter whether a particular class of world/time couples explicates the intuitive proposition ALAN IS A MAN or rather ALAN IS NOT A MAN. Such a link of a possible world proposition to its intuitive correlate is guaranteed by an *interpretation* of the members of ω and the two truth-values. Interpretation is obviously a reverse of explication:

> Now to interpret the basic category ω is to assign to each of its members a unique determination system. ... The determination systems which are assigned, within the [given epistemic] framework, to ω-objects are called the *possible worlds* of the framework. (Tichý 1988, 199-200)

Let us briefly reflect on Tichý's position. Tichý's contribution to metaphysics consists in explaining possible worlds as determinations systems. This is a refinement of the idea that possible worlds are total classes of compatible facts.[19] For logical investigations, however, Tichý decided to use only *surrogates* of these worlds, namely the logically primitive entities $W_1, W_2,..., W_n$, which are interpreted by the possible worlds as determination systems (or rather their chronologies).

A metaphysician can be perhaps a bit uncomfortable with the fact that Tichý's framework, used by him and others for a number of useful explications of various notions, does not provide a 'full blooded' explication of the notion of possible world. Yet there is a way out of this suggested by Raclavský (2009a) who utilized ideas and apparatus from Raclavský (2008a) and Raclavský – Kuchyňka (2011).[20] We can retain Tichý's framework as it is, with all those explications, but we must rethink the role of Ws. I suggest understanding Ws as a mere *modal factor* (I suppress some questions related to interaction with temporality). A proposition, for instance, is clearly a function whose values depend on logical modality (modal factor). Possible worlds are then explicated as some other, complex entities which reflect the intuitive features of classes of facts, whereas facts are some structured entities,

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[19]   Which goes back to C. I. Lewis (see Lewis 1923).

[20]   The original motivation is Raclavský's solution (2007; and 2014 with Kuchyňka) to the puzzle studied already by Petr Kolář in his (e.g. 2002): Tichý rejected the idea of facts as structured entities by evoking the famous aRb fact; but then, there is the problem of how to preserve correspondence theory of truth which is based on some sort of isomorphism between sentences and their significance (facts).

not possible world propositions. It is interesting that such possible worlds would be very close to the worlds of Tichý's first stage conception (recall that those worlds were classes of structured procedures expressed by sentences).

6. Possible worlds in Tichý's Transparent intensional logic

In this section, I am going to briefly explain the role of possible worlds (as Ws) in Tichý's semantics and logic. It is important to stress that Tichý adopted the notion of possible world for utilization in philosophical logic, not as an object of metaphysical considerations; this is somehow obscured by the fact that in Tichý's work logic and philosophy go hand in hand.

An admissible introduction to Tichý's semantics likens it to Montague's semantics which was published mainly around 1970, cf. the posthumous collection (see Montague 1974). Tichý referred to Montague's work in (1971) and it seems that he became acknowledged with Montague's results after developing his own system. Unlike Montague, Tichý made a straightforward adaptation of Church's typed λ-calculus because he enriched Church's type basis containing o (two truth-values) and ι (individuals) by the type ω. Over such basis, there are numerous functions of composite types; for instance, the type of propositions is (oω) (in another notation: ω→o). After his (1971), Tichý adopted partial functions, thus some intensions can be without a value (gappy). In the late 1970s, he admitted the temporal parameter τ; *intensions* (e.g. propositions, properties, ...) are then functions from world/time couples (equivalently speaking, they are functions from worlds to 'chronologies' of objects; for the sake of brevity, I will omit temporal parameter).

Tichý's technical treatment of intensions is distinct from Montague's (cf. e.g. Tichý 1978b). Tichý's terms standing for intensions are λ-abstractions over possible worlds; but such λ-abstraction λw[...w...] can be combined with variable w ranging over possible worlds in order to express a recourse to a value of that intension in the value of w. This way Tichý could sensibly assign intensions to expressions having modally conditioned reference (common sentences, descriptions, predicates, etc.) in every context, including the transparent one,[21] which is the main difference from Montague's approach.

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[21]   This is why he called his system *Transparent intensional logic, TIL.*

λ is a variable binding operator and λ-formalism is capable of expressing subtle differences in scope. This enables a logically lucid treatment of *de re/de dicto* propositional attitudes as well as scopes of modal operators. Let us add that *modal operators* are classes of propositions, being of type (o(oω)), which means that they are 'quantifiers' of possible worlds. Famous puzzles concerning modality are quickly solvable in TIL (cf. Tichý 2004; Raclavský 2009).

Already in (1970), Lewis published a criticism of intensional (or possible world) semantics. His main argument roughly says that possible world intensions are too coarse-grained to be meanings of expressions. In other words, intuitive meanings have a more fine-grained structure. We thus need *hyperintensional entities* which would stand in semantic scheme between expressions and extensions/intensions signified by them. For another argument, when X believes that 1+1=2, we can hardly entail that X believes Fermat's Last theorem, despite that "1+1=2" and the famous theorem stand for one and the same proposition which is true in all possible worlds.

After Tichý (1971), he found a solution to the problem. He realized that his λ-terms can be read in an extensional way as representing usual set-theoretic objects, e.g. possible world intensions, or they can be read in 'intensional' way as representing entities which determine the set-theoretic objects. Tichý called those 'intensional' entities "*constructions*" and he later explained (in his 1986) that he borrowed the term from geometry where a point or circle can be constructed one way or another. Constructions are structured, abstract, extra-linguistic entities which are akin to algorithmic computations (Tichý 1986, 526). For a defence of constructions and their careful description see esp. Tichý (1988).

Constructions can be used for capturing features of intuitive entities that cannot be explicated by means of mere possible world intensions. Tichý stressed (already in his 1976) mainly their usefulness as the explicata of *meanings*. His semantic scheme is thus entirely Churchian ('Fregean'): an expression E expresses (in L) a construction C (= the meaning of E) whereas C constructs an intension or extension (= the significance of E). For instance, the meaning of the sentence "Fido is a dog" is the propositional construction $\lambda w[\textbf{Dog}_w\ \textbf{Fido}]$, which constructs the proposition FIDO IS A DOG. Propositional attitudes are explicated in Tichý (1988) as attitudes towards propositional constructions, not towards mere propositions; this proposal blocks undesirable consequences embraced by intensional semantics and solves the problem of *logical omniscience*.

The type of constructions is split. Tichý's late system is thus a special *ramified theory of types*. Consequently, it is easily capable of avoiding a number of *paradoxes concerning 'propositions'* (propositions not in the strict sense of possible world semantics). One of the best known paradoxes concerning possible worlds and 'propositions' is Kaplan's (1994). In Tichý (1988, sec. 42, 218 and passim), he reminded the reader of the fact proven by Cantor that there are more mappings from (nonempty) set S to (nonempty) set S' than there are members of S. Thus, there are more propositions than worlds: no mapping can associate, in 1-1 fashion, every proposition with a certain world (or world/time couple). Consequently, no matter how one explicates relations such as belief, assertion,... between individuals and propositions, "there will always be a proposition such that at no world/time couple is it the only proposition believed, or asserted, by George IV." (Tichý 1988, 219). Tichý demonstrated the situation and immediately proved Theorem 42.1, the corollaries of which provide his solution to the *Liar paradox* (which bears resemblance to his solution in his 1976).

7. Conclusions

To repeat the most essential features of Tichý's conception of possible worlds, Tichý proposed it in close connection with his sophisticated and extensive logical system. Similarly as other intensional logicians/semanticists, he used possible worlds for semantic analysis of natural language and also further explication of various notions of our conceptual scheme such as fact, causality, event, ability, freedom, propositional attitudes, subjunctive conditionals and modalities. Though it is problematic to subsume his conception under the known ones, "combinatorialism" and "actualism" seem to be the most appropriate labels.

Tichý's first proposal was published in 1968. His conception underwent various modifications, but its main character remained unchanged. In the first stage, possible worlds were classes of certain procedures (algorithms) consisting mainly of tests on individuals. In the second and subsequent stages, they were intuitively total classes of facts but Tichý technically treated them as arguments for his intensions, i.e. as logically primitive entities. The combinatorial character was underlined by his late conception in which the intuitive possible worlds are explicitly specified as some determination systems; determiners are then explicated as intensions.

A tension in textual evidence is caused by the fact that Tichý always described possible worlds in the spirit of combinatorialism but, at the same time, he treated them as logically primitive entities of his logical framework. Above, I have reconciled the two views utilizing Tichý's late suggestion that the former worlds are only intuitive, pre-theoretic possible worlds, while the latter worlds are their rigorous explicata.

Tichý usually stressed intensional dependence of attributes/determiners and also the idea that worlds are individuated even by the nexuses and attitudes which are realized in them. In the late 1970s, he added temporality. Tichý always preferred fixed domain; he modelled 'possibilia' as individual offices, i.e. some intensions. Since his recent type-theoretic framework is explicitly ramified, his approach can avoid various paradoxes concerning possible worlds and 'propositions'.

Some questions not answered by Tichý, but posed and answered by some his followers, concern the structured nature of facts, the nature of correspondence, and the possibility to construct possible worlds from structured facts. Another important task is to elaborate consequences of temporality involved in Tichý's conception of possible worlds.[22]

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Quantificational Accounts of Logical Consequence III. The Model-Theoretic Account: Quantificational Approach Triumphant?[1]

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ABSTRACT: This concluding study devoted to quantificational accounts of consequence and related logical properties deals with the model-theoretic account (MTA). In response to objections questioning its intuitive adequacy, it is argued that MTA does not aim to analyse "the" alleged intuitive notion of consequence, but aims to formally reconstruct one specific semantic account, according to which valid arguments preserve truth in virtue of their logico-semantic structure and irrespectively of particular semantic values of the non-logical vocabulary. So conceived, MTA is arguably superior to any other quantificational account, being based on a principled account of the semantic structure and the specific contribution of logical elements to it.

KEYWORDS: Logical consequence – models – quantificational accounts – validity.

1. Introduction

In my penultimate study (see Koreň 2014) on quantificational accounts of consequence, I discussed modern substitutional (Russell 1918/1919, 1919, Carnap 1937, Quine 1986) and interpretational (Tarski 1936) expla-

nations of valid arguments as those that preserve truth under all admissible variations with respect to their non-logical vocabulary. I highlighted two difficulties for such explanations: they might overgenerate due to limited expressive means or due to assuming a fixed domain of quantification. Tarski-style interpretational accounts avoid the first difficulty but the second remains pertinent. Quine's update on the substitutional account hopes to avoid both problems, but it is restricted to first-order languages rich enough to embed elementary number theory.[2] I suggested two reasonable desiderata that might be imposed on appealing quantificational accounts: (1) logical properties/relations of sentences should persist under subtractions and expansions of the non-logical vocabulary; and (2) they should persist no matter what sequence of possible semantic values of appropriate types we assign to their non-logical elements, whatever possible domain of application those values may come from. I concluded by saying that the model-theoretic account (henceforth MTA) of logical consequence as *truth-preservation across all admissible set-theoretic interpretations* suggests itself as an advance in this respect, as it appears to be taylor-made to meet the two desiderata. Many logicians would agree that MTA is the most promising semantic approach to consequence currently on the market, not least because it provides rigorous explications of logical notions – relative to a principled account of the semantic behavior of certain traditionally distinguished logical operators – that makes room for mathematically tractable metatheoretical comparisons between the semantic and the deductive side of logic. That said, MTA has been subjected to vigorous criticism questioning its adequacy as an account of consequence. In particular, it has been claimed that it blatantly fails as an account of consequence, because it inevitably misses certain essential modal-epistemic characteristics of it (cf. Etchemendy 1990). In this concluding part of my explorations into the quantificational tradition, I discuss how MTA fares *vis-à-vis* the main philosophical objections in this direction, suggesting considerations that conspire together to provide a partial vindication of MTA.

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[2]   And, as I pointed out in Koreň (2014, 322), identity is not regarded as a logical primitive but as a defined predicate expressing indistinguishability with respect to all (*n*-adic) predicates of the object-language.

2. MTA

As is established practice, we will introduce the essentials of MTA by focusing on a first-order language L (with identity), containing denumerably many individual constants and variables, *n*-adic predicates and *n*-adic functors. With the syntax defined in the usual way via recursive definitions of the sets of *L-terms*, *L-formulas* and *L-sentences*, the idea of interpretation of L in L-structure $\Re$ is implemented by taking a non-empty set d as the domain of $\Re$, and assigning extensions of appropriate types (defined over d) to non-logical symbols, according to their categories: (a) an element $c^\Re \in d$ to each individual constant c; (b) an *n*-adic relation $P^\Re \subseteq d^n$ to each *n*-adic predicate P (for every $n \geq 1$); (c) an *n*-adic operation $f^\Re: d^n \to d$, to each *n*-adic function symbol f (for every $n \geq 1$). This amounts to a set-theoretic interpretation of L in $\Re$, usually represented as the ordered pair $\langle d, I \rangle$, with I being an interpretation-function accomplishing the job of (a),...,(c) above. On this basis, satisfaction of a formula of L in $\langle d, I \rangle$ by a variable-assignment (function assigning d-elements to individual variables) is defined by recursion on the logical complexity of the formula. As a limiting-case, then, truth of a sentence *A* (formula with no occurrences of variables free) in $\langle d, I \rangle$ is defined as its satisfaction by all variable-assignments of d-elements:[3]

$\Re \models A$ iff $\Re$, s $\models A$, for every variable-assignment s of d-elements,

where "$\Re$, s $\models A$" says that *A*, as interpreted in $\Re$, is satisfied by a variable-assignment s of d-elements. If we read "$\Re \models A$" as saying that $\Re$ is a *model* of *A*, we can finally define crucial model-theoretic notions as follows:

$\Re$ is a model of a set Γ of L-sentences iff $\Re$ is a model of each sentence in Γ.
A is valid iff every L-structure $\Re$ is a model of *A*.
A is a consequence of Γ iff every L-structure $\Re$ that is model of Γ is also a model of *A*.

The idea here is that whereas the semantics of L's logical constants is fixed (the same irrespectively of what admissible structure interprets L) via

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[3]   I pass over tedious details, the requisite machinery being contained in any standard mathematical logic book such as Hodges (1997) or Enderton (2001).

recursive clauses of the general satisfaction definition, non-logical symbols of L are allowed to pick out different extensions in L-structures. Importantly, however, possible interpretations of non-logical constants are in no way arbitrary but have to harmonize in principled ways with the semantics of logical operators. Assignments of semantic values to non-logical constants are to be such that, in cooperation with the fixed meanings of the logical operators, they suffice to determine the truth-values of L-sentences. The rationale for this requirement should be clear: admissible interpretations of non-logical vocabulary encapsulate as much and only as much information as is required to fix truth-values of L-sentences in accordance with the semantics of their logical operators. For instance, the truth-value of the universal formula $\forall x(Fx \rightarrow Gx)$ is going to depend on what domain d the universal quantifier ranges over, the quantifier being sensitive only to extensions of predicates "F" and "G" in that domain. In general, the Fregean idea of the semantic value of a non-logical constant C is precisely the idea of a truth-relevant feature of C, to which solely the logical operators are sensitive (which operate on the non-logical expressions of C's type). An interpretation of L is then a systematic assignment of such truth-relevant features to its non-logical terms.[4]

Equipped with such semantic explanations and definitions based on them, MTA solves the problem of persistence-violation in Tarski's style – employing the method of satisfaction of formulas by variable-assignments of d-elements. Its comparative advantage *vis-à-vis* substitutional accounts is that it does not stand and fall with the expressive capacity of a language under consideration. And, by allowing domains to vary across set-theoretic interpretations, it avoids the problem of overgeneration that confronted interpretational accounts in the style of Tarski (1936). Consider a cardinality-sentence such as $\exists x \exists y \neg (x = y)$, which the interpretational account declares as logically true if it is true (if there are two or more objects), and as logically false if it is false (there being nothing to reinterpret in it, both quantifiers and "=" being regarded as fixed logical terms). However, it is not logically true (false) according to MTA, because it turns out false when interpreted in set-theoretic structures whose domains contain one object

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[4]   A comparative advantage of verifying interpretations *vis-à-vis* verifying instances is that while there is an interpretation for every verifying instance of a formula, structures are more manageable, encapsulating truth-relevant features that may be shared by several instances.

(and true if interpreted in bigger domains). The same holds, *mutatis mu-tandis*, for other cardinality sentences of this type (for $n>1$), all of which have models as well as counter-models in the vast realm of set-theoretic structures. Consequently, also formalized versions of inferences of the following type (or zero-premise inferences with such cardinality sentences as conclusions)[5]

$$\frac{\text{There are at least } n \text{ objects}}{\text{There are at least } n+1 \text{ objects}}$$

are not model-theoretically valid, since there is always a set-theoretic counter-model whose domain contains no more than n objects. Analogous considerations pertain to formalized versions of cardinality sentences of other types (e.g. those stating an upper bound on the size of the universe) or zero-premise arguments whose conclusions are such sentences.[6]

3. But is MTA really satisfactory?

Is the problem of persistence under all possible contractions and expansions of the quantifier-domain thereby solved? It may seem so, because logical properties now persist not just under all possible contractions and expansions of the non-logical vocabulary, but under all possible contractions and expansions of the domain of quantification, that is, no matter what domain of set-like size the individual variables range over. That said, the critic of MTA may retort that this glorious victory is pyrrhic, as it does not come for free. To use Quine's words, with model theory we are far away from "the modest bit of set theory" (viz. finite sets),[7] being committed to

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[5]　Of the type: $\exists x_1...\exists x_n[\neg(x_1 = x_2) \wedge ... \wedge \neg(x_1 = x_n) \wedge \neg(x_2 = x_3) \wedge ... \wedge \neg(x_2 = x_n) \wedge ... \wedge \neg(x_{n-1} = x_n)]$, therefore $\exists x_1...\exists x_{n+1}[\neg(x_1 = x_2) \wedge ... \wedge \neg(x_1 = x_{n+1}) \wedge \neg(x_2 = x_3) \wedge ... \wedge \neg(x_2 = x_{n+1}) \wedge ... \wedge \neg(x_n = x_{n+1})]$.

[6]　Except for famous (or infamous) sentences such as $\exists x(x = x)$, whose natural reading is that *there is at least one object*, and which is satisfied in all first-order structures (as all have non-empty domains). Other problematic sentences are of the type $\exists x(x = a)$, $\exists x(Fx \vee \neg Fx)$, $\exists x(Fx \rightarrow Fx)$.

[7]　The modest bit of set theory that is needed in Quine's view to provide a substitutional account of logical properties for first-order languages rich enough to embed elementary number theory, which is provably equivalent to the set-theoretic account in the

"the universe of sets of a specifiable and unspecifiable size" (Quine 1986, 55). Now, this warning may or may not appeal to us, depending on whether we want to extend logic beyond first-order systems and whether we take the amount of "higher" set theory needed to build models for such languages to be sufficiently clear. But even if we set aside Quine's scruples, it might be argued that the trouble with the model-theoretic account is deeper. For isn't the problem of intrusion of substantive assumptions into logic still with us, this time reappearing on the level of meta-theory with its set-theoretical assumptions? The objection may be pressed as a version of Wittgenstein's challenge that we saw at work when we discussed Russell's substitutional account (cf. Koreň 2014): if logical relations and properties are to be construed as formal and topic-neutral, it would seem that they should not be contingent on substantial truths of whatever sort. However, MTA appears to make them contingent on substantive matters, this time in the form of specific background set-theoretic assumptions; so logical properties and relations are not distinguished from substantive (indeed, topic-specific) generalizations in terms of sets.

In this spirit, Etchemendy (1990) argued that the model-theoretic account of logical properties is guilty of a misguided reduction, precisely because possession of a logical property such as logical truth (or logical validity, in case of arguments) is equated to the truth of a certain set-theoretic generalization. To see what is at stake, consider a first-order sentence

$$S[a_1,..,a_1, A_1,..,A_n],$$

where $\{a_1,..,a_1\}$ is the set (possibly empty) of all its individual terms, and $\{A_1,..,A_n\}$ is the set of all its unary predicates (possibly empty). We shall assume that S does not contain any other non-logical constant. As Etchemendy notes, the model-theoretic account declares S as logically true just in case the following set-theoretic sentence holds (for $1 \leq i \leq n$):

$$(\forall d)\ (\forall x_i \in d)\ (\forall X_i \subseteq d)\ (x_1,..,x_1, X_1,..,X_n),$$

in which the non-logical constants are uniformly replaced by variables of fitting logical types (a_i/x_i ; A_i/X_i), and the result is universally closed with

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model-theoretic style. Cf. Quine (1986, 56). See also my discussion of Quine's account in Koreň (2014, 319-323).

respect to all variables.[8] This set-theoretic sentence states that the matrix $(x_1,..,x_1, X_1,..,X_n)$ is satisfied with respect to all individual domains, whenever we assign elements of such domains to individual variables and subsets thereof to predicate variables. In effect, MTA tells us that:

> S remains true no matter what domain d we take S to talk about, no matter what individuals $x_1,..,x_1$ (from d) the terms $a_1,...,a_1$ respectively pick out and no matter what subsets $X_1,..,X_n$ (of d) the predicates $A_1,..,A_n$ respectively pick out.

This consideration applies, *mutatis mutandis*, also to the model-theoretic account of logical consequence as truth-preservation across all set-theoretic structures. Fully spelled out, what MTA states is that an L-sentence *A* logically follows from a set Γ of L-sentences just in case a certain set-theoretic sentence holds, namely one stating that every model of Γ is also a model of *A*.

At first blush, MTA is an obvious advance over interpretational accounts in the style of Tarski (1936), helping us to address the overgeneration problem due to the fixed domain. But Etchemendy thinks that this reductionist maneuver is still misguided as an analysis of logical properties, because it makes the logical status of a sentence (or argument) dependent on whether a substantive set-theoretic generalization holds, hence on extra-logical matters such as: whether there are sets, or how big (see Etchemendy 1990). For instance, if there were only finite sets, some substantive (e.g. cardinality) sentences should be declared logically true according to MTA, since there would not be enough (large) structures to show that they could fail to hold. Admittedly, the model-theorist might invoke the background set-theoretic axiom of infinity to ensure that there will be no shortage of sufficiently large sets (hence structures) to frame counter-models to such sentences. But the question then is why this manoeuvre is not on a par with the logicist postulation of the axiom of infinity that, many would agree, is suspect from the point of view of pure logic. Intuitively, such sentences are logically contingent and should remain so no matter whether sets are actually finite or infinite. Indeed, it would seem that a staunch finitist could consistently claim both that there are (or *can be*) only finite sets and that cardinality sentences holding in all finite mod-

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[8]   The variables are to be chosen so as to avoid potential clash with bound variables already present in S.

els are still not logically true (see Etchemendy 1990, 195). If this is intelligible, model-theoretic validity just cannot capture the essence of our intuitive notion of consequence. Or so Etchemendy argues, concluding that MTA fails to provide adequate conceptual analyses of logical properties.

Etchemendy pushes this line of objection yet further, maintaining that although the standard MTA does not overgenerate in the first-order case (i.e. it does not declare as logically true/valid sentences/arguments that are not intuitively logically true/valid; see Etchemendy 1990, 154), this is no more than a happy coincidence owing to expressive idiosyncrasies of first-order languages (that the account does not overgenerate he takes to be shown by a version of Kreiselian squeezing argument to be reviewed shortly).[9] In the higher-order case we do not have any guarantee that the model-theoretic account does not overgenerate, declaring as logically true (valid) sentences (arguments) that are intuitively not logically true (valid). In fact, Etchemendy argues that it overgenerates, since there is a second-order formalizable sentence CH, expressed purely in variables and logical symbols, that is true in all standard (full) structures[10] just in case the Continuum Hypothesis holds, and a sentence non-CH of a similar character that is true in all such structures just in case the hypothesis fails to hold.[11] So, depending on whether the hypothesis holds or not, either CH or non-CH is declared as logically true by the model-theoretic account for second-order logic. But isn't that weird, given that the hypothesis seems to express a rather substantive mathematical fact, if true? Once again, logical properties

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[9] As Blanchette (2000; 2001) points out, even this claim needs qualification, as the set of first-order validities (which, by the completeness theorem, is included in the set of purely logically provable first-order sentences) includes also *prima facie* logically contingent sentences of the type $\exists x(x = x)$, $\exists x(x = a)$, $\exists x(Fx \lor \neg Fx)$, $\exists x(Fx \rightarrow Fx)$.

[10] The standard semantics of second-order logic works with full models interpreting second-order predicate variables as ranging over *all* sets of *n*-tuples of the domain over which first-order variables range. This does not hold for Henkin's non-standard semantics that does not force second-order variables to range over all such subsets.

[11] The Continuum Hypothesis says that there is no set such that its cardinality is greater than the cardinality of the set of natural numbers but strictly smaller than the cardinality of the set of real numbers. If we let „x > N" and „R ≤ x" to abbreviate second-order definable properties of *being of greater cardinality than the set of natural numbers* and *being of no smaller cardinality than the set of real numbers* respectively, CH can be captured thus: $\forall X(X > N \rightarrow R \leq X)$. Cf. Blanchette (2001, 128).

explicated *à la* MTA seem to be contaminated by apparently extra-logical matters (see Etchemendy 2008, 176-177).[12]

One's response to this kind of objections is going to depend on one's view of the nature of logic and its relation to mathematics. Several stories may be told here, but I favour the one in which mathematics (its set-theoretic branch) is utilized by logicians as a powerful modelling device, where modelling involves vital aspects of representation, idealization and abstraction.[13] Specifically, mathematical tools help us reconstruct correct reasoning in various domains, disregarding irrelevant features, while retaining and possibly sharpening features deemed central – and all this for theoretical and practical purposes at hand (cf. Priest 1999). This approach to logic seeks not only a proper balance – reflective equilibrium – between general theoretical principles, informal desiderata (e.g. a prioricity, necessity, formality) and intuitive judgements concerning validity, but the whole enterprise is open to revision and subject to the criteria of simplicity or economy, just as any other theory using mathematical models of real-world phenomena.[14]

Viewed from this perspective, as Shapiro (2005) points out, it makes little sense to say that MTA aims to "conceptually analyze" intuitive notions of logical truth or consequence – still less "the" intuitive notions of logical truth or consequence – when defining their idealized formal-mathematical counterparts (see also Priest 1995). Etchemendy's objection that MTA fails as a conceptual analysis is thus off the mark, as MTA does not aim to provide conceptual analyses (in whatever plausible sense this may have). Still, we need not deny that it may be somehow desirable to incorporate into a good formal model of logical properties the informal desideratum that

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[12] The Continuum Hypothesis is independent of the first-order ZFC (Zermelo-Fraenkel axiomatization of set theory plus the axiom of choice) but semantically decided in its second-order version. Does not this show that the second-order model-theoretic consequence brings in a rather substantive (and controversial) set-theoretical content that cannot be reasonably considered logical? Cf. Blanchette (2001) for a discussion.

[13] Shapiro (1991; 1998; 2005) develops this approach that he calls *logic as model*.

[14] Considerations of economy and simplicity could eventually conspire together to weaken the pull of informal desiderata (intuitions) to the effect that logical truth or consequence has to be necessary, a priori recognizable, or topic-neutral. Thus, what seem to be logically contingent sentences of the type $\exists x(x = x)$, etc. (or arguments having them as conclusions) may eventually be declared as logical truths (valid arguments) of the first-order logic precisely on such "pragmatic" grounds.

they should persist *irrespectively of what may be the case*. The question is how to make it formally precise, that is, how to model it. Now, up to a point at least, the abstract universe of sets is a powerful modelling device that allows us to formally reconstruct both the idea of truth-relevant *cases* (viz. *structures*) and the idea of *truth of a sentence in a case* (viz. a *structure being a model of the sentence*). One can make the idea mentioned above more precise by saying that if a sentence is logically true, then it is true no matter what possible domain it talks of – modelling various possible domains via sets.[15] It is vital here that plenty of domains of various (including infinite) sizes can be represented in the abstract set theory, as this allows us to model the informal idea that logical properties persist no matter how the world could be (that is, no matter what things it may contain or what may be true of them). Just as we need an abstract representation of possible distributions of truth-values w.r.t. atomic sentences, we need an abstract representation of possible distributions of truth-relevant semantic values w.r.t. terms and predicates relative to domains talked about.

Granted, then, the model-theoretic account provides formal reconstructions of informal notions of logical properties, *based* on the mathematical ideology and ontology of the background theory. But, of course, that does not mean that the formally modelled phenomenon is set-theoretic in nature or supervenes on set-theory (Do successful mathematical models of real-world phenomena imply that modelled phenomena are – or somehow supervene on – mathematical phenomena?). Rather, the background set theory (or, possibly, another sufficiently powerful abstract apparatus) may be viewed as an abstract *instrumentarium* of formalized explications of informal interpretational notions of logical properties.[16]

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[15]   Shapiro (1998) and Hanson (1996) both argue for a hybrid interpretational-modal notion of logical consequence as one that the model-theoretic account explicates (though the latter replaces possibilities by set-like domains supposed to exist in the abstract but actual universe of sets). Shapiro (1998; 2005) emphasizes the isomorphism-property of models and suggests that the only differences between models that really matter concern their respective sizes but not what individuals they contain. Shapiro claims that this captures the intuition that logic is in some sense topic-neutral, and, accordingly, that logical truth and consequence are insensitive to identities of objects, being invariant under permutations of the domain.

[16]   Except of Shapiro (1998; 2005), see also Chihara (1998), García-Carpintero (1993) and McFarlane (2000).

It is a vexed question how far we can get with the set-theoretic instrumentarium. Already a natural interpretation of the first-order set theory would seem to require the domain (of all sets) that is too large to be a set, hence it is not represented in the model-theory, as model-theoretic structures have set-like domains.[17] And if the world contains more things than can be packed into a set-like collection, then the model-theoretic account misses one crucial possible domain – namely the actual one.[18] Maybe proper classes or something of the sort can be invoked to amend the model-theory in this respect.[19] However, we should never forget that such mathematical models are useful servants only to the extent we understand them well. There are theorists who think that higher-order logics can be approached in a similar model-theoretic spirit, but substantively "higher flights" into set-theory or beyond may be called for if one wants a suitable modelling device for it. And this may certainly give one a pause: are not second-order logical truths and consequences just – as Quine warned us – disguised mathematical (set-theoretical) truths and consequences?

Be that as it may, for the paradigmatic first-order case at least we have an argument in support of the extensional accuracy of MTA, which has no analogue in the second-order or higher-order case. Let us have a closer look at it to see what morals we may draw from it.

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[17]   Viz. Kreisel (1967) and McGee (1992). Reservations about MTA concern the circumstance that domains of models are bound to be sets, which may result in its declaring certain sentences to be true (or false) in all models that are non the less not true (or false) in all interpretations (may be true/false in an interpretation whose domain is too big to be a set). McGee's example is a sentence (involving a new cardinality-quantifier '∃^{AI}' expanding the standard first-order language) to the effect that *there are not absolutely infinitely many (self-identical) things*, where the cardinality in question is of a proper class. Then all set-theoretic interpretations are its models, but it is false under its natural interpretation requiring a proper-class as the domain. See also Blanchette (2000).

[18]   Cf. McGee (1992, 279) or Field (2008, 45). Also for Field this means that a sentence *P* (or argument *Ps/C*) may be true (valid) in all set-theoretic structures without being true (truth-preserving) *simpliciter*.

[19]   Field (2008, chap. 2) argues that even if we allow more generous models (say, with proper-class domains), the problem arises anew a level higher.

4. Kreisel's squeezing argument

Kreisel (1967) famously argued that the model-theoretic explication of logical validity (as well as of logical truth) introduced above is, in the first-order case, extensionally adequate with respect to a certain informal-intuitive notion of logical validity (or logical truth).[20] Let us consider first-order languages and the notion of logical validity informally characterized as *truth-preservation in every interpretation (structure)*, that is, whatever domain d of individuals we take and whatever extensions (over d) of the right type we let the non-logical vocabulary of the argument to pick out. Kreiselian argument then shows that this informal notion is coextensive with the formally precise notion of *truth-preservation in every set-theoretic interpretation* (*structure*) as it is standardly reconstructed in set-theory.

Kreisel's recipe is remarkably simple.[21] Let I_v be the set determined by the first notion (*intuitive validity*), let S_v be the set determined by the second notion (*set-theoretical validity*), and let P_v be the set determined by the notion of *argument provable in a standard first-order proof-system* (*proof-theoretical validity*). We start noting that $P_v \subseteq I_v$, as any standard proof-system, is intuitively sound in that it does not prove any argument refutable by some admissible interpretation. That is to say, P_v does not overgenerate w.r.t. I_v, or we would not have a reason to accept the proof-system in the first place. Suppose further that I_v overgenerates w.r.t. S_v. If so, there is an argument that is I_v-valid while having a countable set-theoretic counter-model C in the domain of natural numbers.[22] But this cannot be the case: the argument is not intuitively valid as interpreted in C, hence it is not I_v-valid. We can thus be sure that $I_v \subseteq S_v$. But then we also have

$P_v \subseteq I_v \subseteq S_v.$

In the last step we can apply the completeness theorem for first-order logic to obtain $S_v \subseteq P_v$: every set-theoretically valid argument is also proof-theoretically valid. In that case we also have

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[20]   Kreisel (1967, 89-93). I shall confine the argument only to logical validity.

[21]   See Smith (2010) for an admirably clear exposition of squeezing arguments and discussion of their philosophical ramifications.

[22]   By the downward Löwenheim-Skolem theorem that we saw at work in Quine's argument for extensional adequacy of his substitutional account of logical truth w.r.t. truth in all set-theoretic interpretations (= S_v).

$$P_v \subseteq I_v \subseteq S_v \subseteq P_v$$

which forces the three sets under consideration to coincide in extension:

$$P_v = I_v = S_v.$$

Summing up: Kreisel's reasoning shows that none of the three notions corresponding respectively to the sets P_v, I_v and S_v overgenerates or undergenerates with respect to the others.[23]

Kreisel's recipe has its limits, as for incomplete logics (in particular, second-order logic) we could not carry out the last step of the argument. One issue arising here is what implications this has. One may want to suggest that a genuine logic is to be complete so that a version of Kreiselian argument can be reconstructed for it. But the opponent of this view is likely to retort that a complete (and compact) system such as first-order logic is expressively too weak to formalize categorical theories of paradigmatic mathematical structures (having just one model up to isomorphism; cf. Shapiro 1985; 1991; and Read 1995; 1997), and, connected with this, cannot capture intuitively correct reasoning about such structures (cf. Shapiro 1991 or Read 1995). According to this criterion, second-order logic, albeit not effectively axiomatizable, might be considered superior. In the second round, the opponent of higher-order logic might complain – following Quine (cf. Quine 1986; or Tharp 1975) – that they blur the distinction between logical and mathematical truths. Now, which perspective one deems more plausible and fruitful is going to depend on one's view of what logic is after.

For instance, the fact that MTA for second-order logic declares either CH or non-CH logically true (depending on whether the Continuum Hypothesis holds) may be used to challenge the status of second-order logic as a genuine logic. Or it may be advertised as showing us that, in the general case, MTA does not provide a good model of the informal interpretational notion of logical truth. Or one may want to bite the bullet holding that CH or non-CH is indeed logically true, possibly arguing in a Quinean way – but *pace* Quine himself in this particular case – that there is no clear-cut

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[23]   Note that Kreisel's squeezing argument does not appeal to the standard soundness theorem relating P_v to S_v.

boundary between logic and mathematics after all (cf. Shapiro 1998, 146, who urges this last strategy).[24]

Another important issue concerns the claim that Kreisel's squeezing argument assures the adequacy of MTA with respect to the intuitive-informal notion of validity. Indeed, the argument appeals to an informal-intuitive notion of "validity" as *truth-preservation under all interpretations in all structures*. But we should be careful here, since the theoretician's "intuitive" notions of validity typically involve a certain sharpening of the initial intuition about consequence that *it is somehow excluded that the premises hold and the conclusion fails to hold* (or that holding of the former establishes holding of the latter).

I propose to see the conceptual situation along the following lines.[25] Kreisel's informal-intuitive notion of validity presents *one* possible sharpening of our initial (imprecise and ambiguous) intuition. Semantically approached, the intuition can be first sharpened via the idea that the conclusion of a valid inference is true in every case in which the premises are true. Second, truth-preservation characteristic of valid arguments is further explained as depending on the semantic behaviour of "formal-logical" elements and on the semantic profile of the premises and conclusion (the pattern of logical terms and the semantic categories of the remaining non-logical terms to which the logical terms are semantically sensitive). This is designed to capture the formal character of logical consequences distinguishing them from those preserving truth due to connections between their descriptive terms.[26]

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[24] I am indebted to James Edwards for pressing me to be much clearer on this point.

[25] This proposal is indebted to Smith (2010).

[26] It is thus not charitable to charge that they do not capture validity of arguments like "Bob is bachelor; so Bob is unmarried", as Etchemendy (1990; 2008) or Read (1994; 1995) do. Granted, they "undergenerate" w.r.t. the notion of analytical validity (or purely modal notion of validity). But this is just what they wanted! Indeed, we could just as well say that analytical validity overgenerates w.r.t. formal validity. Admittedly, the distinction between analytical and formal validity is relative to how we divide terms into logical and non-logical (or descriptive). If there is – as seems quite likely to me – no principled demarcation, the boundaries of the two classes will be flexible to some extent or other. The debate about the nature of the logical constant is very much alive, but I have no space here to join it. Let it be said that none of various ingenious proposals (including Tarski's 1986 latter attempt to define logical notions as those that are inva-

Precisely this informal explication is captured in Kreisel's "intuitive-informal" notion of *truth-preservation under all interpretations in all structures*, it being understood that (1) structures represent cases and (2) what gets reinterpreted across various structures are non-logical elements. Note, however, that the Kreiselian notion is still "informal", since it is not yet a mathematically defined notion (as opposed, say, to *truth-preservation under all interpretations in all set-theoretic structures*, which is set-theoretically defined as S_v; cf. Smith 2010). However, for the first-order case we have a Kreisel-style argument that this informal notion coincides extensionally with the precise set-theoretical one. For the first-order case, then, we have justified the model-theoretic notion of validity as a good formal explication (or reconstruction) of the Kreiselian notion, which presents an informal explication of the rough intuition that we have started with.

Seen in this light, Kreisel's argument shows that *a* reasonably motivated (and historically important) informal sharpening of the vague idea of validity coincides, in the first-order case, with two formally precise notions – namely model-theoretic validity and provability. That is, the mathematically precise explication of validity in terms of set-theoretical models is not just extensionally adequate with respect to standard proof-systems but also with respect to the interpretationally characterized notion of consequence as truth-preservation under all admissible valuations of non-logical vocabulary that respects the semantics of logical terminology. Accordingly, it can be viewed as a good mathematical model or reconstruction of the last notion.[27]

What Kreisel's argument does not show, though, is that the model-theoretic notion of validity or the informal notion it models is *the* correct one, getting right *the* intuitive notion of validity. On the view I urge, the idea that there is such a notion of validity to be got right is a wild goose chase.[28] If the alleged common notion of validity is the initial intuition

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riant under all permutations of the domain) has found wider acceptance, and there is a tendency to see the matter of choice of logical constants as more or less pragmatic.

[27] Shapiro (2005) argues, quite plausibly, that the mathematically precise notion of proof-theoretical validity can be seen as a model of an epistemic aspect of consequence understood with Frege as *that which can be derived via a gap-free chain of applications of visibly sound inference rules.*

[28] As I understand them, Smiley (1989), Smith (2010) and Beall – Restall (2006) seem to urge a similar view.

mentioned above, it makes no sense to "get it right" – to give an equivalent preserving all its vagueness and ambiguity. Rather, an explication is in order, whose point is to replace it with something better by way of precision and theoretical fruitfulness. And if one has in mind some notion involving a refinement/sharpening of this intuition, we may point out that several informal explanations of it are possible, the interpretational account being just one among them (though historically prominent). Thus the deductivist or relevantist tradition in thinking about logic propound alternative accounts of the initial intuition about validity that in a valid argument it is somehow excluded that the premises hold and the conclusion fails to hold. The question as to which of these notions is *the* correct one is out of place, though we may compare them and weigh their merits in light of their theoretical fruitfulness, comparative clarity of ideology or ontological costs.[29]

5. The alleged devastating objection

The foregoing discussion will not persuade everybody that quantificational account in the model-theoretic style is a good thing. Let me finally turn to what can be considered the most principal objection to quantificational account in whatever form. An early version was voiced by Kneale in the early 1960s:

> Just as according to [Bolzano's] definitions a proposition can be analytically true by accident, so too one proposition may follow from another by accident, that is to say in such a way that the truth of the universal proposition about the results can be known only by an examination of the individual results.
> ... a proposition cannot properly be said to be derivable from a set of premises unless it is possible to establish that if the premises are true the proposition is also true without first establishing whether or not the premises and the proposition are true. (Kneale 1961, 94)

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[29] Moreover, there is nothing in the initial intuition *per se* that compels us to emphasize the formal aspect and the classical first-order forms in particular (hand in hand with its standard selection of logical terms). So there is a room for accounts of validity explicating the vague intuition so as to be usable for "non-classical" logics, which develop the logic of specific modal, epistemic, deontic (etc.) notions.

Kneale's worry is that if we explain the nature of logical properties in a purely quantificational style (substitutionally or interpretationally), we cannot do justice to the intuition that recognition of an argument's validity is to be independent of knowledge of the truth-values of its component sentences.

An elaborated version of this objection can be found in Etchemendy's sustained argument against the standard model-theoretic account (see especially Etchemendy 2008, 265-271). On his view, quantificational accounts in general and the standard model-theoretic account in particular introduce as a defining characteristic of validity something that is only a symptom (though a reliable one) of it. Let us call this symptomatic characteristic, which only masquerades as the true cause of validity, *the quantificational condition*:

> *Q*: to belong to a class of equiform arguments containing only truth-preserving arguments.

It is plain wrong, Etchemendy claims, to say that *A* is valid just *because* it meets *Q*, that is, just because it has only truth-preserving variants in the same form. As Kneale pointed out, this does not make *A* conceptually different from arguments that by sheer coincidence have no equiform counterexample, whose formally truth-preserving character is thus accidental and as such would have to be ascertained empirically – instance by instance.

Already this, Etchemendy submits, is a *reductio* of all quantificational accounts. Due to their faulty conceptual analysis that mistakes symptoms for a cause, quantificational accounts cannot but miss the following desideratum

> I. whatever validity is, it must be an intrinsic feature of *A* whose possession by *A* is recognizable without knowing the actual truth-values of *A*'s components (or of any other argument),

a special corollary of which is that

> II. whatever validity is, it must be an intrinsic feature of *A* that provides a guarantee that *A*'s conclusion is true given that *A*'s premises are jointly true, which does not depend on one's knowledge of the truth-value of *A*'s conclusion.

If one is after a plausible conceptual analysis of logical validity, one is to capture in the *analysans* a characteristic that meets at least those two desi-

derata. Or so Etchemendy seems to suggest. However, quantificational accounts relying on Q (or something of the sort) do not supply any such desirable characteristic. It seems that one cannot recognize that A meets the condition Q, without knowing of each given argument A^* in the same form that it is truth-preserving. Moreover, even if one checked all the other arguments in the same form and found them truth-preserving, this would not give him/her independent assurance that A is truth-preserving, not even if one already knew its premises to be true. For all one knows at this juncture is: either A has a false conclusion and is invalid or A has a true conclusion. So only if one already knows that A has a true conclusion, can one be sure that A is valid (provided one also knows that all other arguments in the same form preserve truth)! In which case, however, validity so defined is of no use at all to justify one in accepting A's conclusion on the strength of A' premises. Etchemendy concludes:

> It is clear that Tarski's definition tries to reduce a 'cause' – the logical consequence relation – to its 'symptoms,' the truth preservation that the consequence relation guarantees. And it is equally clear that this guarantee of truth preservation is the essential feature of logical consequence, the feature that makes it possible to infer the conclusion of a valid argument from its premises. In short, the reductive analysis omits the single most important characteristic of the consequence relation. (Etchemendy 2008, 271).

6. The alleged devastating objection rebutted

For a start, we should note that Q is not a sufficient but only a necessary condition of logical consequence in Tarski's interpretational or the standard model-theoretic account. But Etchemendy could still argue that a version of his argument goes through even for quantificational conditions spelled out in terms of interpretations. Indeed, there is a reason to think that if his argumentation works at all, it applies, *mutatis mutandis*, to any account spelled out in terms of *truth-preservation in all cases*, no matter how *cases* are construed:

> A follows from Γ just if A is true in every case C in which every $Ai \in \Gamma$ is true.

Already this, I think, may warn us that something is wrong with the argument. For note that much the same reasoning would apply to the "representational" slogan favoured by Etchemendy:[30]

A follows from Γ just if for every possible configuration w of the world, A is true in w, if every $Ai \in \Gamma$ is true in w.

Whatever *cases* may be, one could argue in Etchemendy's style that *truth-preservation (truth) in all cases* is merely a symptom of what in the last instance brings it about (of a "true cause"). For surely it is no less absurd to suppose that one has to check all logically possible ways the world could be in order to find assurance that truth cannot but be preserved from Γ to A. Even if, *per impossibile*, we checked all possible but non-actual ways the world may be and found out that they do not disqualify the inference from Γ to A, and even if, in addition, we knew that all the premises are true, we would still face the following unpalatable option: either A is non-truth-preserving (invalid) in the actual world or A has a true conclusion in this world. In order to decide the question whether the inference is valid, we would have to know the actual truth-value of A's conclusion.

One thus suspects that the argument shows at most that quantificational slogans are *just* slogans and cannot therefore provide the whole story. Indeed, at least in interpretational approaches there is arguably more to logi-

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[30]   Etchemendy (2008, 285-295) compares the interpretational approach to model-theoretic semantics (developed by Tarski *et al.* in the 1950s) with the representational approach to model-theoretic semantics. Roughly speaking, while the first fixes the world and lets interpretations of the non-logical vocabulary vary (together with the domain of quantifiers), the second fixes meanings of all words and lets the world vary (but allowing words to pick out different extensions in different logically possible configurations of the world). To be fair to him, he does not think that the slogan spelled out in terms of logically possible worlds provides a conceptual analysis of logical validity. In his view, the notion of "logically possible configuration of the world" already presupposes understanding of logical properties, since representational models must be *consistent*, mutually *independent* and *jointly complete* in determining the whole logical space of possibilities. If I understand him, Etchemendy thinks that logically possible configurations of the world invoked by a representational model-theory are not irreducibly "modal" in some metaphysical sense, but reflect the specifics and requirements of a proper semantic analysis of a given domain of discourse (reasoning), which focuses on the semantics of certain terms (but without assuming any fixed-privileged set of "logical" terms), while treating the remaining terms "schematically" (what general semantic features they contribute to the semantic structure involving the first terms).

cal properties than the quantificational slogan reveals. By way of conclusion, I am going to point out that this is something that should be rather obvious in the case of the standard model-theoretic account. In my view, it makes Etchemendy's argument off the mark.

The minor point already mentioned is that MTA does not aim at a conceptual analysis but at a mathematical explication (model) of informal logical notions.[31] But, more importantly, the quantificational slogan is not all there is to the model-theoretic reconstructions of logical properties. It is but a convenient short hand for something more complex, which presupposes the full-blooded model-theoretic explanation of satisfaction/truth in a set-theoretic structure with all its tedious details. It is these details, of course, that flesh out the quantificational slogan spelled out in terms of truth-preservation in all (set-like) structures. The recursive story fixes the semantics of logical operators and shows how the truth-value of every sentence (in a given structure) is determined based on the truth-relevant features of its components to which the fixed semantic features of logical operators are sensitive. Importantly, this story also tells us that there are sentences or arguments that possess certain properties independently of how their non-logical vocabulary is interpreted – no matter what specific values of fitting types from what particular domain they pick out. So to check that they possess such properties we need to have a general semantic knowledge of what the general recursive story states, but no specific knowledge of what specific values non-logical elements have (that is, to know the fixed semantic roles of specifically logical operators and the principled ways in which the non-logical vocabulary contributes to fixing truth-values of sentences whose semantic structure is determined by a certain schematic pattern involving the logical vocabulary).[32]

Up to a point, this answers Etchemendy's objection that the interpretational account (formalizable model-theoretically) completely misses the epistemic aspect of validity (he conceives of it as a kind of *a priori* knowability that the supporting relation between the premises and conclusion obtains). But in the next step one may question his desiderata I-II, as begging the

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[31]   Apparently, I disagree with Etchemendy on this point too, as he thinks that interpretational accounts are failed attempts to provide accurate conceptual analysis of logical properties. Cf. Etchemendy (2008, 294).

[32]   A well executed attempt to justify the model-theoretic account along these lines is García-Carpintero (1993).

question against semantic-interpretational notions of validity (logical truth). On such accounts, the "semantic" consequence-relation, unlike the "syntactic" proof-relation, need not be in general effectively recognizable – not even a priori. If an argument belongs to a decidable logical system (viz. propositional logic), everything is just fine. When it belongs to a complete system whose set of theorems (logical truths) is recursively enumerable but not decidable (such as first-order logic), we have at least a positive test: if the argument *Ps/C* is valid, there is a proof in the system of *C* from *Ps*. However, when it belongs to a system with an incomplete proof-procedure (viz. second-order logic), there is not even a positive test. Now the proponents of the model-theoretic approach in particular tend to see this as its virtue helping us to sort things out, rendering the deductive and the semantic side of logic formally tractable and making room for fruitful meta-theoretic comparisons between them.[33]

Maybe Etchemendy does not have in mind proof-theoretic criteria when he speaks of the intrinsic power of valid arguments to justify conclusions solely on the strength of accepting their premises. Maybe he thinks that a properly "semantically" construed account of logical properties – along the representationalist lines – must show that valid arguments have this epistemic (justificatory) feature. If so, he just does not make it clear how such a story is supposed to go (and I suspect that its essentials, if spelled out, would not significantly differ from the account given two paragraphs back). Hence it is far from clear why a semantically valid argument should always be (*a priori*) recognizable as such.

All in all, seeing how the recursive semantic story fleshes out interpretational accounts and that the semantically construed consequence-relation, unlike the effective proof-relation, may not be (always) recognizable as such, the proponents of interpretational approaches (including its model-theoretic formal explication) need not be paralysed by Etchemendy's allegedly devastating objection.

7. Conclusion

My aim in this study was to show that MTA, properly understood, marks a culmination point in the quantificational tradition; and that, up to

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[33]   Here I am much indebted to the comments of James Edwards.

a point, it can be partially vindicated against various objections challenging its adequacy. The strategy was to show that, up to a point at least, MTA is a good formal explication of a specific informal semantic account, according to which logically valid arguments preserve truth in virtue of their logico-semantic structure and irrespectively of particular semantic values of the non-logical vocabulary. This is a modest achievement. For one thing, I make no pretentious claims to the effect that MTA is the best account of *consequence proper*. On the pluralistic approach urged here, this claim does not even make good sense, since there is no such a thing as *the* intuitive or pretheoretic notion of consequence to be captured by the conceptually adequate definition. For another thing, there are foundational questions about consequence that I have not touched. For instance, if logic indeed aims to provide good models of correct reasoning, one pertinent issue is whether mathematical practice in particular and reasoning practices in general are not better reflected in the *deductivist* or *inferentialist* models, which give pride of place to rules of inference and their chaining. But, understandably, this big issue – and related questions – could not be addressed in the limited stace of this study.

Acknowledgements

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Záměr Wittgensteinova *Traktátu* (2): Korespondence

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ABSTRACT: The article presents a second part of an interpretation of the intention of Wittgenstein's *Tractatus*. The intention itself used to be considered a rather marginal topic until so called new-Wittgenteinian interpretations. The present article considers main sources to show what kind of content we can ascribe to the book. Its aim is to prove that *Tractatus* is not purely practical exercise, however, without stripping the book of its therapeutic side. This second part continues with interpretation of Wittgenstein's correspndence with Russell, Frege, Ficker and comes to the conclusion for both parts considering mutual relation of all the sources.

KEYWORDS: Bertrand Russell – Frank Ramsey – Gottlob Frege – *Tractatus* – Wittgenstein.

Naším cílem je zde výklad záměru Wittgensteinova *Traktátu*. Pramenem je nám jednak kniha samotná, hlavně její předmluva a motto, kterým byl věnován předchozí díl článku, jednak dobová korespondence s Russellem, Fregem a s nakladatelem Fickerem, ve které se jim Wittgenstien pokouší vysvětlit, oč mu v knize šlo. K té přejdeme nyní.

1. Dopis Russellovi

Důležitým zdrojem pro pochopení záměru knihy je Wittgensteinův dopis Russellovi z 19. srpna 1919:

> Obávám se, že Vám doopravdy nedošel můj hlavní nárok, k němuž je celá záležitost s logickými větami jen mezikrokem. Hlavní pointou je teorie toho, co lze vyjádřit (gesagt) větami – tj. jazykem – (a co lze myslet, což je totéž) a co větami nelze vyjádřit, nýbrž pouze ukázat (gezeigt); což je podle mě kardinální problém filosofie.
>
> Poslal jsem svůj rukopis také Fregovi. Napsal mi před týdnem a připadá mi, že z toho všeho nepochopil ani slovo. Mohu tedy jen doufat, že Vás brzo uvidím a všechno Vám vysvětlím, protože je velice těžké, když není duše, která by Vám rozuměla![1] (Wittgenstein 1997a, 124)

Wittgenstein odpovídá na Russellův dopis, který shrnoval jeho dojmy z prvních dvou přečtení rukopisu. Russell byl velmi povzbudivý a zároveň kladl některé konkrétní technické otázky. Wittgenstein sice ve své odpovědi nejprve píše, že nemá po ruce text, takže si netroufá na jednotlivé otázky

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[1] "Now I'm afraid you haven't really got hold of my main contention, to which the whole business of logical prop[osition]s is only a corollary. The main point is the theory of what can be expressed (gesagt) by prop[osition]s – i.e. by language – (and, which comes to the same, what can be thought) and what can not be expressed by prop[osition]s, but only shown (gezeigt); which, I believe, is the cardinal problem of philosophy. I also sent my M.S. to Frege. He wrote to me a week ago and I gather that he doesn't understand a word of it all. So my only hope is to see you soon and explain all to you, for it is very hard not to be understood by a single soul!" (Wittgenstein 1997a, 124). Wittgensteinovy dopisy Fregovi se nedochovaly. Máme pouze Fregovy dopisy Wittgensteinovi, z nichž je zřejmé, že Frege ulpíval na technických otázkách víc než Russell a knihu četl důsledně jako akademický spis. Přitom dokázal (mimochodem pomocí stejného citátu z Lessinga, jaký o několik let později použil Heidegger ve věnování své první knihy svému učiteli Husserlovi) pregnantně vystihnout povahu Wittgensteinovy knihy, když vysvětloval, co mu na ní vadí: „To, co mi píšete o cíli své knihy, je mi vzdálené. Dojít k němu může jen ten, kdo myšlenky v ní vyjádřené už sám promýšlel. Radost z četby Vaší knihy nebude tedy pocházet z obsahu, který je už známý, nýbrž z formy, v níž se snad vyjeví něco z jedinečnosti jejího autora. Působnost knihy bude tudíž spíše umělecká než vědecká; co se v ní říká, je druhotné oproti tomu, jak se to říká. Ve svých poznámkách jsem vycházel z předpokladu, že hodláte sdělovat nový obsah. A pak by největší zřetelnost rozhodně byla největší krásou." Fregův dopis Wittgensteinovi z 16. září 1919, viz Frege (2011, 40).

odpovídat, ale nakonec to stejně dělá, takže vidíme, jak bere Russellovy otázky vážně a očividně přitom bere vážně také jednotlivé prvky toho, co se standardně interpretuje jako nauky obsažené v *Traktátu* (vysvětluje mu rozdíl mezi *faktem* a *stavem věcí*, povahu toho, čemu říká „myšlenka" a její vztah k tomu, čemu říká „fakt", resp. odpovídá na otázky ohledně povahy jejích složek – zda jsou to slova, nebo zda je myšlenka něco duševního apod.). Ve výše citované pasáži to vše sice označuje jen za krok k naplnění hlavního cíle, ale zároveň nijak nenaznačuje, že by onen hlavní cíl tento mezikrok zpětně diskvalifikoval. Zdá se, že parciální traktátovské nauky bere Wittgenstein vážně jako pravdivé teorie, které ovšem slouží ještě něčemu dalšímu, co je obsahem citované pasáže.

Na této pasáži je pak nejnápadnější, že i tuto hlavní pointu knihy Wittgenstein označuje za teorii. Jde podle něj o systematické rozlišení toho, co lze větami říci a co jimi lze ukázat. A přitom ztotožňuje první část rozlišení, tedy to, co lze větami říci, s tím, co lze myslet. To, co nelze říci, nýbrž pouze ukázat, tedy podle Wittgensteina zřejmě nelze myslet.

Neméně zajímavé je podívat se na Wittgensteinovy odpovědi na některé jednotlivé Russellovy otázky. Aspoň jedna z nich podle Wittgensteinových slov „se týká kardinální otázky toho, co lze větou vyjádřit a co nelze vyjádřit, nýbrž pouze ukázat." Wittgenstein zde tento rozdíl Russellovi vysvětluje na příkladu:

> Jen pomyslete, že to, co chcete říci zdánlivou větou ‚existují dvě věci', je ukázáno tím, že existují dvě jména, jež mají různé významy (nebo tím, že existuje jedno jméno se dvěma významy). Věta, třeba $\phi(a, b)$ nebo $(\exists\phi, x, y).\phi(x, y)$ neříká, že existují dvě věci, říká něco zcela jiného; ale ať je nebo není pravdivá, ukazuje, co jste chtěl vyjádřit, když jste řekl ‚existují dvě věci'.[2] (Wittgenstein 1997a, 126)

A o něco níže reaguje na Russellovu výhradu, že je nutné, aby byla dána věta, že jsou dány všechny elementární věty:

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[2]   "Just think that, what you want to say by the apparent prop[osition] 'there are 2 things' is shown by there being two names which have different meanings (or by there being one name which may have two meanings). A prop[osition] e.g. $\phi(a, b)$ or $(\exists\phi, x, y).\phi(x, y)$ doesn't say that there are two things, it says something quite different; but whether it's true or false, it shows what you want to express by saying: 'there are 2 things'." Wittgenstein Russellovi 19. srpna 1919, viz Wittgenstein (1997a, 126).

To není nutné, protože je to dokonce nemožné. Žádná taková věta není!
To, že jsou dány všechny elementární věty, se ukazuje tím, že neexistuje
žádná, jež by měla elementární smysl, který by nebyl dán.[3] (Wittgen-
stein 1997a, 126)

Prý jde o stejný případ, jako ve výše citované odpovědi. Dobře utvořené
formalizace tady nejsou označeny za zdánlivé věty, a dokonce je zřejmé, že
něco říkají a mají pravdivostní hodnotu. Naproti tomu věta běžného jazyka,
kterou zachycují, je označena za zdánlivou. Zároveň je tím, co ony formali-
zace ukazují. Přesněji, ony formalizace ukazují to, co se snažíme říci použi-
tím oné prý zdánlivé věty běžného jazyka. Po formalizaci vidíme, že jejím
výsledkem je jiná věta, resp. věta, kterou bychom do běžné řeči přeložili ji-
nak. Pojmové písmo tady slouží ujasnění myšlenek, protože znemožňuje
formulovat nesmysl.

Pointou knihy by podle dopisu mělo být systematické rozlišení mezi ří-
káním a ukazováním. Tím by se také měl řešit onen kardinální problém fi-
losofie. Rozlišení by mělo být také klíčové pro to, co Wittgenstein v předm-
luvě označuje za druhý cíl knihy: ukázat, jak málo se vyřešením filosofic-
kých problémů dosáhne.

Dopis Russellovi tedy potvrzuje rozdělení cílů knihy na řešení nějakého
souboru problémů a poukaz na jistou neuspokojivost takového řešení.
Wittgenstein Russellovi říká, že problematika, které se týkají jeho otázky, je
pouze prostředkem k dosažení dalšího cíle. A ten je specifikován jako rozli-
šení říkání a ukazování s tím, že právě on se týká toho, co je pro filosofii
podstatné. Wittgenstein sice neztotožňuje výslovně dvojici z předmluvy
s dvojicí z dopisu, ale pokud předpokládáme, že Russellovi nechce cosi pod-
statného ohledně cíle knihy zamlčet, je namístě použít dopis také jako vý-
kladovou pomůcku k předmluvě. A pak můžeme brát otázky kolem „logic-
kých vět“ vztáhnout k prvnímu bodu a rozlišení říkat/ukazovat k druhému
bodu, totiž k tomu, že kniha něco „ukazuje“. Teoretické rozlišení říkat/
ukazovat tedy nemusí být výslovně totožné s druhým zdrojem hodnoty kni-
hy, ale zřejmě se k němu podstatně váže. Rozlišení říkání a ukazování by
přinejmenším mělo čtenáři sloužit k tomu, aby nahlédl, že kniha něco nejen
říká, ale také ukazuje (totiž jak málo se dosáhne naplněním prvního bodu).

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[3]　"This is not necessary, because it is even impossible. There is no such
prop[osition]! That all elementary prop[osition]s are given is shown by there being
none having an elementary sense which is not given. This is again the same story as in
No 5." Wittgenstein Russellovi 19. srpna 1919, viz Wittgenstein (1997a, 126).

Ostatně, jistým potvrzením, že Wittgenstein počítá s Russellem jako se čtenářem, je také jeho předchozí dopis, kde si dělá starosti s vydáním knihy.

> Víc než hořím, abych to už konečně viděl vytištěno. Je hořké, muset se s knihou vláčet zajetím a dívat se, jak venku hraje svou hru nesmysl! A právě tak hořké je myslet na to, že to nikdo nepochopí, i když to vyjde tiskem![4] (Wittgenstein 1997a, 116)

Wittgenstein v dopisech Russselovi dává opakovně průchod nejen zoufalství z toho, že ho asi nechápou ani jeho vzory a učitelé Russell a Frege, resp. hlavní zamýšlení čtenáři, a že ho tedy asi nepochopí ani ostatní. Podle všeho také předpokládá, že Russell pochopí jeho výkřik o nesmyslu hrajícím svou hru.

Mimochodem, máme zde názorný příklad Wittgensteinova použití pojmu nesmyslu. Wittgenstein totiž toto slovo obvykle nepoužívá v jednoznačně pozitivním smyslu. Nenajdeme u něj vyslovené ocenění vznešeného nesmyslu jako takového. Výraz pro něj vždy znamená pejorativum. Nejasná vyjádření, která nelze projasnit analýzou nejsou sama o sobě ničím vznešeným. To, co je důležité, bývá spíše záměr takové napodobeniny vět formulovat.

2. Dopis Fickerovi

Zde je namístě zmínit čtvrtý klasický pramen, dopis vydavateli Ludwigu Fickerovi, kde Wittgenstein píše:

> A snad Vám pomůže, když Vám ke své knize napíši několik slov: z její četby totiž, jak jsem pevně přesvědčen, nebudete moc mít. Nebudete jí totiž rozumět: její látka Vám bude zcela cizí. Ve skutečnosti Vám cizí není, neboť smysl knihy je etický. Původně jsem do předmluvy chtěl dát větu, která v ní teď vlastně není, ale napíši ji Vám, protože Vám snad poslouží jako klíč: Chtěl jsem totiž napsat, že mé dílo sestává ze dvou částí: jednak z té, kterou zde předkládám, jednak z té, kterou jsem ne-

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[4]   „Mehr als je brenne ich jetzt darauf es gedruckt zu sehen. Es ist bitter, das vollende-te Werk in der Gefangenschaft herumschleppen zu müssen und zu sehen, wie der Un-sinn draußen sein Spiel treibt! Und ebenso bitter ist es zu denken daß niemand es verstehen wird, auch wenn es gedruckt sein wird!" Wittgenstein Russellovi 19. června 1919, Wittgenstein (1997a, 116).

napsal. A právě tato druhá část je tím důležitým. Etické se totiž mou knihu jakoby vymezí zevnitř; a podle mě se přísně vzato dá vymezit jen takto. Myslím si zkrátka, že to, co dnes mnozí blábolí, jsem ve své knize ostře zachytil tak, že jsem k tomu mlčel. A proto ta kniha, nemýlím-li se příliš, říká ledacos, co byste chtěl říct i Vy, byť třeba neuvidíte, že se to v ní říká. Doporučil bych Vám, abyste si zatím přečetl předmluvu a závěr, protože tam je ten smysl vyjádřen nejpříměji. (dopis Fickerovi z 20. října 1919 in Wittgenstein 1980, 96)

Dopis Fickerovi se cituje často. Kromě známého rozlišení napsané a ne-napsané části knihy s důrazem na tu druhou, etickou, a vysvětlení, že to dů-ležité, tedy etično, se dá vymezit jen takto, je zde určitě zajímavé také ote-vřené sdělení, že adresát dopisu není zamýšleným čtenářem knihy. Wittgen-stein vlastně sám říká, že knihu nepsal pro lidi jako Ficker. Ficker přitom patřil k okruhu Karla Krause, vedl intelektuální nakladatelství a časopis. Wittgensteina zároveň po vydání knihy zajímal Krausův názor, očekával, že by knihu nebo aspoň Krausův názor na ni mohl znát Adolf Loos. Vyzvídal takto přes dalšího člena kruhu, architekta Paula Engelmanna, s nímž také knihu podle všeho probíral ještě v rukopise (ostatně, nechal mu kopii).[5]

Snad nepokládal Fickera za méněcenného ve srovnání s ostatními jme-novanými. Nejspíš i jim měla být podle Wittgensteina blízká spíš pointa *Traktátu* než jeho obsah. Když v předmluvě psal, že knize bude nejspíš ro-zumět jen ten, kdo se něčím podobným už sám zabýval, nemínil tím tedy podle všeho někoho, pro koho jsou v nějakém ohledu důležité etické otáz-ky. Adresátem knihy není širší intelektuální veřejnost. *Traktát* je podle Wittgensteinova vlastního mínění odborná kniha, ze které laik jako Ficker nejspíš mnoho nepochytí. Ostatně, první lidé, za kterými s hotovým ruko-pisem běžel, byli Frege a Russell. Oni jsou tedy nejspíš vzorovými příklady těch, které měl *Traktát* potěšit, protože mu budou rozumět. Oba ho zkla-mali. Nicméně, když se v předmluvě zmiňují filosofické problémy, míní se tím podle všeho to, čemu Wittgenstein ve starší korespondenci s Russellem říká „naše problémy": teorie souzení, otázky logiky a epistemologie.[6]

Především však máme v dopise Fickerovi další formulaci pointy *Traktá-tu*. Wittgensteinův dopis skutečně působí věrohodně, když se podíváme na předmluvu a závěr knihy. Nezdá se, že by se zkrátka vemlouval nakladateli.

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[5] Viz dopis Paulu Engelmannovi z 25. října 1918 v Engelmann (1967, 14).

[6] Viz Wittgensteinovy dopisy Russellovi v souboru Wittgenstein (1997, 19, 20, 110, 111).

V dopise se vrací téma *vymezení zevnitř* jako jediné možnosti jak provést vymezení, jež je cílem spisu. To vnější je zde však oproti předmluvě konkretizováno jako etično. Oproti předmluvě se tomuto vnějšku přiznává důstojnost, zatímco v předmluvě bylo vše mimo vymezený prostor „zkrátka nesmysl". Také v dopise se ovšem vnější oblast kryje s tím, co „mnozí blábolí". Nicméně dopis také jasně říká, že vnější oblast je to, co je důležité – a s tím souvisí obraz dvou částí knihy: napsané a nenapsané. Mimo hranice myslitelného tedy pro Wittgensteina skutečně leží nesmysl, avšak doslova (jak později řekl sarkasticky Frank Ramsey) důležitý nesmysl (srov. Ramsey 1931, 263). Podíváme-li se na slavný velkolepý závěr *Traktátu*, který Wittgenstein Fickerovi v dopise doporučuje kromě předmluvy, vidíme, že jeho dopis nelže. Dopis nakladateli Fickerovi tak vhodně doplňuje předmluvu, ve které se „to důležité" z dopisu označuje jako pouhý nesmysl, ale na druhé straně se zde překvapivě skromně píše o tom, že hodnota knihy spočívá z valné části v tom, že ukázala, jak málo dosáhneme vyřešením filosofických problémů, totiž problémů, které Wittgenstein sdílel s Russellem. Pořád totiž zbude to, co teprve je tím důležitým – oblast etiky. A náš dopis tvrdí, že právě o etickou oblast nakonec v knize jde. Dokonce v ní má být jednoznačně zachycena, paradoxně mlčením.

3. Shrnutí

Všechny čtyři pokusy přiblížit pointu knihy se doplňují. Dopis Fickerovi zdůrazňuje etický smysl knihy, který leží mimo napsanou knihu, a naopak marginalizuje obsah knihy, který laikovi není přístupný. Dopis Russellovi zdůrazňuje rozlišení říkání a ukazování jako cíl, od něhož se odlišuje řešení logické problematiky jako prostředek pro jeho dosažení. Předmluva naproti tomu staví nejvíce do popředí specifikaci možného obsahu myšlení a explicitní teze, jimiž se řeší nějaká ne zcela jasně specifikovaná problematika. Předmluva ovšem dodává druhý cíl knihy, totiž ukázat neuspokojivost explicitního řešení. Odlišení říkání a ukazování zde tedy najdeme také a s tímto rozlišením jsou ztotožněny oba cíle knihy (kniha jednak obsahuje pravdivé, byť neuměle formulované myšlenky jako definitivní řešení problémů, jednak něco ukazuje). Motto knihy pak jednoznačně vyzdvihuje to, co lze říci, jako věděné, oproti zbytku, který je degradován na „zaslechnutý ruch a šum".

Každý výše uvedený zdroj nastiňuje určitou dichotomii. Motto mluví o dvojici přehledná formulace založená na přímé znalosti vs. odkaz na mé-

něcennou znalost z druhé ruky. Předmluva pracuje s dvojicí (neumělé) sdělení pravdivých myšlenek vs. ukázání neuspokojivosti těchto myšlenek chápaných jako řešení problémů. Dopis Russellovi rozlišuje problematiku logických výroků jako nástroj pro systematické rozlišení říkání/ukazování, jež je cílem knihy. A dopis Fickerovi odlišuje explicitní obsah knihy, který je laikovi cizí, od pointy, která je etická a zůstává záměrně nenapsaná, byť je zároveň součástí knihy.

V jakém vztahu jsou tyto dichotomie? Vzhledem k cíli knihy deklarovanému v předmluvě, totiž systematickému rozlišení možného výrazu myšlenek od nesmyslu, se nabízí ztotožnit první díl dichotomie z předmluvy (sdělení pravdivých myšlenek) s tím, co je v dopisu Fickerovi označeno za explicitní obsah knihy, a s problematikou logických výroků z dopisu Russellovi, resp. s prvním dílem dichotomie motta (s přehlednou formulací skutečného vědění). Pak bychom stejně ztotožnili druhé díly dichotomií. Implicitní etická část knihy z dopisu Fickerovi by potom byla totožná se systematickým rozlišením říkat/ukazovat z dopisu Russellovi a s tím, co kniha podle předmluvy ukazuje, potažmo se sekundární znalostí z motta. To by ovšem nedávalo dobrý smysl. V mottu je druhá půle dichotomie pejorativní, což se sice shoduje s představou předmluvy, že to, co se nedá říct jasně, je obyčejný nesmysl, ale v dopise Fickerovi je do druhé části dichotomie postavena pointa knihy, která je zde chápána pozitivně stejně jako je v dopise Russellovi distinkce říkat/ukazovat chápána jako úspěch knihy.

Zkusme s nastíněnými dichotomiemi pracovat strukturovaněji. Vyjděme z dopisu Fickerovi, který dělí knihu na její napsanou a nenapsanou část. Toto rozdělení odpovídá *traktát*ovskému rozlišení faktu a hodnoty. Explicitní obsah knihy odpovídá faktům, resp. sděleným pravdivým myšlenkám, jak je o nich řeč v předmluvě, a přehledné formulaci skutečného vědění, o níž se zmiňuje motto. Obsah knihy je napsaný a podle Wittgensteina pravdivý a přehledný. Proti němu stojí pointa knihy, jež není součástí jejího výslovného obsahu stejně jako podle *Traktátu* smysl a hodnota leží mimo skutečnost a fakty. Tato pointa je tím, co se (řečeno s předmluvou) ukazuje. To, co by podle předmluvy měla knihy ukazovat, je ovšem jistá neuspokojivost, kterou se ale nemíní to, že by obsah knihy bylo třeba revidovat (sdělení knihy je podle předmluvy pravdivé s definitivní platností). Ukázanou neuspokojivostí by měla být falešnost nároku, který by zamýšlený čtenář spojoval s řešeními, jež jsou explicitním obsahem knihy. Tento nárok můžeme ztotožnit s tím, co dopis Fickerovi charakterizuje jako blábolení mnohých o etice, resp. s vládou nesmyslu, o němž byla řeč ve starším dopise

Russellovi, resp. s „ruchem a šumem" z motta, tj. s polovzdělaneckým diskursem, který deleguje odpovědnost na experty a při své mnohomluvnosti nepředstavuje žádné skutečné vědění. Jednoduše, kniha by měla ukazovat (v *traktát*ovském smyslu tohoto termínu), že teoretický diskurs o etice je nesmyslný.

Když jsme takto ztotožnili dichotomii z dopisu Fickerovi s dichotomií motta a dvěma údajnými zdroji hodnoty knihy, jak o nich mluví předmluva, podívejme se blíže na první díl fickerovské dichotomie. Fickerovi zapovězený obsah knihy můžeme ztotožnit s prvním zdrojem její hodnoty, jak se o něm mluví v předmluvě, resp. s přehlednou formulací, které se dovolává motto. Dopis Russellovi pak tento obsah jen rozděluje na technickou problematiku, které se týkaly Russellovy (a Fregovy) otázky z korespondence, a na systematické rozlišení říkat/ukazovat, které je klíčem k pochopení pointy knihy – k pochopení toho, co kniha ukazuje. Motto, předmluva a dopis Fickerovi tedy nastiňují cíl knihy ve dvojici, co a) kniha říká, b) kniha ukazuje. Dopis Russellovi se týká jen toho, co kniha říká, a snaží se ho upozornit na to, co v knize přehlédl: totiž že zde Wittgenstein navrhuje systematické rozlišení sémantických kategorií říkání a ukazování, což je zřejmě třeba ztotožnit se záměrem specifikovat kritéria smysluplného výrazu myšlenek, který deklaruje předmluva.

Dopis Fickerovi však říká o pointě knihy něco silnějšího než předmluva:

> Chtěl jsem totiž napsat, že mé dílo sestává ze dvou částí: jednak z té, kterou zde předkládám, jednak z té, kterou jsem nenapsal. A právě tato druhá část je tím důležitým. Etické se totiž mou knihu jakoby vymezí zevnitř; a podle mě se přísně vzato dá vymezit jen takto. Myslím si zkrátka, že to, co dnes mnozí blábolí, jsem ve své knize ostře zachytil tak, že jsem k tomu mlčel. A proto ta kniha, nemýlím-li se příliš, říká ledacos, co byste chtěl říct i Vy, byť třeba neuvidíte, že se to v ní říká. Doporučil bych Vám, abyste si zatím přečetl předmluvu a závěr, protože tam je ten smysl vyjádřen nejpříměji. (dopis Fickerovi z 20. října 1919 in Wittgenstein 1980, 96)

Wittgenstein nepíše, že druhá část knihy je to, co kniha neříká, nýbrž ukazuje. Když Wittgenstein v předmluvě knihy píše, že její hodnota spočívá mj. v tom, že něco ukazuje – totiž jak málo se dosáhne vyřešením určitých problémů – pak ono ukázané lze těžko nazvat nenapsaným, protože je to stále táž napsaná kniha, která něco jednak říká, jednak ukazuje. Nenapsanou částí je to, k čemu autor pomlčel. Na toto mlčení samo bychom pak snad opět

mohli také vztáhnout kategorie říkání a ukazování, resp. přinejmenším ukazování.

Wittgenstein se ale v dopise Fickerovi nedrží *traktát*ovské terminologie (nakolik něco takového vůbec existuje). Jak se v dopise zachází se slovem „říkat“: „Myslím si zkrátka, že to, co dnes mnozí blábolí, jsem ve své knize ostře zachytil tak, že jsem k tomu mlčel. A proto ta kniha, nemýlím-li se příliš, říká ledacos, co byste chtěl říct i Vy, byť třeba neuvidíte, že se to v ní říká.“

Kniha říká ledacos, co v ní čtenář nenajde? V tom případě knize nerozumí – buď doslova (jako nerozumíme knize v cizí řeči nebo laik nerozumí odborné knize), nebo v tom ohledu, že třeba rozumí všemu, co v knize stojí psáno, ale uniká mu příliš z toho, co v knize není napsáno, ale dá se to z jejího textu tak či onak odvodit. Obojí se nemusí navzájem vylučovat. Wittgenstein Fickerovi výslovně píše, že knize nebude rozumět a to v silném slova smyslu: jako laik nebude rozumět knize o logice. Tím spíš samozřejmě nemůže knize rozumět v druhém ohledu – stěží může rozhýbat líný mechanismus textu a přijít s nějakou sofistikovanou interpretací knihy, které prvoplánově nerozumí. Není ovšem jisté, zda by odborná kniha mohla říkat ledacos, co by chtěl říct také laik, který jí nerozumí do té míry, že nepozná, jak kniha jeho přání naplňuje – zvláště v případě, kdy má být čtenáři svým způsobem cizí už téma knihy. Proto by také bylo nemístné, kdyby Wittgenstein vysvětloval Fickerovi, u kterého neočekává porozumění knize, její pointu pomocí technického rozlišení říkat/ukazovat (je-li toto rozlišení v knize skutečně technické). Zde by naopak rozlišení napsané a nenapsané části knihy mohlo pomoci, budeme-li je chápat jako obrazné.

Existuje tedy nenapsaná část *Traktátu*, v níž Wittgenstein významně mlčí? Nebo je výraz „nenapsaná část knihy“ a „pomlčet k něčemu“ jen pokusem přiblížit laikovi koncept ukazování? To by znamenalo, že kniha říká jen to, co v ní stojí psáno, ale tomu, kdo její liteře rozumí, je díky četbě jasné také něco víc. A tenhle výsledek interpretace knihy by byl aspoň z nějaké zřejmě podstatné části oním etickým smyslem knihy, o jehož existenci Wittgenstein přesvědčuje Fickera. Věříme-li Wittgensteinovi, že onu klíčovou větu z předmluvy skutečně jen nakonec vynechal, můžeme to brát jako doklad snahy vyhnout se právě riziku interpretace, podle níž by po předložení litery knihy následoval ještě akt významného mlčení, jež by přinejmenším ukazovalo, ne-li dokonce říkalo oproti knize něco navíc.[7] V tom

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[7] Nijak se tím ovšem nepopírá existence fenoménu významného mlčení, který z běžné komunikace dobře známe.

případě by druhou, nenapsanou, nicméně hlavní částí *Traktátu* bylo to, co text *Traktátu* ukazuje. Tahle možnost odpovídá rozdělení obsahu knihy z předmluvy, kde je řeč jednak o pravdivých myšlenkách, jednak o tom, co kniha ukazuje. Odpovídala by také dopisu Russellovi, kde Wittgenstein upozorňuje na teorii ukazování a spojuje ji s „kardinálním problémem filosofie". Konečně podle motta také stačí k vyjádření vědění „tři slova" – nemusí po nich následovat významná pomlka mystického mistra.

Nabízí se ovšem vysvětlení, že v *Traktátu* se mlčí o tom, o čem se podle koncepce významu v něm představené nedá smysluplně mluvit. Ohraničuje-li *Traktát* to, co lze smysluplně říci, pak toto ohraničení diskvalifikuje nějaké oblasti řeči, jež třeba fakticky existují. Ve skutečnosti však kniha aspoň o některých těchto oblastech řeči mluví. V *Traktátu* je přece řeč o sémantice, o mystičnu, o subjektu, o hodnotách, o smyslu – je v ní řeč o tématech, jež se podle její koncepce významu nanejvýš ukazují. Pak by nenapsaná část knihy nebyla nenapsaná. Nenapsanou částí knihy by byly především ty partie, které Wittgenstein Fickerovi doporučuje ke čtení, protože z nich pochopí její smysl – totiž předmluva a závěr. Můžeme ovšem říci, že Wittgenstein o věcech, o nichž se nedá mluvit, mluví tak, aby čtenáře dovedl k pochopení, proč a jak o nich nemluvit. Jak říká interprety tolik diskutovaná věta 6.54: Ten, kdo Wittgensteinovi rozumí, nahlédne z toho, co říká, že to, co říká, se říci vlastně nedá, protože je to cosi, co se dá přiměřeně jen ukázat použitím smysluplných vět.

Druhá možnost, jak rozlišení napsané a nenapsané části knihy chápat, by bylo odkázat do nenapsané části knihy konkrétní realizace těch typů teorií, jež se *Traktát* snaží diskvalifikovat. Nenapsaná by tak zůstávala konkrétní Wittgensteinova etika, teologie, estetika, teorie subjektivity, případně teorie významu, ontologie či epistemologie. Zůstávaly by nenapsané, protože je podle napsané části knihy nelze formulovat.

Jde o tradiční dilema čtenářů *Traktátu*. První možnost ústí v paradox (údajně nenapsaná část knihy byla napsána), což nás nutí zvolit druhou možnost. Nenapsanou částí knihy by tedy byly Wittgensteinovy filosofické nauky. Pak by nenapsaná část knihy byla opravdu tím, co je na knize důležité – a rozhodně by to nebyly pro Wittgensteina nesmysly, resp. hlouposti (což je v jistém napětí s předmluvou knihy). Abychom však mohli nějaké Wittgensteinovy nenapsané nauky chápat jako část *Traktátu*, byť část nenapsanou, musel by se Wittgenstein snažit, aby je napsaná část knihy jednoznačně identifikovala, resp. čtenáře přivedla k tomu, aby je rozpoznal. Jak je ale dobře známo, *Traktát* nic takového nedělá, nebo dělá-li to, pak v tom

naprosto pozoruhodně trapně selhává. Asi nejzřejmější je to na debatách o traktátové ontologii. Wittgensteinovi interpreti věnovali této disciplíně pečlivou pozornost a přišli snad se všemi možnými interpretacemi, jež obvykle bývají velmi dobře odůvodněny. A nejenže se v *Traktátu* hledají různé ontologie od fyzikalismu, přes fenomenologii k fenomenalismu, či dokonce solipsismu, a také různé podoby empirismu i kantiánství, ale setkáme se také s různými názory na to, jestli *Traktát* vůbec obsahuje konkrétní ontologii a co říká k její možnosti. V etice, jež by měla být pro *Traktát* zásadní, je situace lepší. Na různé morální otázky dokážeme leckdy dát asi celkem autenticky wittgensteinovské odpovědi, leč obvykle se nám to nedaří díky četbě *Traktátu*, rozhodně s jeho textem nevystačíme. Pokud rozumíme Wittgensteinově morálce, pak hlavně díky znalosti jeho života, který si navíc dokážeme zasadit do kulturního kontextu. Mají-li nenapsanou část *Traktátu* tvořit konkrétní nauky z jednotlivých filosofických disciplín, musíme tuto část knihy pokládat za ztracenou stejně jako druhou část Aristotelovy *Poetiky*.

Jak vidíme, čtenářské dilema nemá řešení. Což je dobrý důvod pokládat je za dilema falešné. Problému se lze nejsnáze zbavit, když se vyhneme přeinterpretovávání dopisu Fickerovi. Především jej nesmíme číst otrocky doslova. Vraťme se k výkladu, že se Wittgenstein v dopise snaží laickému intelektuálovi přiblížit rozlišení říkat/ukazovat pomocí přirovnání k napsané a nenapsané části textu. To, co se z textu ukazuje, v něm nemusí být zcela zamlčeno. Je dokonce celkem rozumné, aby autor čtenáři pomohl explicitním výkladem rozlišení říkat/ukazovat. Dopis Fickerovi tedy v tomto ohledu neříká nic silnějšího než předmluva knihy. Jen se snaží udělat k ní další předmluvu pro určitý typ čtenáře (totiž pro čtenáře nekompetentního).

Nehledejme tedy v *Traktátu* významné mlčení k závažným tématům, jež nás dovede k hlubokým vhledům, jež odpoví na etické a jiné filosofické otázky. *Traktát* se zkrátka prostřednictvím řešení logických otázek dopracovává k rozlišení říkat/ukazovat a chce po nás, abychom je uplatnili také na text knihy samotné. Wittgenstein tedy říká Fickerovi totéž, co říká Russellovi (a co koneckonců stojí také v předmluvě): neulpívejte na jednotlivých technických otázkách, jež se v knize řeší, mají posloužit systematickému rozlišení říkat/ukazovat, jehož prizmatem máte číst celou knihu – ta tak nevyslovuje jenom určité myšlenky, jež řeší tyto technické problémy, ale také ukazuje omezenost legitimního nároku těchto řešení.

Právě v tomto ohledu je smysl knihy skutečně etický, totiž praktický. Filosofie jako teorie tady nemá co říct, na místě je čin. Oblast etična je sku-

tečně významná, ale jako prostor jednání, nikoli jako námět k řeči, přinejmenším ne k teoretizování. A tento závěr, jak připomíná známý citát Wittgensteinova přítele Ramseyho, platí podle Wittgensteina pro celou filosofii:

> Filosofie musí k něčemu být a musíme ji brát vážně – musí ujasňovat naše myšlenky a činy. Jinak je sklonem, před nímž bychom se měli mít na pozoru a úsilím vidět, že tomu tak je – hlavním výrokem filosofie tedy je to, že filosofie je nesmysl. A opět platí, že musíme vzít vážně, že jde o nesmysl a nesmíme se – jako Wittgenstein – tvářit, že jde o důležitý nesmysl![8] (Ramsey 1931, 263)

Ramsey znal autora *Traktátu* tak dobře, že jeho slova můžeme chápat jako adekvátní shrnutí. Filosofie také u něj vystupuje ve dvojí roli. Jednak je snahou ujasnit si, co si myslíme a co děláme. Závěrem *Traktátu* v tomto ohledu je poukaz na to, že nakolik se náš jazyk hodí k popisu světa, nehodí se k vynášení všeobecně a nutně pravdivých soudů, jež by rozšiřovaly naše poznání. Popis světa je totiž podstatně popisem nahodilosti, ze kterého se nanejvýš ukazuje forma našeho chápání světa, kterou lze případně formulovat v tautologiích. Ale filosofické teorie – ať už by se měly týkat významu, poznání, jsoucího nebo etiky – se v takto chápaném jazyce formulovat nedají. Sklon formulovat je onou druhou podobou filosofie a něčím, před čím bychom se podle Ramseyho měli mít na pozoru. Ramsey ovšem zároveň označuje tradiční filosofii za úsilí vidět vlastní nesmyslnost. Důsledně provozovaná tradiční filosofie by měla ústit v náhled marnosti filosofování. Jak víme, podobně pozoruhodné přesvědčení připisoval Wittgenstein nejen Kierkegaardovi nebo Heideggerovi, ale také Augustinovi, kteří se všichni snažili říct víc, než řeč zmůže, a to podle Wittgensteina zřejmě mimo jiné ve snaze na tuto mez poukázat.[9] Ramsey se podle všeho shoduje s Wittgensteinem v rozdělení a pojetí obou typů filosofování, ale rozchází se s ním v hodnocení tradiční filosofie jako vědomého nabíhání proti mezím možností jazyka. Podle Ramseyho by nás rozpoznání nesmyslnosti takového počínání mělo přivést k tomu, abychom filosofii začali provozovat nanejvýš jen

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[8]   "Philosophy must be of some use and we must take it seriously; it must clear our thoughts and so our actions. Or else it is a disposition we have to check, and an inquiry to see that this is so; i.e. the chief proposition of philosophy is that philosophy is nonsense. And again we must then take seriously that it is nonsense, and not pretend, as Wittgenstein does, that it is important nonsense!" (Ramsey 1931, 263).

[9]   Viz např. McGuiness (1979, 68) (30. Prosince 1929).

ve výše zmíněném užitečném smyslu: jako ujasňování vlastních myšlenek a činů. Wittgensteinovi naopak připisuje přesvědčení, že tradiční nesmyslná filosofie není vůbec bezvýznamná.

Odkud bere ve Wittgensteinových očích tradiční filosofický nesmysl svou důležitost? Stručně můžeme říci, že z frustrace věděním. Nejen v přednášce o etice, ale také dlouho před ní ve válečných zápisnících Wittgenstein uvažuje nad motivací tíhnutí k mističnu (srov. Wittgenstein 1997c, 51). V obou případech vidí jeho původ stejně. Některé naše starosti nedokáže utišit přísun poznatků. Nejenže takové poznatky nemáme k dispozici, ale dokonce se nám leckdy zdá, že je nikdy nezískáme – a to nikoli pro svou neschopnost, ale protože takové poznatky nejsou možné. Kupodivu nás dokáže přinejmenším dočasně utlumit něco, co má vnější podobu poznatku – odpovědi na filosofickou otázku.

A v tomto ohledu je tradiční filosofování skutečně cenné i při postoji, jaký zaujímá Wittgenstein nebo Ramsey. I tradiční filosofování tiší neklid toho, kdo není na světě doma tím, že mu poskytuje způsob, jak se na světě zabydlet. Tradiční filosofování také poskytuje výraz onomu neklidu z odcizení našemu světu. Tím, že tento neklid objektivizuje do otázek,[10] na které následně hledá odpovědi, sice ukazuje nepochopení jazykové logiky, ale zároveň tak představuje první krok a důležitou podmínku pro zjednání nápravy. Je jako symptom nemoci, který na nemoc upozorňuje, takže ji nemůžeme přehlížet. Nutí nás zastavit se, nepokračovat v dezorientovaném bloudění a najít cestu. Stejně jako pro Marxe náboženství, jsou také pro mladého Wittgensteina odpovědi tradiční filosofie jen opiem lidstva, nicméně zoufalství, jež se tímto sedativem tiší, skutečně vyžaduje péči. A to, že se objevilo, není projevem méněcennosti toho, kdo je zakouší (jako by tomu důsledně vzato bylo u Ramseyho), ale dokladem jeho neúnosné situace ve světě. Když tedy Wittgenstein viděl práci některých filosofů jako vědomé nabíhání proti mezím jazyka, pak jejich snahu prezentuje jako vzpouzení se otupujícímu sedativu tradice odpovídání na otázky, jež důsledně vzato nemají odpověď, protože nejsou vlastně vůbec otázkami.

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[10]   Srov. Wittgenstein (1997c, 50): „Die Entshethung der Probleme: die drückende Spannung, die sich einmal in eine Frage zusammenballt und sich objektiviert."

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Author's response to Eugen Zeleňák's review of *Frank Ankersmit's Lost Historical Cause*

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I am grateful to Eugen Zeleňák for belatedly focusing attention on and thus perhaps renewing wider interest in my book, *Frank Ankersmit's Lost Historical Cause* (see Icke 2012) through his eight page review of it recently published in this journal (see Zeleňák 2014). Nevertheless, I remain somewhat bothered by and more than a little perplexed by his style of argumentation which alights everywhere on the book's relatively minor points while skipping over, or omitting entirely, the vital points about which its central argument turns. That is to say, to be more specific about Zeleňák's omissions, that in his review he characterises my primary argument(s) – those marshalled against Ankersmit's proposal(s) for a direct, unmediated form of engagement with the past through (sublime) historical experience – as 'shallow and not illuminating at all' (p. 261), 'just too shallow to explain anything' (p. 264) and again, lest the charge of *shallowness* be somehow missed, he finds that my writings constitute 'a very shallow type of explanation' (p. 267). Yet nowhere in his review does he even begin to address those primary arguments. In fact, I wonder if he has grasped them at all. Indeed, had he done so, his review might have included some kind of useful and instructive challenge to, or perhaps even agreement with, those crucial elements of my comprehensively argued "contra-Ankersmit" position.

To illustrate and underline the point that I am making here I shall now turn briefly to just two of those 'crucial elements'. First, then, it surely cannot be overlooked that I have reasoned variously throughout my text

that experience is always *mediated*, thus questioning Ankersmit's insistence that it is actually possible to have the sort of direct, *unmediated* experiential relationship with the past that he claims is possible and on which his theories of 'Historical Experience (HE)' and 'Sublime Historical Experience (SHE)' depend and, consequently, without which they fail. One might argue for an unmediated sensation but it seems to me, as I have explored in some considerable detail in the book, that experience is always contextualised within a language bound framework of understanding or "realisation" and that it therefore cannot be pure as required by Ankersmit's theory. I wonder what Zeleňák makes of that? And, second, there's the problem of decontextualisation which, according to Ankersmit, is required of both the subject and the object of experience as enabling conditions for the actual transmission and reception of experience. But how is the subject of experience to decontextualize? That is, shed his/her identity, enculturation, etc., and thus be reduced to a vacant state of being or a blank slate, so to speak. And, having decontextualized, if such an astonishing human feat is to be deemed possible, how is that decontextualized, hollowed-out "subject" going to be able to grasp an experience or, for that matter, anything at all? What's at issue here is that these and the many other potentially damaging arguments which I have laid out in my book and which together help constitute the core and primary substance of my challenge to Ankersmit's theories of HE and SHE are not mentioned at all in Zeleňák's review.

I have to add to this that where Zeleňák himself engages in argumentation he doesn't appear to fully grasp the implications of what he is saying. For instance, to give just one such example, he argues sensibly (p. 265) that no author is 'original', yet on the following page he contradicts himself when he states that 'Ankersmit (with his notion of the narrative substance, his distinction between narration and individual statement or representation and description, etc.) is an original Philosopher'. Now, let's be clear, while Ankersmit's early and for me engaging, often complex *mode* of exposition/argumentation and his particular appropriation of signifying terms might be taken as original, there is nothing in its substantive subject matter that hasn't already been variously expressed by theorists such as Jean-François Lyotard, Roland Barthes, Hayden White and many others before them. Or, in short, one could say that the distinction struck by Ankersmit between *narrative statement* and *narrative form* (between *fact* and *value* or *quantity* and *quality*) is innovatively presented but not in its substance original.

So, to sum-up, it's Zeleňák's narrow focus on and his preoccupation with secondary matters that disappoints me and, perhaps more to the point, arguably diminishes his critique of my book. Nevertheless, this is a review of sorts and, who knows, it might in the end have the effect of again drawing attention to and emphasizing the hopelessness of Ankersmit's extraordinary "experiential" proposals.

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Takashi Yagisawa: *Worlds & Individuals: Possible and Otherwise*
Oxford: Oxford University Press 2010, 226 pages

In his book *Worlds & Individuals: Possible and Otherwise*, Takashi Yagisawa presents yet another version of the so-called modal realism, a thesis according to which possible worlds are real entities. The substantive outline of the theory presented in chapters 1-8 (*Modal Realism; Time, Space, World; Existence; Actuality; Modal Realism and Modal tense; Transworld Individuals and their Identity; Extensionalism; Impossibility*, respectively) and subsequent testing of the theory in Chapters 9-10 (*Proposition and Belief; Fictional Worlds*) present a project of a significant philosophical value. And although Yagisawa's book is not a defence of modal realism in its core form, Lewis's views clearly influenced Yagisawa in formulating the proposal. So let put at least three differences on the table.

First of all, possible worlds in Yagisawa's sense are not worlds as understood by Lewis. Rather, worlds are defined as modal indices that are (but not exist)[1] along its temporal and spatial counterparts. Also, modal indices are not concrete mereological sums of individuals. What Lewis describes as the actual world, or the universe, Yagisawa calls the actual-world-stage of the universe. Therefore, the universe *à la* Lewis is not a modal index. Instead, it is the comprehensive subject of possibility and necessity (p. 44). The Lewisian actual world is one way at one possible index while another way at another possible index, since it extends in temporal, spatial and modal dimension. Possible worlds are neither concrete, nor abstract, and whether they are objects at all is an open business:

> [I] take moments of time to be real but I am non-committal about whether they are non-concrete objects of some kind. If they are, I will be happy to accept that worlds in my sense are also non-concrete objects of some kind. (179, fn. 7)

One way or the other, there is a plurality of worlds, a plurality of different world-stages of the same universe. Modal space contains many concrete objects all of which are modal parts of one and the same universe. Some of them may

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[1] For Yagisawa, reality is fundamental and monadic and existence is domain-relative.

be unified by spatiotemporal relatedness, some may be unified by some other relation, and some others may not be unified by any relation other than being part of the universe and whatever that requires (p. 45).

The second crucial distortion from Lewis's theory is the analogy between trans-temporal and trans-world identification. Lewis sympathized with the former, (so that we perdure through time by having distinct temporal stages at different times) but formulated several objections against the latter (see Lewis 1986, 218-219). Yagisawa, on the other side, accepts such an analogy and poses the so-called 'Closest-Continuer' relation holding between modal parts of a single individual. The relation is defined along the following lines:

> A modal stage x at a possible world w_1 and a modal stage y at a different possible world w_2 are parts of the same modally extended object of a kind K if and only if there is a chain of possible worlds from w_1 to w_2 ordered by the overall similarity relation such that x and some modal stage, x+1, at the next world in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, x+1 and some modal stage, x+2, at the next world in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, ..., and x+n and some modal stage, x+n+1=y, at the next world, w_2, in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, where the sufficient similarity, relevant respects, and closeness are relative to the kind K. (Yagisawa 2009, 109)

That's the Closest-Continuer relation operating on the modal stages in a nutshell.

The third move away from the traditional modal realism is the acceptance of impossible worlds. Again, such worlds are neither concrete nor abstract, but as real as possible worlds. Besides, there are impossible individuals. They do not exist in the domain of possible objects. They exist in the domain of metaphysically impossible objects, yet given the 'Closest-Continuer' relation between world-stages, they also exist at some possible worlds (by having stages that exist at those worlds). But let discuss this point in more details as it has raised quite serious accusations from inconsistency.

Recall that for Yagisawa, times, places and worlds are metaphysical indices and are all equally real. Following these assumptions together with metaphysical parity between possible and impossible worlds, impossible worlds are real too. Consider now an extended object, me. I have properties-at-world-w in virtue of having a w-stage with those properties. That means that I have a world-

stage such that I am a philosopher-at-w. Besides that, I have plenty of other word-stages. For instance I have a-football-player-at-w_1 stage, a-pianist-at-w_2 stage, a-talking-donkey-at-w_{99} stage, since I could be a football player, I could be a pianist and (under a very charitable reading) I could be a talking donkey, respectively.

So far so good. But a lot of things are impossible. It is not possible for me to be a philosopher and not a philosopher at the same time, a football player and not a football player at the same time or a talking donkey and not a talking donkey. If that is so, modal stages strategy requires there to be stages such that

> Martin-is-a-fotball-player-and-non-a-football-player-at-i_1
> Martin-is-a-pianist-and-not-a-pianist-at-i_2
> Martin-is-a-talking-donkey-and-not-a-talking-donkey-at-i_{99}

But if impossible worlds are real, there really are the abovementioned inconsistent stages. And that's a plain actual contradiction because inconsistent stages turn out to be actually true. End of the 'exportation' objection.

I think, however, that the situation is not as desperate as it might seem. The reason is that although modal realistic in spirit, Yagisawa's theory appears to represent modal phenomena in a way modal realists don't. For, speaking about reduction of modal facts to non-modal facts, Yagisawa's motivation is more modest. Instead of full modal reductionism, he prefers soft reductionism (p. 152) according to which a) temporal, spatial and modal indices are taken to be metaphysically simple and b) the at-a-world relation is primitive. These features of the theory place it somewhere between modal realism and actualism and, more importantly, between two ways of representation: genuine and ersatz. And while the former causes exportation troubles the latter does not necessarily so.

In Lewis (1986, ch. 3), Lewis identifies one kind of ersatz representation in a dialogical form:

> Say I: [Lewis]: you make a second mystery, because you don't tell me what it is for the concrete world to 'select' an element.
> Says he: [magical ersatzer]: that's primitive. All theories have their primitives, and 'selects' and 'elements' are mine.
> Say I [Lewis]: you cannot explain modality, because you took that as primitive also.
> Says he: [magical ersatzer]: I did. I don't pretend to explain modality, but there are plenty of other purposes for the theory to serve. (Fair enough.) The choice is between primitive modality and crazy ontology like yours, and I choose the former. (Lewis 1986, 176)

Apparently, one of the Lewis's objections takes the meaninglessness of the relation between the concrete cosmos and an element to be crucial. Whatever we take the relation of 'selection' to be, either way lies trouble. Given the primitive at-a-worldness, combined with the simplicity of indices, Yagisawa does not seem to avoid the accusation of magical representation. It is rather by magic how the concrete cosmos 'selects' one index rather than another. But the question might stand otherwise. Namely: are the criteria so strong that any theory that fulfils them should be replaced by a theory that does not? Or: is the 'selection' relation a sufficient reason to deny a theory that makes use of it?

Suppose that the use of the selection relation is enough to dismiss a theory and consider any kind of set theory. Given a set of things it seems obvious that what makes it the case that those very things are its members is a membership relation. Since we do not grasp of intrinsic natures of sets themselves (unless we refer to their members), set-membership relation is a good example of the 'selection' (cf. Van Inwagen 1986, 207-210). But does the presence of such a relation provide reason to deny set theory? It obviously seems too strong to answer the question positively even if we do not have an ultimate story as how it works. I therefore have for it that one way of avoiding the exportation problem is to (bite the bullet and) admit that the representation goes by magic rather than genuine instantiation. Doing so, it would not be the case that real impossible stages make the actual world inconsistent, for the way they *represent* does not bring any inconsistencies in home language. They represent impossible phenomena in a harmless (although magical) way.

Overall, Yagisawa's book provides a systematic treatment of various philosophical issues and gives the reader a unified package. It is thus no doubt that *Worlds & Individuals: Possible and Otherwise* is a unique endeavour in contemporary metaphysics and deserves the attention of a broad philosophical community.

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Vladimír Havlík, Tomáš Hříbek, Juraj Hvorecký, Jiří Nosek,
Zuzana Parusniková:
Z evolučního hlediska: pojem evoluce v současné filosofii
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Súčasné teoretizovanie o vzniku živého sveta, o povahe prírodných, spoločenských javov a osobitne ľudskej mysle implicitne zahŕňa evolučnú perspektívu. Pojem evolúcie vo všeobecnosti zastrešuje myšlienku o vývojovej povahe objektov, procesov okolitého sveta vrátane človeka a jeho psychických schopností. V predloženej práci kolektív autorov – filozofov analyzuje prístupy vysvetľovania vnútorných procesov evolúcie, ktoré sa stali predmetom širokej diskusie a polemík. Spoločné teoretické východisko, o ktoré sa autori jednotlivých kapitol textu opierajú, je *naturalizmus*. Napriek rôznorodému chápaniu významu pojmu naturalizmus, naturalistický prístup predpokladá vzájomnú previazanosť evolučných procesov s prirodzenou povahou javov a udalostí okolitého sveta. Ako však dokladá text práce, táto zdanlivo neproblematická domnienka je opradená viacerými nedorozumeniami a protichodnými interpretáciami. Autori poukazujú na nejednoznačnosť a ambiguitu pri používaní základných pojmov ako darvinizmus, determinizmus, naturalizmus, materializmus, evolúcia, evolučná psychológia, evolučná epistemológia, kauzalita.

V nasledujúcom texte sa pozastavím pri troch problémových okruhoch odrážajúcich základné členenie textu práce, a to: 1) darvinizmus verzus kreacionizmus, 2) naturalizmus a myseľ, 3) poznanie a filozofia.

Ad 1) Ako konštatuje autor prvej kapitoly *Darwinismus a formy kreacionizmu* T. Hříbek, darvinizmus predstavuje „dominantnú teóriu evolúcie súčasnosti". Vo vzťahu k vybraným kontroverzným bodom Darwinovej teórie evolúcie sa autor venuje predovšetkým kritike zvonka, z radov zástancov kreacionizmu. Kritici základných postulátov darvinizmu – vývojovej povahy druhov, mechanizmov prírodného výberu, buď odmietajú vedeckú povahu teórie evolúcie alebo proklamujú vedeckosť kreacionistického prístupu (medzi oboma krajnými postojmi existuje viacero subtílnejších variantov, napríklad koncepcia *evolučného kreacionizmu* slovenského filozofa Jána Letza). Pre prívržencov prvej argumentačnej línie darvinizmus predstavuje „materialistickú filozofiu", ktorá je skôr metafyzickou (ideologickou) špekuláciou než vedeckou teóriou. Na druhej strane, zástancovia tzv. vedeckého kreacionizmu sa štylizujú do roly súputníkov teórie evolúcie podliehajúcej kritériu testovateľnosti a vedeckej kritike. Príkladom druhej argumentačnej stratégie je napríklad teória „inteligentného plánu" (intelligent design) P. Johnsona odvolávajúca sa na teleologický dôkaz Božej existencie. V texte autor približuje vybrané alternatívne postoje a diskusiu k interpretácii

Biblie v kontexte kreacionizmu samého. Považujem za zrejmé, že prirodzené javy a ich poznanie založené na vedeckých princípoch (objektívnosť) a kritériách (testovateľnosť) na jednej strane a nadprirodzené javy a poznanie vychádzajúce z viery (zjavenia), sú nesúmerateľné. Napriek tomu niektorí filozofi vynakladajú nemalé úsilie na spájanie prirodzenej povahy vzniku a vývinu (napríklad) mysle s (jej) principiálnou neredukovateľnosťou či neobjektivizovateľnosťou. Jeden z dôvodov týchto postojov vidím v implicitne prítomnej túžbe po harmónii „viery a rozumu" a tiež v konštruovaní pomyselných priepastí medzi vedeckým poznávaním a duchovnými hodnotami. S Hříbekovým názorom o logickej protirečivosti kreacionistických argumentov a slabej explanačnej sile „vedeckého kreacionizmu" v konfrontácii s poznatkami evolučnej biológie možno len súhlasiť. Rovnako to platí aj pri zdôrazňovaní vzájomnej prepojenosti metafyziky a vedeckej teórie. Menej jasná je téza o metafyzickej kontroverznosti naturalizmu v tom zmysle, že neponecháva priestor pre spiritualizmus a nadprirodzené. Tvrdenie o tom , že „nemáme důvod věřit v existenci supernaturalistických entit" (s. 72), bude zástanca supernaturalizmu sotva pokladať za devastujúce. Podľa Hříbeka je so všeobecným metafyzickým naturalizmom konzistentný záver, podľa ktorého rôzne typy entít sú neredukovateľné na fyzické entity. Tu opäť narážame na terminologický, ale aj metodologický problém významu pojmu redukcia a podstaty reduktívneho prístupu. Otázka ontologického záväzku naturalistického prístupu, a darvinizmu zvlášť, preto predstavuje výzvu pre filozofov spolu s nedoriešenými a citlivými otázkami vzťahu náboženstva, filozofie a vedy.

Ad 2) V tretej kapitole práce J. Hvorecký analyzuje otvorené problémy súvisiace so zdanlivo nenaturalizovateľnými intencionálnymi obsahmi. V texte sa zamýšľa nad úlohou evolučného vysvetľovania pri riešení problému povahy intencionálnych stavov a intencionálnych pojmov. Podobne ako T. Hříbek, autor poukazuje na existenciu rôznych typov naturalizmu a s tým súvisiacou mnohotvárnou argumentáciou. Hvorecký podrobuje detailnej analýze koncepcie intencionálneho realizmu, ktoré sa hlásia k ukotvenosti intencionality vo fyzikálnom svete, a to sémantiku konceptuálnych rolí (Block), teóriu asymetrickej závislosti (Fodor) a teleosémantiku (Millikanová). Spoločným cieľom uvedených prístupov sa stalo skúmanie a vysvetľovanie sémantických pojmov nesémantickými kategóriami (s. 131). Zástancovia intencionálneho realizmu sa podľa Hvoreckého zhodujú v charakteristike mysle ako štruktúrovanej entity, pričom sa má na mysli štruktúra mysle zodpovedajúca ľudovej psychológii, t. j. skúsenosti a jazyku každodennej skúsenosti. Otázka statusu ľudovej psychológie a jej „objektov" v zmysle pevného základu vedeckej psychológie zostáva naďalej otvorená.

J. Hvorecký pokladá postoj naturalizmu za zlučiteľný s empirickým plura-
lizmom vedeckých disciplín, ktoré postulujú existenciu rôznych entít, stavov
alebo vzťahov. Čo však možno rozumieť pod „empirickým pluralizmom"? Ak
ide o otvorenosť naturalizmu vo vzťahu k rôznym filozofickým predstavám
a koncepciám sveta, potom by nič nebránilo postulovať mentálne stavy ako
svojbytné „entity" – konkrétne objekty, teoretické konštrukty atď. S tým súvisí
aj Hvoreckého nie celkom jasné vymedzenie pojmov ako „mentálních jednotli-
vin, s nimiž v myšlení manipulujeme" (Hvorecký 2011, 130). Domnievam sa, že
podobne ako v prípade pojmu naturalizmu aj význam pojmov fyzikalizmus, fy-
zikálny a fyzický svet vyžaduje hlbší rozbor. Ak, ako píše Hvorecký, fyzický
svet pripúšťa len také interakcie, ktoré sa odohrávajú v reálnom čase medzi
reálnymi entitami, potom by explanačná sila princípov evolúcie bola značne
okliešťaná. Ukotvenie biologického sveta (entít, udalostí) do širšie poňatého
fyzického sveta ponecháva dostatočný priestor pre zakomponovanie rozmani-
tých typov entít a udalostí. Veď napokon, ako podotýka aj Hvorecký, fyzika
pracuje s *realitou* teoretických konštruktov, silových polí alebo kvantových
veličín. Navyše, skúmanie a vysvetľovanie procesov biologického sveta impli-
citne zahŕňa históriu, predpokladanú budúcnosť, čím presahuje predstavu line-
árneho chápania vývoja. Nejasnosti späté s explanáciou biologických systémov
a procesov výstižne označil už priekopník tézy evolúcie A. Huxley ako „retro-
spektívne proroctvo".

V texte, ako sa zdá, J. Hvorecký sympatizuje s názorom D. Dennetta proti
pokusom naturalizovať epistemológiu, obsahy mysle, intencionalitu a pod.
Podľa Dennetta projekt *naturalizácie* stroskotáva preto, lebo sa pokúša naturali-
zovať to, čo už prirodzeným javom *je*. Prijatie evolučnej perspektívy pri skúmaní
akéhokoľvek filozofického problému predpokladá uplatnenie principiálneho na-
turalizmu od počiatku skúmania! Na začiatku skúmania síce môžeme, rortyov-
sky povedané, vychádzať z pojmu mysle ako *machule,* ale v priebehu skúmania
sa tento pojem môže vyčistiť natoľko, že sa nám podarí opísať a vysvetliť jav,
ktorý pomenúva. Prostredníctvom intencionálnej stratégie Dennett poukazuje
na to, ako sa vyhnúť nadbytočnému problému „naturalizácie" tajomného a skôr
nabáda k skúmaniu a vysvetľovaniu povahy javov bežnej skúsenosti. Hvorecký
oprávnene zdôrazňuje potrebu radikálne zvážiť dôsledky zakomponovania teórie
evolúcie do naturalizmu. Z hľadiska svojho naturalisticky ladeného postoja po-
ukazuje na rastúci význam integrácie najnovších poznatkov biologických vied do
filozofického skúmania. Hlásiť sa k naturalizmu, vyjadrovať sympatie k evoluč-
nej teórii zďaleka nepostačuje. Ukazuje sa, že jedna z najťažších výziev spočíva
v premyslení dôsledkov, ku ktorým teória evolúcie vedie bez ohľadu na kontra-
intuitívnosť získaných poznatkov. (Až) potom možno filozofi budú vnímať od-

klon od svojich ontologických intuícií *pozitívne* ako krok vpred v skúmaní povahy vlastných myslí.

Ad 3) V texte venovanom vzťahu evolučnej teórie poznania a transcendentálneho argumentu J. Nosek nadväzuje na problematiku poznania z predošlých kapitol no v otázke naturalizácie epistemológie sa dištancuje od prístupov Hvoreckého a Hříbeka. Svoj postoj zdôvodňuje na základe porovnania tradičnej epistemológie, do ktorej zaraďuje koncepcie Platóna, Descarta a Kanta, a naturalizovanej epistemológie W. O. Quina. Tradiční epistemológovia vychádzajú podľa Noseka z teórie poznania, ktorej problémy možno zodpovedať pred a nezávisle od vedeckého skúmania. V protiklade k tomu quinovská epistemológia obracia vzťah filozofie vedy smerom k zdôrazneniu závislosti filozofie od vedy a jej poznatkov. Tým podľa Noseka dochádza k „narušeniu" nutnej izolácie filozofie od vedy. J. Nosek nesúhlasí s prístupom Hříbeka a Hvoreckého v tom, že by sa kultúrna a evolučná história poznania ako aj poznanie samé mali skúmať metódami evolučnej biológie. Svoje teoretické východisko formuluje takto: „teorie poznání si může udržet své místo vedle přírodních věd jako součást racionality v širším slova smyslu" (s. 213). Nosek sa prikláňa k transcendentálnej argumentácii spočívajúcej, ako píše, v objasňovaní a ospravedlňovaní poznania. Evolučnej teórii poznania, s ktorou polemizuje, pripisuje predovšetkým funkciu vysvetľovania a predikcie. Vo svojom príspevku sa ďalej koncentruje na analýzu spoločných čŕt a rozdielov medzi naturalizovanou epistemológiou a evolučnou epistemológiou predovšetkým G. Vollmera, M. Ruseho a N. Reschera. Transcendentálny argument podľa Noseka odkazuje na zmysluplnosť poznania. Zatiaľ čo interpretačné a ospravedlňujúce funkcie dávajú hypotézam zmysel, deskriptívne, explanačné a predikčné funkcie argumentov zaisťujú pravdivosť alebo nepravdivosť hypotéz (s. 244). Pripusťme hypoteticky, že pravda nie je vzťah (korešpondencie, koherencie), ale jednoduchá abstraktná entita, ktorá je stále tá istá a možno ju pripájať k ľubovoľným zmysluplným výpovediam. Pokiaľ však pravdivosť "může být objevena jen v spojení se smysluplností" (s. 245), vzápätí sa natíska otázka na základe čoho priradíme výpovediam prívlastok „zmysluplný"? Ak má byť transcendentálny argument signifikantný, potom sa zdá, že zdôvodňujúce a interpretačné funkcie, o ktoré sa prednostne opiera, *by mali* nejakým spôsobom túto zmysluplnosť zaisťovať. Neviem si predstaviť, ako možno tento cieľ dosiahnuť bez zohľadnenia *obsahu* explanácie a predikcie. To však podľa Noseka neprichádza do úvahy, keďže zmysluplnosť a pravdivosť nekráčajú ruka v ruke.

Na záver sa domnievam, že naturalisticky orientovaný prístup Hříbeka a Hvoreckého sa vo vzťahu k autonómnosti a teoretickej relevantnosti filozofického skúmania zásadne nelíši od postoja J. Noseka. Autori svorne prízvukujú nielen kontinuitu filozofie a vedy, ale aj previazanosť s tradičnou filozofiou.

Významnejšie odlišnosti možno očakávať pri výbere toho, čo budú jednotliví autori z bohatého odkazu histórie filozofie pokladať za reprezentatívne.

Posledná kapitola práce z pera Z. Parusnikovej sa venuje Popperovej darvinistickej epistemológii. Autorka sa podujala kritickými očami premyslieť paralelu medzi Popperovou teóriou rastu poznania a darvinistickým výkladom biologickej evolúcie. V rámci interpretácie Popperovho filozofického odkazu Parusniková zvažuje otázku, či K. Popper sám dostatočne docenil empirickú povahu darvinizmu.[1] Zaujímavý a pre mňa dosť prekvapivý moment predstavuje konštatovanie vnútorného rozporu v Popperovej evolučnej epistemológii. Z. Parusniková vidí tento rozpor v nasledovnom: Na jednej strane Popper pripúšťa existenciu dogmatizmu v zmysle vrodených očakávaní pravidelností v živote človeka a na druhej strane vo svojej koncepcii zdôrazňuje zásadný význam boja proti dogmatizmu uplatňovaním kritického postoja, argumentovaním atď. Každý organizmus disponuje vrodenými reakciami alebo odpoveďami, ktoré podľa Poppera možno chápať ako nevedomé, neuvedomované „očakávania" (por. Popper 1963, 47). Ak Popper aj pripúšťa „vrodené poznanie", netvrdí, že dané poznanie je platné a priori, nakoľko sa môže ukázať jeho mylnosť. Rodíme sa s očakávaniami, s „poznaním", ktoré nie je platné a priori, ale je *psychologicky alebo geneticky apriórne* – predchádza pozorovateľnej skúsenosti. Nachádzanie pravidelností Popper radí k najvýznamnejším očakávaniam človeka, vrodená alebo „inštinktívna" dispozícia, t. j. *psychologické* a priori, je podľa Poppera zároveň *logickým* a priori, pretože predchádza všetkej pozorovateľnej skúsenosti. Logické a priori v tomto zmysle však neznamená, ako zdôrazňuje Popper, to, že očakávanie je platné a priori. Náš sklon hľadať pravidelnosti a vkladať zákony do prírody vedú k psychologickému javu dogmatického myslenia a správania (Popper 1963, 49). Vzhľadom na túto tendenciu je istá miera dogmatizmu nutná. Týka sa okolností, s ktorými sme schopní sa vyrovnať, a to formulovaním domnienok, ktorých prostredníctvom pôsobíme na svet. Navyše, spomínaný dogmatizmus umožňuje, aby sme sa približovali k dobrej teórii postupne. Je zrejmé, ako píše Popper, že takýto *dogmatický postoj* je znakom silného presvedčenia a teda je v protiklade ku *kritickému postoju,* ktorý pripúšťa pochybnosti a vyžaduje testy. Pripúšťam, že používanie pojmu dogmatickosti u Poppera na označenie „inštinktívnych" očakávaní nie je práve „šťastné", a to najmä vo vzťahu k rozsiahlej analýze a kritike dogmatickosti v celom jeho diele. Napriek tomu si na rozdiel od Z. Parusnikovej nemyslím, že by použitie pojmu dogmatizmu viedlo k dvojitej vnútornej nekonzistentnosti Popperovej evolučnej epistemológie a koncepcie racionality. Nielen v dôsledku rozlišovania naznačených

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[1]   K teoretickým problémom spätým s postavením teórie evolúcie pozri bližšie Gálik (2009).

významov pojmu dogmatický, ale aj vzhľadom na Popperovo zdôrazňovanie potreby posilňovať vedomie o povahe ľudských kognitívnych schopností s cieľom prekonávať pohodlnosť prameniacu z predvedeckého poznania. Čo sa týka racionality, Popper nepokladá človeka za racionálneho, ale naopak tvrdí, že koná iracionálne a podobne ako v prípade pravdy, v prípade racionality ide skôr o vytúžený *ideál* človeka. Napokon, nemyslím si, že by Popperova koncepcia evolučnej epistemológie evokovala oslabovanie dogmatizmu (s. 282). K. Popper sa vo väčšine svojich prác vehementne bráni prehnanému optimizmu, opakovane odmieta akékoľvek záruky viažuce sa k pokroku pri hľadaní lepšieho sveta.

Vo svojej skratkovitej úvahe som opomenula viaceré témy z textu predloženej publikácie, akou je problematika univerzálneho evolučného princípu (V. Havlík), otázky súvisiace s evolučným pôvodom morálky či projektom evolučnej deskriptívnej etiky (T. Hříbek). Čitateľovi napokon odporúčam pridržiavať sa stratégie prezentovanej v celom texte práce, a tou je filozofická analýza vychádzajúca z vedeckých poznatkov a implementácie popperovského kréda: „Já se mohu mýlit a ty můžeš mít pravdu; v každém případě o tom pojďme kriticky diskutovat a společným úsilím se můžeme pravdě přiblížit."

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Vladimír Svoboda: *Logika pro Pány, Otroky a Kibice.*
Filosofický průvodce světem deontické logiky
Praha: Filosofia 2013, 322 strán

Vydaním knihy Vladimíra Svobodu konečne uzrela svetlo sveta prvá československá monografia venovaná výlučne deontickej logike. Staršia kniha *Logika a etika*, ktorú napísal V. Svoboda spoločne s Petrom Kolářom v roku 1997, sa tiež zaoberala deontickou logikou, no tematicky zúženou na (meta)etický dis-

kurz. Výskum v deontickej logike je pritom celosvetovo veľmi živý: Syzifovské úsilie o vytvorenie vhodného systému deontickej logiky trvá už takmer storočie. V pestrej literatúre možno pozorovať dve základné pozície. Pre prvú z nich je charakteristická inklinácia k skúmaniu viet, ktorými *predpisujeme*, teda jazykových formulácií príkazov, zákazov a dovolení. V tejto línii vznikajú logiky predpisov (či užšie imperatívov). Druhá pozícia sa vyznačuje preferenciou výrokov, ktorými *konštatujeme*, že je niečo prikázané, zakázané či dovolené. Tu sa budujú logiky deontických výrokov. Názov recenzovanej knihy naznačuje, že tieto pozície nemusia vyčleňovať dva disjunktné tábory bádateľov. Logika pre Pánov je totiž práve logikou predpisov, a teda reprezentuje prvý tábor. Logika pre Kibicov má zase blízko ku záujmom druhého tábora. Nemožno si však nevšimnúť autorovu preferenciu predpisov, ide teda v prvom rade o „panskú" logiku. Problém budovania logiky deontických výrokov ustupuje čiastočne do úzadia.

Knižka pozostáva z ôsmich rozsahovo vyvážených kapitol. Ako naznačuje jej názov, pôjde o sprievodcu svetom deontickej logiky; a ako si môže čitateľ ľahko overiť, ide o skutočne *filozofického* sprievodcu, pretože autor svoje tézy precízne filozoficky zdôvodňuje a, navyše, už hlavný cieľ knihy je filozofický: vyjasnenie filozofických predpokladov, ktoré opodstatňujú budovanie systémov deontickej logiky, či konkrétnejšie, logiky imperatívov. V nasledujúcom texte stručne zhrniem obsah jednotlivých kapitol a poukážem na určité miesta v knihe, ktoré považujem za problematické.

Prvé dve kapitoly poskytujú čitateľovi lákavý a podnetný úvod do deontickej logiky. Exkurzia začína kritickým predstavením logických systémov, ktoré stáli pri zrode projektu deontickej logiky, a upozornením na niekoľko problémov, na ktoré naráža tento projekt ako taký. Výber systémov zodpovedá reálnemu historickému vývoju a systémy sú vysvetlené veľmi zrozumiteľne a prehľadne. Jedna drobná pripomienka. Svobodovo tvrdenie zo s. 41, podľa ktorého formuly $\Box A \to \Diamond A$, resp. $OA \to PA$, sú „očividne platné", považujem za príliš silné. Platnosť týchto formúl predsa závisí od toho, s akými pojmami nevyhnutnosti a možnosti, resp. príkazu a dovolenia budeme pracovať. Uvedená aletická formula by nebola platná, keby sme predpokladali taký možný svet, z ktorého už žiaden ďalší svet nie je dosiahnuteľný. V ňom by potom vzhľadom na bežný pojem nevyhnutnosti platili všetky formuly triviálne nevyhnutne, no žiadna z nich by nebola možná. Takáto logická situácia by mohla celkom prijateľne nastať napríklad pri temporálne interpretovanej aletickej logike, v ktorej by sa predpokladala existencia posledného časového okamihu. Deontická verzia aletickej formuly by v nejakom svete podobne neplatila vtedy, keby preň už neexistoval žiadny ďalší – deonticky dosiahnuteľný svet. Takáto logická situácia by mohla nastať, ak by boli prikazované výroky navzájom nekonzistentné (čo sa v praxi mimochodom často stáva). Keby sme totiž predpokladali, že existuje svet *s*,

v ktorom platí OA aj O¬A, a že existuje nejaký svet *t*, ktorý je zo sveta *s* do-
siahnuteľný, podľa štandardného chápania operátora O a relácie deontickej do-
siahnuteľnosti by mali vo svete *t* platiť všetky formuly, ktoré sú vo svete
s prikázané, čo znamená, že by vo svete *t* muselo platiť A aj ¬A. Svet *t* by bol
teda logicky nemožný. Ak však nechceme pracovať aj s nemožnými svetmi,
musíme predpokladať, že ak máme vo svete *s* prikázané navzájom nekonzistent-
né formuly, neexistuje žiadny svet, ktorý by bol z neho dosiahnuteľný. Ak však
zo sveta *s* neexistuje žiadny dosiahnuteľný svet, budú v ňom platiť všetky for-
muly viazané operátorom O. Žiadna z nich však nebude dovolená, teda nebude
platiť ani formula OA → PA. Táto formula by mala byť neplatná aj vtedy, keby
sme chceli skúmať, čo bolo prikázané, zakázané či dovolené *explicitne*.[1] Ak sa
niečo explicitne prikázalo, nevyplýva z toho, že sa to aj explicitne dovolilo.

V druhej kapitole Svoboda vysvetľuje Jørgensenovu dilemu a najznámejšie
paradoxy deontickej logiky. Tu sa prvýkrát výraznejšie prejavuje jeho inklinácia
k problémom „panskej" logiky. Takmer všetky uvádzané paradoxy deontickej
logiky sa totiž prezentujú ako úsudky s rozkazmi, hoci ich pôvodné formulácie
obsahovali deontické výroky, nie rozkazy. K tejto kapitole mám dve drobné pri-
pomienky. Téza, že filozofickú kritiku v kontexte Jørgensenovej dilemy možno
vztiahnuť aj na možnosť budovania deontickej logiky vo všeobecnosti (s. 68),
by potrebovala presvedčivé zdôvodnenie. Ak budeme za predmet deontickej lo-
giky považovať deontické výroky, vieme ich pravdivosť odvodzovať z faktu, že
sú uvedené v určitom normatívnom systéme. Pre takúto deontickú logiku je
celá Jørgensenova dilema irelevantná. Celkom nesúhlasím ani s tým, že by mal
byť Rossov paradox osudnejší pre logiku prepisov ako pre logiku normatívnych
výrokov. Túto tézu Svoboda obhajuje na s. 85. To, či ide naozaj o problematic-
ký úsudok, pritom v oboch prípadoch v rovnakej miere závisí od interpretácie
logických spojok, ktoré sa v úsudku vyskytujú, najmä disjunkcie. Slávny Rossov
paradox (pre logiku normatívnych výrokov) spočíva v odvodení záveru typu *Je
prikázané poslať alebo spáliť list* z premisy *Je prikázané poslať list*. Neprijateľnosť
tohto odvodenia sa zvykne znižovať tým, že spojka *alebo* v závere je predsa len
obyčajnou klasickou disjunkciou a nemôžeme v nej vidieť nič viac. Konkrétnej-
šie: Nemôžeme v nej vidieť tzv. operátor slobodnej voľby (*free-choice operator*).[2]
Z premisy síce vyplýva, že je prikázané poslať alebo spáliť list, no tento záver

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[1]   V deontických logikách sa pracuje s viacerými technickými pojmami explicitnosti.
Nepredpokladám tu žiadny z nich, skôr predpokladám bežný predteoretický pojem expli-
citnosti.

[2]   Nech P je operátor reprezentujúci *je dovolené, aby* a nech A a B reprezentujú ľubo-
voľné výroky. Pre operátor slobodnej voľby platí $P(A \lor B) \models PA \land PB$, čo pre klasickú
disjunkciu neplatí. Pre klasickú disjunkciu platí slabší argument $P(A \lor B) \models PA \lor PB$.

neposkytuje adresátovi príkazu možnosť voľby. Ak by bola spojka v závere operátorom slobodnej voľby, úsudok by nebol platný. Neprijateľnosť odvodenia, ktoré predstavuje Rossov paradox (vo formulácii pre logiku predpisov), zrejme viac bije do očí. Argumentácia, ktorá by sa pokúšala ukázať, že ide iba o zdanlivú neprijateľnosť, by však bola úplne analogická tej, ktorú som naznačila vyššie. Či takúto argumentáciu uznáme alebo neuznáme za uspokojivú, budeme tak musieť urobiť jednotne pre jej prvú aj druhú verziu.

Tretia kapitola čitateľovi predstavuje Lewisovu teóriu preskriptívnych jazykových hier, ktorá tvorí jadro Svobodovej vlastnej koncepcie. Preskriptívna jazyková hra je hrou troch hráčov – Pána, Otroka a Kibica. Stručne povedané, Pán nariaďuje, čo má Otrok robiť, Otrok plní nariadenia Pána a Kibic opisuje normatívnu situáciu. Svoboda sa im venuje v trochu nevyváženom pomere: V centre záujmu je Pán, potom nasledujú problémy súvisiace so vzťahom medzi Pánom a Kibicom, následne Kibic. Logike pre Otrokov, problematike vzťahu medzi Kibicom a Otrokom a medzi Otrokom a Pánom sa Svoboda nevenuje. Názov by pritom mohol naznačovať, že sa dočkáme aj logiky pre Otrokov. Otrok má predsa tiež svoj jazyk. Tento jazyk pozostáva z viet ako napríklad: *Musím upiecť koláč a uvariť večeru. Smiem piť kávu?* Okrem konštatovania a zisťovania, čo (ne)musí a (ne)môže by mohol tiež presviedčať či prosíkať Pána, aby zrušil nejaký príkaz či zaviedol nejaké dovolenie. Netreba sa potom však nejako vyrovnať aspoň s analýzou otázok? Svoboda nepochybne ukazuje, že svet deontickej logiky je oveľa bohatší, ako sa bežne predpokladá: Nie je však ešte bohatší? Zdá sa, že je. Dovolím si ďalej jednu drobnú poznámku k drobnej poznámke 84 na s. 95, ktorá poukazuje na nevhodnosť voľby komplikovaného formálneho jazyka pre deontickú logiku: Zdanlivá komplikovanosť, neprehľadnosť a nečitateľnosť formálneho jazyka môže byť iba dôsledok toho, že sa daný jazyk ešte nestal populárnou a známou súčasťou logického folklóru. Za to však nemusia niesť vinu iba nedostatky danej logiky, ale aj rôzne nepriaznivé empirické faktory. Prečo by sme nemohli namiesto jednoduchosti, prehľadnosti, čitateľnosti a popularity preferovať napríklad expresívnu silu jazyka? Za problematické považujem aj dovolenia na s. 96 uvedené ako vety s výkričníkmi. Pôsobia značne neprirodzene a pravdepodobne čitateľa povedú k otázke, či takéto vety možno naozaj oprávnene zaradiť do jazyka Pána. Ak možno, potom je otázne, prečo do jazyka Pána nezaradiť aj definície a rôzne vyjasňujúce tézy. Veď napokon, ako Svoboda ukáže v nasledujúcej kapitole, jednou z úloh dovolení je vyjasňovanie. Pritom sa zdá, že Svoboda by definovanie a vyjasňovanie prenechal skôr v kompetencii Kibica (pozri s. 271, pozn. 298), čo je však opäť trochu problematické. Kibic by potom predsa mohol dezinterpretovať Pánove predpisy. Autor v tejto kapitole zavádza aj dôležité rozlíšenie medzi statickou a dynamickou preskriptívnou jazykovou hrou. Myslím, že by sa v deontickej logike

predišlo mnohým zmätkom, keby sa rozdiel medzi nimi vždy rešpektoval. Na základe rozlíšenia medzi jazykom Pána a Kibica i medzi statickou a dynamickou preskriptívnou hrou Svoboda rozlišuje šesť druhov systémov deontickej logiky. V prvom rade ide o skúmanie statickej logiky Pána, statickej logiky Kibica, dynamickej logiky Pána a dynamickej logiky Kibica. Autor ďalej rozlišuje skúmanie vplyvu statickej a dynamickej logiky Pána na logiku Kibica. Tieto rozlíšenia sú veľmi užitočné, no mám podozrenie, že je z nich neodôvodnene vyhostený jazyk Otrokov.

Nasledujúca, štvrtá kapitola rozoberá (v deontickej logike často zanedbávaný) pojem dovolenia, a to najmä z pohľadu preskriptívnych jazykových hier predstavených v predošlej kapitole. Svoboda sa pokúša spochybniť bežne akceptovanú tézu, že výroky o dovoleniach možno vo všeobecnosti bezpečne preformulovať na výroky o príkazoch, resp. zákazoch. Argumentácia je presvedčivá (Svoboda ukázal, že existujú prípady, v ktorých je stotožnenie dovolenia s nezakázaním nevhodné) a zdá sa, že najvhodnejšie by bolo pracovať aspoň s dvoma pojmami dovolenia (silným a slabým, pozri s. 137). Väčšina kapitoly skúma dovolenia ako Pánove ťahy v preskriptívnej jazykovej hre. Čitateľ sa tu dozvie o rolách, ktoré dovolenia v preskriptívnom diskurze zohrávajú. Na s. 151 v pozn. 140 Svoboda priznáva, že formulácia pravidla futbalu v preskriptívnom jazyku znie neobvykle. Toto zdanie neprirodzenosti môže mať pôvod v tom, že pravidlá športov či normatívne systémy vo všeobecnosti fakticky nie sú vôbec písané v jazyku Pána, ale v jazyku Kibica.

Pokiaľ ide o piatu kapitolu, ide zrejme obsahovo o najviac „filozofickú" kapitolu knihy – je totiž zameraná na vyjasnenie ontologického a pojmového rámca pre skúmanie preskriptívneho diskurzu. Takýto cieľ je sám osebe veľmi náročný a autor si uvedomuje, že to bude možné iba za cenu istých zjednodušení. Jadro kapitoly tvorí autorova koncepcia noriem, ktorú navrhuje ako alternatívu voči von Wrightovej koncepcii noriem z práce *Norm and Action*. Navrhovaná teória zároveň ponúka Svobodovo riešenie závažného problému, ktorý predstavuje Jørgensenova dilema: Zjednodušene povedané, pravidlá chápané ako sémantické objekty môžu byť platné či neplatné podobne, ako môžu byť vety (resp. propozície) pravdivé či nepravdivé. Ak je takéto pravidlo platné, existuje zodpovedajúce pravidlo chápané ako sociálna skutočnosť. Najdôležitejšie výsledky kapitoly sú zachytené v prehľadných schémach na konci kapitoly.

Šiesta kapitola sa zaoberá sémantikou deontickej logiky. Kapitolka začína sémantikou pre *Štandardnú deontickú logiku*, pokračuje Hintikkovým sémantickým systémom a končí vyjasnením dôležitých sémantických predpokladov deontickej logiky. Dve drobné poznámky: Na s. 209 v pozn. 226 autor tvrdí, že je veľmi problematické hovoriť o splnení či nesplnení deontických výrokov. To samozrejme je pravda, no možno bez problémov hovoriť o tom, že ich dodržia-

vame, prípadne o tom, že sa správame v súlade s nimi. Tvrdenie na s. 228, pod-
ľa ktorého ak platnosť predpisujúcich premís odvodíme iba z prejavov autority,
tak sotva možno z platných predpisov odvodiť nejaký výrok, ktorého pravdivosť
bude premisami garantovaná, považujem za problematické. Zrejme by sme
mohli bez problémov odvodiť výroky o platnosti daných predpisov.

Siedma kapitola je venovaná statickej deontickej logike. V centre záujmu sú
modernejšie systémy deontickej logiky, konkrétne von Wrightova dyadická lo-
gika (tzv. *Nový systém*) a logiky predpisov Nicholasa Reschera a Petra Vranasa.
Na rozdiel od prvej kapitoly je výber logických systémov účelový, pretože, ako
sa neskôr v knihe dozvieme, Svobodova vlastná teória je dyadickou logikou a ide
o logiku príkazov, zákazov a dovolení. K tejto kapitole mám jednu drobnú pri-
pomienku. Na s. 254 sa uvádza úsudok UF7.4, v ktorom je z predpokladov *X,
urob A vždy, keď nastane R!* a *X, urob B vždy, keď nastane S!* odvodený záver *X,
urob A a B vždy, keď nastane R alebo S!* Uvedený úsudok je prezentovaný ako
platný v logike Nicholasa Reschera a navyše ako „vcelku neproblematický". Res-
cher pritom úplne analogický úsudok uvádza ako príklad neplatnej inferencie.[3]
Ide preto zrejme o preklep: Namiesto „a" malo byť v závere uvedené „alebo".

Kniha vrcholí v záverečnej, ôsmej kapitole, v ktorej sa autor venuje dyna-
mickej deontickej logike. V tejto kapitole sa opäť výrazne prejavuje Svobodova
orientácia na logiku Pána – pojem úspešnej preskriptívnej hry možno podľa ne-
ho „najprirodzenejšie" interpretovať z hľadiska Pána (s. 270). Celkom nerozu-
miem, prečo by to malo byť tak. Keby sme pri hodnotení úspešnosti preskrip-
tívnej hry napr. namiesto stanoviska zákonodarcu zaujali stanovisko občanov,
bolo by to rovnako prirodzené (a vďaka kvantitatívnej prevahe občanov dokonca
bežnejšie). Na s. 275 začína Svoboda vymedzovať jazyk svojho logického systé-
mu. V jazyku rozlišuje medzi tým, čo je a čo nie je potenciálne pod kontrolou
adresáta. Rozdiel medzi nimi je však empirický, čo spôsobuje značný (praktický)
problém s demarkáciou. Keby chcel nejaký logik použiť takýto systém, musel
by pri každej vetičke špekulovať, či ide o skutočnosti, ktoré sú potenciálne pod
kontrolou adresáta, alebo nejde. Ako sa však ukazuje, autor si je týchto praktic-
kých problémov s analýzou vedomý (pozri s. 240, 277). Bolo by vhodné v bu-
dúcnosti navrhovaný jazyk rozvinúť a poskytnúť mu väčšiu expresívnu silu na-
príklad tým, že by sa vychádzalo aspoň z predikátovej logiky, nie z logiky výro-
kovej. Žiaduca by bola aj temporalizácia, keďže je dobre známym faktom, že za-
nedbávanie gramatických časov pri analýze už v deontickej logike spôsobilo ne-
malé problémy a zmätky. Temporalizácia by pomohla aj v kontexte skúmania
dynamických preskriptívnych jazykových hier ako takých (dynamické preskrip-

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[3]   Jediný rozdiel spočíva v tom, že Rescher používa namiesto „X" druhú osobu singulá-
       ra, pozri Rescher (1966, 85).

tívne jazykové hry by bolo možné analyzovať ako časové sledy statických preskriptívnych jazykových hier). A napokon, temporalizácia by bola užitočná aj v súvislosti s navrhovanou demarkáciou medzi skutočnosťami, ktoré sú potenciálne pod adresátovou kontrolou, a tými, ktoré nie sú. To však nie sú výhrady, iba návrhy na ďalšie rozvinutie. Posledná kapitola veľkolepo zavŕšila dielo, a musím konštatovať, že ju považujem za najzaujímavejšiu a najoriginálnejšiu kapitolu knihy.

Recenzovaná publikácia je výsledkom dlhodobého úsilia, ktoré V. Svoboda venoval skúmaniu sveta deontickej logiky. Vďaka tomu v knihe cítiť autorov obdivuhodný prehľad v deontickej literatúre i ostražitosť voči všemožným zákerným nástrahám, ktoré na deontických logikov číhajú pri budovaní ich teórií. Ide preto o užitočné a inšpiratívne čítanie pre všetkých, ktorí sa touto problematikou zaoberajú. Text je navyše písaný zrozumiteľným a príťažlivým štýlom, vďaka čomu môže zaujať aj čitateľov, ktorým je táto oblasť úplne neznáma. Monografia je v neposlednom rade cenná tým, že podobná publikácia doposiaľ na československom knižnom trhu chýbala. Nakoľko ide o akési *Prolegomena ku každej budúcej deontickej logike, ktorá sa bude môcť nazývať adekvátnou*, ostáva už len dúfať, že v budúcnosti vyrastú z takto precízne pripravenej pôdy nejaké adekvátne systémy deontickej logiky.

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Praha: Akropolis 2014, 176 strán

V novembri minulého roku sa na pôde Ústavu pro českou literaturu AV ČR v Prahe konala vedecká konferencia s názvom *O popisu*, ktorej zavŕšením bolo neskoršie vydanie rovnomenného zborníka obsahujúceho konferenčné príspevky účastníkov tohto podujatia. Hneď na úvod treba povedať, že organizátori sa rozhodli pre nesmierne zaujímavý interdisciplinárny formát a podarilo sa im pod hlavičkou „opis" spojiť relatívne pestrú paletu príspevkov z niekoľkých teoretických disciplín. Pravda, ak by sme chceli povedať, že tematickým svorníkom

príspevkov uverejnených v zborníku *O popisu* sú opisy alebo že sa autori v týchto príspevkoch venujú predovšetkým opisom ako predmetu ich odborného záujmu, bolo by to do určitej miery zavádzajúce. Takýto spôsob vyjadrovania nám totiž sugeruje, akoby existoval určitý typ jazykových prostriedkov nazývaných „opisy", o ktorých sú jednotlivé príspevky – zatiaľ čo v skutočnosti tu tento predpokladaný spoločný menovateľ zrejme absentuje. Alebo inak a jednoduchšie: Je potrebné si uvedomiť, že nie sú opisy ako opisy.

Už som spomenul interdisciplinárny charakter diskutovanej knihy. Rád by som však okrem toho vyzdvihol editorskú prácu zostavovateľky A. Jedličkovej (prípadne edičného tímu okolo A. Jedličkovej ako hlavnej editorky), a to predovšetkým citlivé a veľmi umné zoradenie jednotlivých príspevkov, vďaka čomu pôsobí publikácia pomerne kompaktne.

Úvodný text s názvom *Nepřítomný popis: kompenzace jeho evokační a identifikační funkce* (s. 9-16) pochádza z pera lingvistky J. Hoffmannovej, ktorá sa zamýšľa nad špecifikami spontánnych rečových prejavov. Jedným z centrálnych pojmov jej uvažovania je implicitnosť ako explanačné ťažisko pri skúmaní fenoménu bežnej hovorenej reči. J. Hoffmannová upozorňuje na fakt, že to, čo by sme mohli pokladať za informačne defektné sprostredkovanie informácii, je takmer neoddeliteľnou súčasťou spontánnych prehovorov – a preto tu vlastne ani nemožno hovoriť o defektoch. Upozorňovanie na túto skutočnosť je dôležité predovšetkým v kontexte nezanedbateľného množstva lingvistických výskumov, ako aj preskriptívnolingvistických nariadení, kde sa mnohokrát zabúda na špecifiká spontánnej hovorenej reči a kde sa za pravú jazykovú substanciu pokladá (hoci neuvedomene) písaný text. Autorka si celkom oprávnene všíma komunikáciu ako jazykovú interakciu s cieľom porozumieť si, k čomu dochádza mnohokrát veľmi neštandardnými (presnejšie: „neštandardnými") spôsobmi. Na základe analýzy korpusových údajov demonštruje skutočnú povahu hovorenej komunikácie a pokúša sa týmto spôsobom vniesť do diskusie o jazyku nové otázky podnecujúce nové odpovede. Treba však povedať, že J. Hoffmannová vo svojom príspevku nepodáva žiadne kritérium na určenie toho, čo máme pokladať za „absolutní porozumění" (s. 12). Tým nechcem povedať, že explicitná definícia takéhoto kritéria je nevyhnutnou podmienkou ďalšieho skúmania, veď možno tu naozaj nemožno konštatovať nič určitejšie než quinovskú „plynulosť dialógu". Z metodologického hľadiska je však zrejme dôležité vyrovnať sa s faktom, že plynulosť dialógu je v mnohých spontánnych prejavoch zabezpečená jednoducho tým, že nám vlastne až tak nezáleží na *presnosti* toho-ktorého opisu.

V nasledujúcom článku *Sémantika určitých deskripcií a identifikácia* (s. 17-28) hľadá analytický filozof Marián Zouhar odpoveď na otázku, či majú určité deskripcie ako opisy práve jedného indivídua referenčnú funkciu. Autor nadväzuje na starý spor medzi sémantikmi a pragmatikmi, ktorý odštartovala Strawsonova

(1950) ostrá kritika teórie určitých deskripcií B. Russella. Vzhľadom na to, že ide o pomerne známy problém (prinajmenšom pre pravidelných čitateľov *Organonu F*), obmedzím sa na nasledovné skratkovité vysvetlenie (použijem pritom vlastné príklady): Otázka znie, či máme sémantické fungovanie výrazov typu „súčasný pápež" analyzovať tak, ako analyzujeme sémantické fungovanie výrazov typu „nejaký pápež", alebo skôr tak, ako analyzujeme výrazy typu „tento pápež". Zatiaľ čo kvantifikačný výraz „nejaký pápež" brázdi svetom a vyberá tie indivíduá, ktoré zastávajú funkciu pápeža, výraz „tento pápež" je kontextovo usmernený, a má teda schopnosť referovať na konkrétne indivíduum, o ktorom chceme niečo povedať (napr. „Tento pápež je Argentínčan."). Takto načrtnutý problém je, pravdaže, zrozumiteľný iba pre tých, ktorí pripúšťajú, že naznačený rozdiel v sémantickom fungovaní daných výrazov skutočne existuje. V každom prípade v spore o určité deskripcie zaujíma M. Zouhar nasledovné stanovisko: Určité deskripcie fungujú ako kvantifikačné výrazy a hoci môžu byť použité na identifikáciu rozličných objektov, nemožno na základe toho argumentovať, že na dané objekty referujú.

V záujme objasnenia obhajovanej teórie v kontexte reálnych komunikačných situácií M. Zouhar v závere svojho článku upozorňuje na teóriu variabilných univerz. Podľa tejto teórie použitie kvantifikačných výrazov vždy sprevádza vytýčenie množiny indivíduí, ktoré sú z hľadiska komunikácie relevantné. To znamená, že ak napríklad v závodnej jedálni prehlásime „Všetky obrusy sú špinavé", tak je naše tvrdenie pravdivé, alebo nepravdivé zrejme iba vzhľadom na tie obrusy, ktoré sa nachádzajú na stoloch v danej jedálni – a nie vzhľadom na všetky obrusy na svete. K tomu si dovolím uviesť dve poznámky:

1. Podľa môjho názoru a) „mať na mysli" konkrétne univerzum indivíduí (pozri s. 26) a b) uplatňovať určité deskripcie v komunikácii sú dva aspekty toho istého komunikačného aktu a nemožno ich jednoducho oddeliť. V tom prípade je však prinajmenšom otázne, či dokážeme vysvetliť mienenie toho-ktorého univerza indivíduí bez explicitného či implicitného referovania na toto univerzum.

2. V príspevku sa M. Zouhar zaoberá tým, ako fungujú určité deskripcie v jazyku. Z môjho pohľadu by sme tu však mali rozlíšiť a) fungovanie určitých deskripcií v Russellovej teórii a b) fungovanie určitých deskripcií v komunikácii. Domnievam sa, že ak opustíme územie vytýčené bodom a), tak nám výraz „fungovanie určitých deskripcií" môže spôsobiť konceptuálne ťažkosti.

Autorom tretieho príspevku je filozof Petr Koťátko, ktorý v článku s názvom *Identifikační funkce popisu ve fikčním textu* (s. 29-40) zostáva na pôde analytickej filozofie, hoci v centre teoretického záujmu sú v tomto prípade literárne texty, a to predovšetkým otázka povahy opisov a vlastných mien uplatnených v tomto type textov. Koťátkova polemická stať je kritickou reakciou na niekto-

ré názory G. Currieho a M.-L. Ryanovej, ale dá sa povedať, že autor sa v článku vymedzuje v podstate voči celému a dnes už pomerne mohutnému prúdu teoretikov fikčných svetov. P. Koťátko je presvedčený, že ak chceme vysvetliť fungovanie literárnych textov, tak sa nemusíme uchyľovať ani k pojmu fikčný svet, ani k žiadnej zložitej teórii literárneho jazyka – pretože tak vlastné mená, ako aj opisy fungujú v literatúre rovnako, ako fungujú v prirodzenom jazyku. Pravdaže, čitateľ nesmie zabúdať, že ak sa tu hovorí o literárnom opise, tak výlučne so zreteľom na jeho sémantickú funkciu, pričom sa abstrahuje od estetického rozmeru literatúry. Vzhľadom na takto vytýčený metodologický rámec sa Koťátko púšťa do polemiky s teóriou nedourčenosti literárnych opisov a okrem iného konštatuje, že literárne texty sú nedourčené v tom istom zmysle ako všetky ostatné opisy (teda aj tie, ktoré používame na identifikáciu skutočných vecí). Podľa Koťátka je predstava, že napísaním literárneho diela stvoríme nedourčený fikčný svet, zvádzajúca – literatúra totiž neopúšťa reálny svet, ide skôr o to, že sme ochotní na základe literárnych opisov predpokladať (v mode *ako by*) taký stav reálneho sveta, ktorý daným opisom zodpovedá (pozri s. 39).

Hoci je Koťátkova kritika teórie o nedourčenosti fikčných svetov presvedčivá, treba povedať, že niektorí autori (napr. L. Doležel, ktorý svoj postoj vyjadril priamo na novembrovej konferencii) hovoria o nedourčenosti fikčných svetov so zreteľom na estetické funkcie toho-ktorého literárneho diela. Ako som spomínal, Koťátko od tohto aspektu abstrahuje, ale keďže tak nerobí explicitne, jeho koncepcia môže byť v niektorých prípadoch zdrojom nedorozumení a pseudosporov.

V súvislosti s koncepciou P. Koťátka je však ešte podstatnejšie to, či na jej základe dokáže čitateľ odpovedať na nasledovnú metateoretickú otázku: Čo znamená predpokladať existenciu entít (v mode *ako by*) v reálnom svete? Na prvý pohľad sa zdá, že sa tu tvrdí niečo podobné, ako keď povieme, že tie a tie literárne opisy opisujú fiktívne entity. Predpokladať, že niečo existuje v reálnom svete, je jedna vec, avšak predpokladať to „v mode *ako by*" znamená – ak sa nemýlim – vedieť, že v skutočnosti neopisujeme nič reálne. Ak je to tak a ak zohľadníme spomínané tvrdenie, podľa ktorého literatúra neopúšťa reálny svet, potom je tu zrejme potrebné dodatočné vysvetlenie. Vyvstáva totiž možnosť zablúdenia v pojmových uličkách, ktoré sú vydláždené vratkými kockami jazyka teórie, a to konkrétne slovami „ako by" a „reálny". To v podstate znamená, že Koťátkovo priamočiare vysvetlenie fungovania fikčných textov v skutočnosti nemusí byť až také priamočiare.

V nasledujúcich dvoch príspevkoch zborníka *O popisu* sa do centra pozornosti dostáva špecifický typ opisu nazývaný *ekfráza*. Zjednodušene povedané, ekfráza je verbálny (a zväčša umelecký) opis umeleckého obrazu, a predstavuje

teda fenomén, ktorého skúmaním sa teoretici v konečnom dôsledku dotýkajú otázok intermediality.

V spomínaných príspevkoch sa čitateľ dočíta, prečo je veta, ktorou som sa pokúsil ekfrázu vystihnúť, problematická, resp. prečo je príliš zjednodušujúca. Prvý príspevok s názvom *Trajektorie starověké ekfráze* (s. 41-72), ktorého autorkami sú Heidrun Führerová a Bernadette Banaszkiewiczová, sleduje problematiku ekfrázy predovšetkým z historickej perspektívy orientovanej na antické pokusy teoreticky sa vyrovnať s daným fenoménom. Ide o článok, ktorý sa z metodologického hľadiska zásadným spôsobom odlišuje od predchádzajúcich príspevkov, pretože sa tu namiesto analytického preosievania argumentov uplatňuje historizujúca syntéza definícií, postrehov či charakteristík, ktoré však niekedy čitateľa zbytočne zahlcujú. Inými slovami, tento text sa v dôsledku informačnej nasýtenosti stáva pomerne neprehľadným, k čomu prispieva aj rozsiahly poznámkový aparát. V každom prípade v prístupe autoriek sa odráža antickými teoretikmi inšpirované chápanie ekfrázy ako „umenia vyvolať predstavu" (s. 48). Z textu nie je jasné, či túto charakteristiku možno pokladať za východiskovú, alebo je spolu s inými predmetom samotného skúmania – jednoznačne sa však dá povedať, že teoretické záujmy autoriek sa primárne orientujú na – ak to tak môžem nazvať – „kognitívne efekty" ekfrázy ako nástroja podnecovania predstáv a presviedčania. Z tohto pohľadu je, samozrejme, otázne, či sa skúmaním antických prameňov môžeme čo i len priblížiť k objasneniu spomínaných „kognitívnych efektov". Odpoveď na túto otázku čitateľ v texte nenájde – autorky ho však vedú iným smerom, upozorňujú na zväzok pojmov, ako je *enargeia*, *fantasia*, *saféneia*, *mimésis* a podobne a aj prostredníctvom nich sa pokúšajú odpovedať na otázku, aká je povaha ekfrázy. V tomto prípade je kľúčovým pojmom tzv. rétorická vízia. Podľa autoriek „*rétorická vize* zrcadlí způsob, jakým řečník utváří představivost obecenstva na všech kognitivních úrovních" (s. 47). Keďže autorky ekfrázu usúvzťažňujú (ba na jednom mieste ju priam stotožňujú) s rétorickou víziou, zároveň tým naznačujú, že v kontexte skúmania ekfrázy nie je dôležité lingvistické skúmanie (chápanie ekfrázy ako opisu), ale relevantné je predovšetkým „postulované emoční zapojení vnímatele" (s. 67) (chápanie ekfrázy ako rétorickej vízie). Domnievam sa však, že programové zotieranie hraníc medzi „kognitívnym stimulom" a „kognitívnym efektom", ktoré autorky uplatňujú v súvislosti s pojmom rétorickej vízie, nám nijakým spôsobom nepomôže odhaliť „skutočnú povahu ekfrázy", ba práve naopak, takáto kategoriálna deštrukcia nám priam bráni v poznávaní.

V druhom článku na podobnú tému, ktorého autorkou je Emma Tornborgová a ktorý má názov *To podstatné je čas: temporální transformace v ekfrázi* (s. 73-93), sa čitateľ dozvie, akým spôsobom možno teoretickú analýzu fenoménu ekfrázy uplatniť pri interpretácii – ako som to prv nazval – verbálnych (a zväčša

umeleckých) opisov umeleckých obrazov. V tomto prípade ide o analyticky ladený text, v ktorom sa autorka pokúša vymedziť niekoľko ekfrastických subkategórií vymedzených predovšetkým s ohľadom na dvojicu pojmov *čas/bezčasie (statickosť)*.

E. Tornborgová v príspevku nielen vypracúva vlastné literárno-teoretické kategórie, ale zároveň ich priamo uplatňuje pri interpretácii konkrétnych ekfrastických ukážok. Okrem toho sa pokúša takpovediac upratať diskusiu teoretikov, a to predovšetkým prostredníctvom subtílnejšieho posúdenia jednotlivých rovín, ktoré možno „temporálne určovať". Ak to opäť zjednoduším, ekfrastické opisy môžeme charakterizovať ako statické, či ako dynamické, a podobne môžeme určovať aj obrazy. Autorka upozorňuje na to, že diskusia sa sprehľadní, keď budeme explicitne rozlišovať to, či predikát „statický" uplatňujeme na samotnú ekfrázu/na samotný obraz, alebo tento predikát uplatňujeme podľa toho, čo daná ekfráza/daný obraz reprezentuje, alebo napokon podľa toho, aký interpretačný efekt daná ekfráza/daný obraz spôsobuje. Nebudem zachádzať do ďalších detailov a k uvedenému už len poznamenám, že pri subtílnejšom posúdení predkladanej analýzy možno predsa len vzniesť jednu námietku: Tá spočíva v spochybnení kategoriálnej rovnocennosti („súmerateľnosti") tých prípadov opisov, ktoré sú síce klasifikované ako statické, avšak v jednom prípade je opis statický v dôsledku toho, ako je koncipovaný (minimum tzv. dynamických slovies a pod.), no v inom prípade je opis pokladaný za statický na základe toho, o čom daný text vypovedá (pozri s. 89-90; báseň Znehybnění). Domnievam sa, že rozlišovať tieto prípady je vzhľadom na ciele analýzy rovnako dôležité, ako je dôležité rozlišovať obraz, ktorý padá na zem, od obrazu niečoho, čo padá na zem.

Vo zvyšných štyroch príspevkoch zborníka *O popisu* sa dostávame oboma nohami na pôdu literatúry alebo, ešte presnejšie, vstupujeme do oblasti skúmania opisov uplatnených v umeleckých textoch. Dva z týchto príspevkov sú nielen tematicky, ale aj ideovo natoľko príbuzné, že ich možno (kvôli stručnosti) predstaviť spoločne. Ide o článok Stanislavy Fedrovej s názvom *Popis a jeho subjekt: očima pozorovatele* (s. 94-109) a text *Experiencialita: rozděluje, nebo spojuje popis a vyprávění?* (s. 146-167) od Alice Jedličkovej, ktorý publikáciu *O popisu* uzatvára. Centrom teoretického zaostrenia uvedených autoriek je literatúra ako médium, ktoré dokáže čitateľom sprostredkovať síce fiktívny, ale predsa „živý" zážitok. Všeobecne sa predpokladá, že literárne texty, ktoré dokážu čitateľa, ako sa hovorí, vtiahnuť do deja, sú založené na brilantnom rozprávaní – avšak autorky, ktoré vo svojich úvahách v istom zmysle rešpektujú literárnoteoretický protiklad *narácia/opis*, skúmajú fungovanie literárnych opisov práve ako prostriedkov posilňovania tzv. experienciality textu. To znamená, že opis by sme podľa autoriek nemali predpojato chápať ako spomaľovaciu prekážku na ceste

fikčným údolím, ale mali by sme si všímať možnosti uplatnenia tohto literárneho prostriedku práve v prospech posilnenia čitateľského zážitku. Autorky svoje presvedčenie ilustrujú na konkrétnych ukážkach a upozorňujú na rozličné techniky opisovania:

- v opise sa prelínajúce pásmo rozprávača s pásmom postáv;
- technika opisovania zacielená na zachytenie priestoru v pohybe, resp. na zachytenie tzv. „simultaneity stavů" (s. 98);
- striedanie perspektív opisovania, t. j. prelínanie opisov vševidiaceho rozprávača s opismi limitovanými zorným uhlom postáv;
- a napokon technika, ktorú možno nazvať „zčasování procesu atribuce" (s. 153) a ktorá rešpektuje nielen zorný uhol postavy, ale aj sukcesívnosť percepcie.

Ide nepochybne o zaujímavé postrehy, a to predovšetkým z pohľadu tých, ktorých zaujímajú subtílnejšie interpretačné rozlíšenia v rámci analyzovaných diel, ako je napr. Čapkova próza *Procházka*, Jiráskova kronika *F. L. Věk* a podobne. Pravdaže, v tomto prípade stále ostáva otvorené, či sa analýza týka skutočných techník posilňovania experienciality textu, alebo tu ide skôr o vypracovávanie literárnoteoretických konceptov, ktoré spolu s pojmom experienciality umožňujú autorkám – rortyovsky povedané (porov. Rorty, 1992) – uviesť k jednotlivým umeleckým textom zaujímavé interpretačné postrehy. Okrem toho autorky píšu o rozličných technikách „zanoření", akoby mal samotný text – a v rámci tohto textu použité opisy – schopnosť vovieť čitateľa do príslušného fikčného sveta, hoci týmto spôsobom orientovaný výklad môže mnohým pripadať neúplný. Do samotnej explanácie by zrejme malo byť zahrnuté napríklad aj to, čo slovenský teoretik umeleckých textov F. Miko (1970) nazýval „skúsenostný komplex", t. j. súbor konkrétnych zážitkov, skúseností, ktoré čitateľ pri čítaní premieta do fikčného sveta toho-ktorého diela. Explanačná sila tejto hypotézy spočíva v zachytení jedného z možných dôvodov, prečo jeden a ten istý text niekoho „pohltí", zatiaľ čo iného vôbec nezaujme.

Ďalším výsostne literárnym príspevkom zborníka *O popisu* je článok Zdeňka Hrbatu *Thespidova kára* (s. 110-126), v ktorom autor predkladá detailnú literárnu interpretáciu románu *Kapitán Fracasse* od T. Gautiera. Teoretickým zázemím interpretácie sú, dá sa povedať, štandardné (predovšetkým gettierovské) literárnoteoretické kategórie, ktoré autor využíva hlavne s cieľom preniknúť do sémantickej roviny analyzovaného diela. Vzhľadom na tematickú orientáciu zborníka je Gautierovo dielo zaujímavé špecifickým využitím opisov, ktoré na niektorých miestach vyúsťuje priam do deskriptívnej minucióznosti. Ako upozorňuje Z. Hrbata, v prípade *Kapitána Francassa* ide okrem iného o literárnu

reakciu na žáner hrdinských či komediantských románov, poetologicky tu teda dominuje intertextuálnosť, tá však nie je realizovaná iba implicitne, „potichu" – ale sama sa v metaliterárnych pasážach románu dostáva do čitateľskej pozornosti. Uvedená metaliterárnosť ako autorská stratégia vyjadriť sa pomocou literárnych prostriedkov k samotnej literatúre, prípadne transformovať literárnoteoretické a interpretačné postrehy do podoby umeleckých/estetických textov predstavuje jeden z najdôležitejších poetologických rysov analyzovaného diela. Z. Hrbata sa tejto problematike podrobne venuje, hoci predkladá predovšetkým *sémantickú* interpretáciu – čo v tomto prípade znamená, že sa pokúša predovšetkým dopovedať, *o čom* je daný román. Keďže sú však vďaka autoreferenčným a metaliterárnym autorským stratégiám uplatneným v Gautierovom diele mnohé idey dopovedané priamo v samotnom umeleckom texte, z hľadiska literárnej interpretácie sa podľa môjho názoru žiada skôr semiotická interpretácia, ktorá práve tieto skutočnosti zohľadní a vyabstrahuje z nich určité poetologické špecifiká, prípadne vyvodí dôsledky (v tomto a výlučne v tomto prípade pracujem s protikladom *sémantický/semiotický* čitateľ (interpret), t. j. s protikladom, ktorý svojho času zaviedol U. Eco. Pozri napr. Eco 1994, 3. kap.).

Podobne ako príspevok Z. Hrbatu, aj článok Ivany Taranenkovej s názvom *V hľadaní adekvátneho sveta a výrazu. Opis v próze slovenského literárneho realizmu* (s. 127-145) je predovšetkým literárnointerpretačnou štúdiou – pričom I. Taranenková sa vo svojom texte zaoberá prozaickou tvorbou S. H. Vajanského a M. Kukučína ako dvoch významných slovenských autorov obdobia realizmu (prinajmenšom z pohľadu starších periodizácií dejín slovenskej literatúry). Autorka si všíma, akým spôsobom fungujú v dielach uvedených spisovateľov naoko neutrálne opisy a dospieva k záveru, že ani v jednom prípade nemožno hovoriť o „nevinnom" realizme, o literárnom fotografovaní reálneho sveta, pretože v obidvoch prípadoch je snaha o zachytenie skutočného determinovaná subjektívnymi postojmi či túžbami. V prípade Vajanského je najzreteľnejšia snaha zapriahnuť literatúru v záujmoch nacionalistickej ideológie, „realistický opis" sa tu nevzťahuje na dobové reálie, ale je skôr akousi literárnou výstuhou vyabstrahovaného a nikdy neexistujúceho ideálu, pričom, ako upozorňuje autorka, „tento deficit sa tu nahrádzal naliehavosťou melodramatického výrazu" (s. 138). A hoci sa práve Kukučínova próza pokladá mnohokrát aj v porovnaní s Vajanského textami za akýsi kánon slovenského realizmu, podľa I. Taranenkovej je aj v tomto prípade literárny svet autorsky koordinovaný, detailný realistický opis tu totiž nie je ani tak výsledkom dôsledného napĺňania určitého estetického ideálu, ale je skôr odrazom „manickej túžby nostalgika" (s. 140), ktorý do svojich príbehov premieta staré dobré časy. V nadväznosti na postrehy I. Taranenkovej sa však môže čitateľ pýtať, čo si má vlastne počať s predikátom „byť realistickým opisom" (obmedzeným na literárne texty). Autorka svoje úvahy uzat-

vára pomerne všeobecným konštatovaním, podľa ktorého sú tak Vajanského, ako aj Kukučínove literárne opisy indikátormi „špecifickej realizácie realistického umeleckého modelu v kontexte slovenskej literatúry" (s. 143). Ako indikátory sú však zrejme „čitateľné" až vtedy, keď poznáme okrem kontextu slovenskej literatúry aj kontext tvorby jednotlivých diel, to znamená, keď máme okrem diel dostatočne dobre prečítaných aj samotných autorov. A to je zrejme len ďalším dôkazom toho, že pri používaní frázy „fungovanie opisov" musíme byť ako teoretici nanajvýš obozretní.

Keďže sa mi napriek úsiliu o stručnosť príspevok akosi natiahol, nebudem už trúsiť ďalšie poznámky a zdržím sa aj záverečného hodnotenia diskutovaného interdisciplinárneho projektu. Domnievam sa, že o zmysluplnosti podobných teoretických konfrontácií sa nemožno vyjadrovať na základe vydanej knihy, ale až na základe toho, či podnieti, alebo nepodnieti ďalšiu odbornú debatu. Svoje poznámky k jednotlivým príspevkom zborníka *O popisu* som písal práve s cieľom takúto debatu podnietiť.

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In memory of Pavel Tichý

On October 26th it will be 20 years since Pavel Tichý suddenly and tragically passed away in a bush reserve near his home in Dunedin, New Zealand. The obituary in the journal *From the Logical Point of View*, penned by his lifelong friend Pavel Materna soon after the news had reached Prague, reverberated with what can only be called shock.

This short note is devoted to the memory of this outstanding, original and gifted logician, one of the greatest ever born not only in then-Czechoslovakia but also in the world. Tichý was the founder of a theory that he called Transparent Intensional Logic, known today as TIL. Thanks to Tichý, there are a number of TILians (as we call ourselves, tongue-in-cheek) who actively continue Tichý's work by further developing his theory as well as discovering new applications of it, and TIL is becoming a widely known and respected theory in the world of analytic philosophy and philosophical logic. Here we are not going to provide a detailed study of Tichý's work, nor details from his biography.[1] Rather, we want to point out the most important features of his brainchild TIL as of 2014. Indexing the development of TIL to a particular year is essential now that there are more people than ever working on the theory.

The foundations of TIL were laid out in the 1960s when Tichý published two remarkable papers, the first one in Czech ('Smysl a procedura'; see Tichý 1968) and the second one in English ('Intensions in terms of Turing machines'; see Tichý 1969). In these papers he came up with the revolutionary idea of *procedural semantics*. The meaning of an expression is not a set-theoretic object, e.g. a function/mapping. Its meaning is instead an algorithmically *structured procedure* that produces another entity, e.g. a set-theoretic object, or in well-defined cases fails to produce an object.[2] In our opinion, this is the greatest and most revolutionary feature of TIL. Actually, as it often happens to brilliant people of genius, Tichý was ahead of his time. Maybe this was

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[1]   A summary of Tichý's logic, his biography and a complete list of his publications can be found in Tichý (2004, 9-34). For an introduction to Tichý's philosophy and logic see also Raclavský (2008).

[2]   More precisely, Tichý's semantic schema was simple; an expression *denotes* the procedure as its meaning. Once you have the denoted procedure, you can examine what, if anything, is produced by it, entailed by it, etc.

one of the reasons why TIL was not recognized during his life as much as it would have deserved. At a time when set-theoretical semantics prevailed in the form of model theory, and the theory of algorithms and procedures was still at the dawn of its development, philosophers and logicians were barely in a position to acknowledge the value and power of this approach. Indeed, only almost thirty years later did a similar idea appear, namely in Moschovakis' work (see Moschovakis 1994).

Yet the need for *structured, hyperintensional* meanings had been recognized at least since the time of Carnap's *Meaning and Necessity*. In fact, the topic of hyperintensionality was born out of *negativity*, as it were. Carnap in (1947) noticed that there are attitudes the complement of which is neither extensional nor intensional, because the substitution of logically equivalent expressions fails there. Cresswell was later to define any individuation as hyperintensional that is finer than logically necessary equivalence. But Tichý came with a positive definition of hyperintensional, or fine-grained, individuation. Though he did not use the term 'hyperintension' as it is known today, but 'intension' as it was used before possible-world semantics usurped the term for functions with domain in possible worlds, he actually rigorously defined hyperintensions as TIL *constructions.*

Here we struggle a bit with terminology. The term 'construction' is perhaps not the most fortuitous due to its current connotations, in particular with the sense bestowed upon it by intuitionistic logic which may be considered the logical basis of constructive mathematics. Philosophically, intuitionism differs from logicism by treating logic as a part of mathematics rather than as the foundation of mathematics; from finitism by allowing (constructive) reasoning about infinite collections; and from Platonism by viewing mathematical objects as mental constructs with no independent ideal existence (see Moschovakis, forthcoming). Though TIL has much in common with constructive reasoning and intuitionism, its main paradigms are different. TIL constructions are *abstract procedures* detailing which operations are to be applied to which objects in order to produce a product, if any, of a particular type. Thus constructions are not mental objects and TIL adheres to Platonism. Moreover, for Tichý logic is not a part of mathematics. Rather, logic can lay down the foundations of mathematics. Yet TIL does not deal only with mathematics; rather, it is an overarching framework in which the logical principles governing reasoning about empirical objects are the same as those governing reasoning about mathematical objects.

Tichý's constructions represent our interpretation of Frege's notion of *Sinn* (with the exception that constructions are not truth-bearers; instead some present either truth-values or truth-conditions) and are kindred to Church's

notion of *concept*.[3] While the Frege-Church connection makes it obvious that constructions are not formulae, it is crucial to emphasize that constructions are not set-theoretical functions/mappings, either. Rather, technically speaking, some constructions are *modes of presentation* of functions, including 0-place functions such as individuals and truth-values, and the rest are modes of presentation of other constructions. Thus, with constructions of constructions, constructions of functions, functions, and functional values in TIL's stratified ontology, we need to keep track of the traffic between multiple logical strata. Hence all the entities of TIL ontology receive a type, and the *type hierarchy* is *ramified*. Importantly, constructions may themselves figure as functional arguments or values.

The syntax of TIL is Church's (higher-order) typed λ-calculus, but with the all-important difference that the syntax has been assigned a procedural (as opposed to denotational) semantics, according to which a linguistic sense is an abstract procedure detailing how to arrive at an object of a particular logical type. The TIL construction known as *Closure* is the very procedure of presenting or forming or obtaining or *constructing* a function; the TIL construction known as *Composition* is the very procedure of *constructing* the value (if any) of a function at an argument. Compositions and Closures are both multiple-step procedures, or *constructions*, that operate on input provided by two one-step constructions, which figure as sub-procedures of Compositions and Closures, namely *variables* and so-called *Trivializations*.[4] Characters such as '*x*', '*y*' '*z*' are words denoting variables, which construct the respective values that a valuation function has assigned to them.[5] Trivialization is a special construction that was added to TIL only in 1988. In pre-1988 TIL objects were supposed to construct themselves. Yet Tichý rightly realized that an object that is not a construction cannot be a constituent of a procedure; it cannot be executed. Similarly as the constituents of a computer program must be subprograms, the constituents of a construction must be sub-constructions that occur executed. The object produced by a construction cannot be part of any construction that constructs it; it is beyond the construction. The linguistic counterpart of a Trivialization is a constant term always picking out the same object. An analogy from programming languages might be helpful. The Trivialization of an object *X*

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[3]   The TIL theory of concepts has been developed by Pavel Materna, see Materna (1998).

[4]   Jespersen (forthcoming) offers a philosophical description of each of the constructions, including *Single* and *Double Execution*, which we have left out above.

[5]   See Tichý (1988, §14) on this objectual notion of variables.

(whatever X may be) and its use are comparable to a *fixed pointer* to X and the *dereference* of the pointer. In order to operate on X, X needs to be grabbed, or 'called', first. Trivialization is such a grabbing mechanism. Another important role of Trivialisation is that it makes it possible to *display* constructions as arguments of other functions. This is needed in hyperintensional contexts, especially mathematical and attitude contexts. To this end we need to type constructions themselves, and the ramified hierarchy of types does just that.

Tichý's TIL was developed simultaneously with Montague's Intensional Logic (IL).[6] But TIL differs from IL in at least two important aspects. One is that we λ-bind separate variables $w_1...w_n$ ranging over possible worlds and $t_1...t_n$ ranging over times. This dual binding is tantamount to *explicit intensionalization* and *temporalization*.[7] The other difference is that *functional application* is the logic both of extensionalization of intensions (functions from possible worlds) and of predication. These features make it possible to handle possible-world intensions in the same way as mathematical objects. Moreover, *contra* Frege, Church and Montague, TIL does not embrace reference shift; Tichý denied both that reference shift is a fact of natural language and that a logic or formal semantics of natural language should be contextual due to reference shift. Empirical expressions denote possible-world intensions in all kinds of context, and instead of a reference shift we distinguish occurrence in supposition *de dicto* and *de re*. If the former, the whole intension is the object of predication; if the latter, the value of the denoted intension is the object of predication. Hence the intension in question must be extensionalized, that is, applied to a possible world w and a time t of evaluation in order to obtain its value (if any) at this dual index.

A main feature of the λ-calculus is its ability to systematically distinguish between functions and functional values. An additional feature of TIL is its ability to systematically distinguish between functions and modes of presentation of functions and modes of presentation of functional values. What makes TIL suitable for being an overarching theory for the semantics of any language is the fact that the theory construes the semantic properties of the sense and denotation relations as remaining invariant across different sorts of linguistic

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[6]   For a critique of Montague's intensional logic, see Duží et al. (2010, §2.4.3).

[7]   Van Eijck – Francez (1995) and Loukanova (2009) both lack explicit intensionalization and temporalization, even though the latter builds on Moschovakis' extension of Montague's IL, whereby TY_2 (in which s is a regular type) becomes available. Moreover, due to the lack of variables ranging over possible worlds, IL does *not* validate the Church-Rosser 'diamond' property. Though it is a well-known fact that an ordinary typed λ-calculus will have this property, Montague's IL is deviant in this respect.

contexts. The logic of TIL is obtained in a top-down manner by devising a semantics for hyperintensional contexts, and applying the same logical principles to the increasingly less-hard cases of various intensional (modal) and extensional contexts. Thus in TIL we systematically distinguish between three different levels of abstraction. It is (i) the highest level of *constructions* presenting functions, (ii) the intermediate level of the products of constructions, that is, *functions* (including possible-world intensions), and finally (iii) the lowest level of *functional values*.

Tichý issues in (1986, 256; 2004, 654) a warning against inter-defining the notions of extensional (etc.) context and the validity of the rules of substitution of co-referring terms and existential generalization on pain of circularity:

Q: When is a context extensional?
A: A context is extensional when it validates (i) the rule of substitution of co-referential terms (i.e. is transparent) and (ii) the rule of existential generalization.
Q: And when are (i), (ii) valid?
A: Those two rules are valid when applied to extensional contexts.

We steer clear of the circle by defining the above three levels of abstraction, and these three levels are squared off with three kinds of context. Here is a summary of these three kinds of context:

- *hyperintensional context*: one or more hyperintensions/constructions occur *displayed* (though one or more constructions at least one order higher need to be executed in order to produce the displayed constructions)
- *intensional context*: one or more constructions are *executed* in order to produce one or more functions (moreover, the executed constructions do not occur within another hyperintensional context)
- *extensional context*: one or more constructions are *executed* in order to produce one or more particular values of one or more functions at one or more given arguments (moreover, the executed constructions do not occur within another intensional or hyperintensional context).

Tichý's entirely anti-contextual and compositional semantics is, to the best of our knowledge, the only one that deals with all kinds of context, whether extensional, intensional or hyperintensional, in a uniform way. The same extensional logical laws are valid invariably in all kinds of context. In particular, there is no reason why Leibniz's law of substitution of identicals, and the rule of existential generalisation should fail to be valid. What differs according to

the context is not the rules themselves but the types of the objects to which these rules are applicable. In an extensional context they are the values of the functions denoted by the respective expression; in an intensional context they are the denoted functions themselves; in a hyperintensional context they are the displayed procedural meanings themselves. Due to its stratified ontology of entities organised in a ramified hierarchy of types, TIL is a logical framework within which such an extensional logic of hyperintensions has been introduced.[8]

Another important feature of TIL is *partiality*. Unlike almost all the other logical systems, TIL does not avoid working with properly partial functions and improper modes of presentation that fail to produce a product. Partiality is notorious for bringing about technical complications. But Tichý was convinced that the task of a logician was not to circumvent problems stemming from technical complications, but to solve them. Indeed, we need to be able to work with partial functions, unless we rest content with an unmanageable explosion of domains. It is neither possible to restrict the logical space in an *ad hoc* way so as to avoid working with non-referring terms like 'the King of France', nor philosophically plausible, though technically possible, to introduce so-called impossible worlds counting 'individuals' like the non-existing King of France in their domain.

Moreover, functions typically have more than one argument. Conventional wisdom has it that *n*-ary functions can be *represented* by unary composite functions. True, Schönfinkel, in (1924), observed that there is a one-to-one isomorphic correspondence between *n*-ary functions and certain unary composite functions. For instance, a two-argument function mapping couples of numbers to numbers can be represented by a unary function mapping numbers to functions from numbers to numbers. However, this isomorphism breaks down when *partial* functions are included, as Tichý showed in (1982, 467-468). One and the same partial *n*-ary function may correspond to more than one unary function.

There are many other remarkable features of Tichý's logic and philosophy of language, to name at least individual anti-essentialism, anti-actualism, a constant domain, and independent treatment of modal and temporal parameters. *Individual anti-essentialism* is the thesis that no individual bears any purely non-constant property by any sort of necessity. This is not to say, though, that TIL

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[8]   For an extensional logic of hyperintensions see, for instance, Duží (2012a; 2012b; 2013). The rules for existential quantification into hyperintensional contexts are introduced in Duží – Jespersen (ms.), Duží – Jespersen (2012). Finally, Duží – Jespersen (2013) introduces the substitution method operating on hyperintensional contexts.

rejects essentialism across the board; far from it. Tichý in (1979) introduces *requisites* as necessary relations between intensions. Roughly, *G* is a requisite of *F* provided, as a matter of analytic necessity, if *x* is a/the *F* then *x* is also a/the *G*, because being a/the *G* is in the essence of being a/the *F*. The *essence* of an *intension* is then the collection of all its requisites. The result is *intensional essentialism*.

Anti-actualism is the thesis that the actual possible world has no special status among all the other possible worlds. TIL's possible-world semantics is custom-built for us humans lacking empirical omniscience. We cannot know which of all the possible worlds is the actual one, and we are far from knowing all the actual satisfiers of the various empirical conditions. Yet, nothing of an epistemic nature bars us from being able to apply conditions (modelled as possible-world intensions) and having our discourse revolve around them. Hence empirical expressions denote such conditions/intensions rather than their satisfiers. What Tichý's explicit intensionalization does is to make the satisfiers vanish from the logical-semantic realm altogether and to focus instead on the conditions.

In TIL individuals do not spring into being in some possible worlds and vanish in others; rather, they exist trivially and independently of possible worlds. Hence TIL eschews *possibilia* (possible worlds arguably being the only exception), and the theory operates with a *constant domain* for all worlds and times. What varies are the values that (non-constant) intensions have in different worlds and at different times, and not the domains that different worlds and times have. Non-trivial existence is not a property of individuals but of intensions, to wit, the property of being occupied/instantiated at a particular world-time pair.

Much, much more could be said here concerning TIL and Tichý's logic. Fortunately, there are numerous sources of information, in Tichý's papers, the (1988) and (2004) books, in the work of his followers, and summarizing all his work would be pointless. Instead, the one of us who was fortunate enough to meet Pavel in the flesh would like to finish this short overview with a personal memory. Pavel was sharp-witted, and many considered him difficult to be around. Yet he was a good friend with a very good sense of humor and he loved rational, fair discussions. He always went directly and rigorously to the fundamental questions at the very heart of things. But being deeply involved in his quest for a solution, he would occasionally forego diplomacy. And he had little time for irrational demagogy devoid of argument. Maybe these were the reasons why people sometimes found him difficult. On the other hand, though a sharp debater, he was ready to accept the other's opinion and even admit his own fault, if only it was supported by a fair and valid argument. True, such

cases were rare, but not because he would not be willing to accept the opposing opinion, but because he was almost always right. I would often feel convinced that I had discovered a mistake in Pavel's arguments, only to realize, upon thorough examination and hard thinking, that Pavel was right, again. Thus I learnt to always read his papers very carefully, and to take into account his brilliant ideas and conclusions. In short, he was a genius.

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