PhD Thesis Abstract

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The Meaning and Modality by Carnap and Kripke

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1. Aim and Topic of the Thesis and its Main Objectives.

The title of the thesis "Meaning and Modality by Carnap and Kripke" direct us to the main topic, namely to the meaning/naming-modality/necessity relationship. Both the meaning/naming pair and the necessity/modality pair refer to the key concepts in the titles of both Carnap and Kripke's well known works on this issue, "Meaning and necessity" by the former and "Naming and Necessity" by the latter author. It is accepted that meaning and naming belong to semantic and philosophy of language, while modalities belong to metaphysics since they are about the essential properties (in the case of necessity, of course) of things. The focus is on Rudolf Carnap and Saul Aron Kripke, the two leading philosophers known for their great contributions to this issue.

1.1. The Main Objectives. The main objectives of the thesis is to represent a comprehensive analysis of both systems, not just defining the basic concepts but investigating how they are connected to each other and which of them can serve as ground for defining the others. Carnap's system represents a study in semantics and modal logic, where the method of semantic analysis is developed and has to serve as a ground for further analysis of modality, while Kripke's system is a study of modal logic and corresponding semantic concepts, where basic modal concepts are defined aimed to define basic semantic relation (naming relation). These two systems are the two possible ways of analysis, but they cannot be taken as contradictory, and they picture the particular frameworks in question.

1.1.1. R. Carnap's Framework. Representing Carnap's system we obtained the investigation about the following points:
– the main theses of his *logical syntax* such as linguistics framework, the principle of verification, metalogic, the rules and modes of speech,
– the main theses about *the method of extension and intension*, extensional and intensional context, the principle of interchangeability and the belief sentences,
– the main theses regarding *the method of the name-relation* and its principles,
– the main theses of his *modal logic*: the object language – metalanguage distinction, modal semantics, formation and transformation of modal sentences.

It has been shown that Carnap's system represents the study in semantics where his method of semantic analysis serves as a ground for further analysis of modality/necessity. His method of extension and intension is semantical method in question, but the introduction to

this method has its root in Carnap's beginning ideas regarding the linguistic framework. His distinction on *internal and external questions* explains the concept of linguistic framework. The first kind of questions is about the existence of new kind entities within the linguistics framework and second about the existence of the system of entities as a whole. If we want to speak in our language about a new kind of entities we have to introduce a system of new ways of speaking, subjected to new rules as well, and this procedure is known as the construction of *linguistics framework* (for the new entities in question). The main question here is that of the relevance of the linguistic framework for the internal questions. *Internal questions* and their answers are formulated by new forms of expressions, and found by logical or empirical methods, depending whether the framework is logical or factual. The concept of reality presented by internal questions is empirical, non-metaphysical concept. *External questions* are about the reality of the thing world itself, usually raised by philosophers .

Carnap is inclined to *linguistic internalism* meaning that we cannot speak from outside the language, but only from within the linguistic frameworks to whose rules we already conform. When the different frameworks are in play we speak about framework pluralism. Frameworks are *ontologically commitments*, meaning that the adoption of the framework involves ontological commitment to the entities over which quantifiers of the framework range. It is possible that *ontology is framework-dependent*, which is a corollary of the thesis of linguistic internalism, which means that we cannot speak from outside linguistic frameworks altogether, and hence there is no viewpoint for ontology other than that supplied by the frameworks to which we subscribe. But, to the extent that different frameworks are independent, and doing different jobs, their existential quantifiers also seem to be doing different jobs, and according to Carnap each framework seems to bring its own notion of reality and this represents the thesis of *ontological pluralism*. *Pragmatism* about the adoption of frameworks means that there are legitimate pragmatic issues which may be raised about the framework.

Interesting question is whether Carnap's internal-external distinction hangs on *analytic-synthetic distinction*? Having in mind his debate with Quine regarding the analytic-synthetic distinction, we can see that Carnap is inclined to this distinction and moreover to follow the usual classification of statements with respect to three main contexts of expressions: metaphysical, logical-semantical and epistemological context. Starting with logical-semantical context, he accepts that analytic statements are necessary and *a priori*, while synthetic are contingent and *aposteriori*. This viewpoint differ him from Kripke who questions this common classification by accepting the *necessary aposteriori truths*/statements.

The explanation of Carnap's semantic method requires the introduction of two key concepts: *extension* and *intension*. This pair of concepts represents the *particular framework* that can be recognized in Carnap's semantic as the fundamental device/tool for his modal logic. Extension and intension are explained and applied:

– in the context of the designators where the important notion is *the possible state of affairs*,

– in the context of the belief sentences where the key concept is *the intensional iso-morphism*,

– in the method of the name-relation (but, in favor to his method of extension and intension).

The relevance of these concepts, or his *extension-intension framework*, is to serve to define basic modal concepts, and provide the answer on his question whether semantic for a *neutral metalanguage* is possible and what is its fundament extension or intension. This issue turns us back to the notion of *necessity and rigidity*, important notion that can be recognized in Carnap's *possible state of affairs*, and as employed by Kripke in the context of the name as rigid designator. Carnap's important view is that any two expressions which express the same individual concept are L-equivalent, or *have the same intension, and therefore they are substitutable, even in modal contexts*. This view represents his conceptual interpretation which has systematic and logically consistent account of the notion of the satisfaction of an open-modal formula. The main conclusion is that Carnap's particular *extension-intension framework* employed is used to explain the relationship between *meaning* and *modality*.

1.1.2. S. A. Kripke's Framework. Representing Kripke's system we obtained the investigation about the following points:

– the main theses of his *modal logic*, especially his *possible worlds semantics*,

– the main theses of his *semantics and causal theory of proper names*, rigid and nonrigid designators, speaker and semantic reference

– the main theses regarding the puzzle about belief and the *belief sentences*.

Kripke's system is a study of modal logic and corresponding semantic concepts, where basic modal concept necessity (with respect to analyticity and *aprioricity*) is aimed to define one of basic semantic relation of naming relation. In his lectures summed up in his *Naming and Necessity* Kripke defends the main these about naming that belong to semantics and philosophy of language, and theses about necessity that belong to metaphysics. Analysis shows that the arguments for these different theses are interrelated. Kripke was criticized for

attempting to derive metaphysical conclusion about the essential properties of things (i.e. possible worlds) from premises in the philosophy of language about the nature of reference and the semantics of proper names. Kripke tried to clarify the relationship between theses and questions about reference and proper names on the one hand, and theses and questions about necessity and possibility on the other hand. But, it has to be noted that Kripke's contribution was not to connect metaphysical and semantic theses, but to separate them. His intention was to provide a context in which questions about essence of things could be asked *independently* of semantic rules for the expressions used to refer to things. Second important issue was to provide the context in which questions about how names refer could be asked *independently* of question about the nature of things names refer to.

It is necessary to deal with *questions of descriptive semantics*, *questions of foundational semantics*, and *those about the capacity and potentiality of the things*. The descriptive-semantic theory says what the semantic for the language is, without saying anything about the practice of using that language that explains whether semantic is adequate or not. This theory assigns semantic values to the language expressions and explains how semantic values of complex expressions are function of the semantic values of their constituents (which is something that can be recognized as the *principle of compositionality* used by Carnap). If we reframe this kind of question in Kripke's terminology we will be concerned with the question of what kind of thing is the semantic value of proper names. On the other hand, the questions of foundational semantic are about what the facts are that give expressions their semantic values. If we reframe this kind of question in Kripke's terminology we will be concerned with the question about the semantic value of names (e.g. what is it about the situation, behavior or mental states of speaker that determine the semantic value of particular proper name used by the speaker in a particular linguistic community). Third kind of question, when reframed in Kripke's terminology, is the question of what might have been true of things (such as persons and physical objects) that are the referents of proper names. As we have seen Kripke provides the answers to each question. Kripke's answer to the descriptive-semantic question about proper names is that the semantic value of name is its referent, which is in its nature the Millian answer. Kripke argues against the opposite answer that semantic value of name is a concept that mediates between name and its referent, namely the concept of definite description. His answer to the foundational-semantic question is that name has the referent that it has in virtue of causal connection of the use of the name and the referent. This means that the referent is the individual that plays the right role in the causal explanation of the particular context in which the name is used. Finally, his answer to the

question about the capacity and potentiality of the things that we commonly refer to by names, is that it makes sense to talk about the logical potential of things independently of how it is referred to them (explained by his Shakespeare-example).

Kripke's particular framework is *the possible-worlds framework* where the key concept is necessity (rigidity in the context of names), and it could be understand in the same spirit as Leibnizian slogan „necessity is truth in all possible worlds". Kripke's framework should not be understand as providing the ontological foundation for a reduction of modal notions, but as formulating the theoretical language in which modal discourse can be uniformed, its structure explained, and equivocation resolved. Kripke recognized that modal discourse is problematic, providing both ambiguities of scope (because the semantic structure of modal statements is complicated and not simply reflected in surface syntax) and ambiguities that arise from alternative senses and context dependence of modal words. Puzzles about, for example, necessary connection and counterfactual dependence, reference to non-existing things, the ability to do otherwise, etc., Kripke tries to resolve by clarifying the discourse in which such problems are posed, and he points out that we need a language free of ambiguities that infect modal discourse, where modal claims can be paraphrased and still be powerful to make claims about what might, would or must be true. The main resource of the possible-worlds framework is in ordinary modal language and contains basic assumption that statements about what might be true can be described in terms of the ways a possibility might be realized.

2. Description of the Method Used.

The very nature of this work and the nature of its main topic determine and frame the basic methods used. The first and the mandatory step was the comprehensive presentation and explanation of both Carnap and Kripke's semantic and modal systems. This step required the usage of usual intensional type of definitions like theoretical and lexical definitions, and recursive definition in order to enumerate all clauses of specific systems (in regarding specific language systems, for example).

The second step was to provide the comparative analysis of two main systems, step which is based on previously given presentation and explanation, and which requires classical logical methods of inference (inductive, deductive, analogical, etc.) of conclusions and their argumentations.

Third step represent the establishment of the main theses (the thesis of two particular frameworks and the final thesis about one particular framework as the solution to fundamentally asked questions), based on previously given argumentations.

3. The Achieved Results.

The most important result of this work is the comparison of the two frameworks, *Carnap's extension-intension framework* and *Kripke's possible-worlds framework*, with respect to the specific features and differences between classical and neoclassical theory of meaning.

As a represent of the classical theory Carnap accepts that it is necessary to explain how meaning of word/expressions (used by speakers to refer) is fixed, which is known as intersubjective criteria for applying the words in the language. This theory is supposed to account for necessary truth. As a classical theorist Carnap thought that meaning determines reference, and if speaker knows the meaning of word he knows how to use it to refer. What he presupposed here is that the meaning of word is a set of characters that are necessary and sufficient for it to apply. But, classical theory does not explain how meaning can fix the criterion for word's application in advance. The notion of *fixing the meaning in advance* has to be explained as providing *a priori* criteria, or otherwise it cannot support a doctrine of necessary truth. It follows that without an appeal to necessary truth the classical theory offers no distinction between *semantic criteria* and *empirical criteria* for applying an expression. From the causal theory point of view, the weak spot of classical theory is in its conception of criteria, which cannot support the doctrine of necessary truth.

On the other hand Kripke, as a causal theorist, focuses his attention on the classical theory's identification of meaning with criteria of application and accept the view that there is no *a priori* specification of criteria. His intention was to show that the classical theory's account of analytic truths does not distinguish them from truths based on contingent facts. By his Gödel-example Kripke shows that it is mistake to claim that there is anything stronger than a contingent connection between the criterion for applying the subject of such sentence and the criterion for applying the predicate. He criticized classical theory and developed his alternative theory based on assumption that all criteria of application are grounded in extra linguistic matters of facts, concepts from empirical science, and information about baptismal ceremonies. Kripke concludes that there is conflict between the classical theory's rationalist

approach to meaning and its empirical approach to language, which keep the classical theory away from developing the *a priori* account of meaning. The tendency to take empiricist view of language prevents the classical theory form drawing a sharp distinction between *a priori* and *a posteriori* criteria. It is not strange, since the classical theorists conceived natural language as historical products and semantics as systems of contingent belief acquired by each generation. Such conception provides very little chance of constructing a rationalist account of meaning, account that could separate *a priori* from *a posteriori* criterion.

Which framework does better job? Whose account represents the adequate solution to all fundamental questions they dealt with? The different starting points of both accounts and his framing in a different way show the complexity of the issue itself. The obvious fact is that both frameworks serve the same purpose, namely they explain the notion of necessity with respect to basic semantic concept of meaning/naming.

First resulting view is that the *extension-intension framework* does not provide *apriori* account of meaning which is due to the empiricist view of language, which means that its use presupposes specific ontological commitment to possibilities, and in Carnap's case this is represented by his *possible state of affairs*. Generating the special feature of meaning through extension and intension his framework explains the very nature of necessity, trying to overcome the difficulties involved in the translation process of object language sentences (sentences of material mode of speech) into metalanguage and modal sentences into neutral metalanguage.

Second resulting view is that the *possible-worlds framework* already has its source in ordinary modal language. The general strategy here is to find a part of modal discourse free of ambiguities and unclarities that infect modal discourse generally, a part that might be developed and used to clarify the rest. So, if something may be true, then it might be true in some particular way, or if something is possible, then it is possible that it be realized in some particular way or many alternative ways – in the actual world and in the possible world/s. This framework takes alternative specific ways that must be realized as the primitive elements out of which the propositions are built, and in terms of which the modal properties of those propositions are defined. This framework is not free of ontological commitment either, but here we speak about the possibilities such as the ways things might bee, counterfactual situations, or possible states of worlds.

Third resulting view is that these two frameworks have in common one similar concept, namely the concept of *possible state of affairs* (used by Carnap) or the concept of *possible worlds* (used by Kripke). But, the difference is that *the extension-intension*

framework does not include nor presupposes the ordinary modal language, which requires the construction of specific linguistic framework and Carnap was inclined to linguistic internalism meaning that we cannot speak from outside the language, but only from within the linguistic frameworks to whose rules we already conform (he admits both internal and external questions as important). On the other hand, *the possible-worlds framework* already presupposes the ordinary modal language and specific linguistic framework sufficient for the intended analysis, which means that no specific or new linguistic framework is necessary in order to deal with main naming/necessity issue.

   Fourth resulting view is the answer on fundamental question here, namely on question which account represents the adequate solution to all fundamental questions regarding the main meaning/naming-necessity issue. Our analysis shows that the main benefit of the possible-worlds framework is that it permits one to paraphrase modal claims in an extensional language that has quantifiers (and no modal auxiliaries), and so in language in which the semantic structure of the usual modal discourse can be discussed without begging the controversial questions about that structure. This framework provides the base to state and explain both metaphysical and semantic theses since it provides an account of a subject-matter that is independent of languages used to describe that subject-matter.

4. Published Literature Related to the PhD Thesis.

Some results of and those related to the PhD topic are already presented or published:

   1. Scientific article "The Analysis of Ancient Propositional Logic with respect of Contemporary Theories", in philosophical journal "Luča" XIII/1-2, Nikšić,1996. (in Serbian),

   2. Translation (from English to Serbian): R. Carnap, *Philosophy and Logical Syntax*, Philosophical library *Aletheia*, ed. Jasen, Nikšić 1999.,

   3. Public lecture entitled "*Rudolph Carnap's Philosophy and his Logical Syntax*", presented at and included as the mandatory topic within the Analytic philosophy - course which took place in October 2004 at the Faculty of Philosophy, Kansas University/Kansas-USA (in English language),

   4. Public lecture entitled "*Logical Syntax as Syntactical Analysis of Scientific Language*", presented at the international conference *Language and Culture* which took place

in September 2006 at the Faculty of Philosophy/University of Montenegro, in Niksic (in English),

5. Scientific article "Logical Syntax as Syntactical Analysis of Scientific Language", in: *New Perspectives: Essays on Language, Literature and Methodology*, Faculty of Philosophy, Niksic 2007 (in English),

6. Book: "Ancient Propositional Logic: temporality and modality" (especially chapter dedicated to modal logic), "Jasen", Beograd 2006. (in Serbian).