

**APRIORITY AND MEANING:
A CASE OF THE EPISTEMIC TWO-DIMENSIONAL
SEMANTICS**

By
Mindaugas Gilaitis

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Supervisor: Professor Nenad Mišćević

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ABSTRACT

This thesis is devoted to an analysis of the conception of apriority that is proposed by the epistemic two-dimensional semantics. The aims of the thesis are two: first, to clarify presuppositions and broader theoretical commitments of the semantic framework that is aiming to ground apriority in semantic terms; second, to critically evaluate the semantic conception that is being proposed by it. However, both of the aims are interconnected in a way that critical evaluation of the epistemic approach to two-dimensional semantics is supposed to clarify theoretical assumptions about the nature of meaning in terms of which apriority is being explained. If an interpretation of the epistemic two-dimensional semantics is adequate and critical evaluations of it and its conception of apriority are valid, then the semantic conception of apriority that is proposed by the epistemic two-dimensional semantics is problematic, since, on the one hand, it is incompatible with semantic externalism, and, on the other hand, it loses its explanatory power if semantic internalism is assumed.

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I dedicate this thesis to D. K. and J. D., without whom it would neither be possible, nor actual.

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INTRODUCTION

Sometimes it is proclaimed that the question of the existence and scope of apriority is one of the most fundamental philosophical questions. In the words of Christopher Peacocke,

[...] a philosopher's attitude to the a priori is a touchstone for his whole approach to the subject. [...] So understanding the a priori is not only of interest in itself. It is also essential for self-understanding, if we are to understand ourselves as philosophers. (Peacocke 2005: 739)

But despite the wish to get clearer about the character and epistemological status of philosophical inquiry, the main aim of this thesis is to analyze a particular conception of apriority and to evaluate its assumptions and plausibility.

In the broader scope, the subject matter of it is related to the discussion of the alleged connection between apriority and meaning. A number of philosophers have maintained that the epistemological category of apriority can be *grounded on*, or *explained by*, the semantic category of meaning, and provided different theoretical frameworks and various conceptions of it.¹ However, it is beyond the limits of the thesis to do an analysis of all of them. Thus, in the narrower scope, it will be devoted to a discussion and critical analysis of one particular semantic conception of apriority that is proposed by the epistemic two-dimensional semantics.

The aims of the thesis are two: first, to clarify presuppositions and broader theoretical commitments of the semantic framework that is aiming to ground apriority in semantic terms; second, to critically evaluate the semantic conception that is being proposed. However, both of the aims are interconnected in a way that critical evaluation of the interpreted framework of two-dimensional semantics that is used in providing a semantic conception of apriority is supposed to clarify theoretical assumptions about the nature of meaning in terms of which apriority is being defined and on which it is being grounded.

¹ See Boghossian and Peacocke (eds.) (2000) for a well compiled book of the semantic accounts of apriority.

The thesis consists of four chapters. In the first chapter two kinds of theoretical attempts to explain apriority will be distinguished and relevant differences emphasized in order to locate the conception that will be discussed in a broader context. Furthermore, some specific theoretical features of the semantic attempt to explain apriority will be indicated. Second chapter will be dedicated to a discussion of the basic notions of the formal framework of intensional one and two-dimensional possible worlds semantics that is used by proponents of the semantic conception of apriority that is being analyzed in this thesis. In the third chapter a detailed analysis and discussion of the epistemic interpretation of two-dimensional semantics and its conception of apriority will be done by relying on David Chalmers' and Frank Jackson's interpretations of it. Relevant notions will be discussed, and substantial theoretical assumptions that are crucial for their conception of apriority will be highlighted. Critical evaluation and discussion of the epistemic two-dimensional framework that is being used in providing a semantic conception of apriority is done in the last, fourth, chapter.

If an interpretation of the epistemic two-dimensional semantics is adequate and critical evaluations of it and its conception of apriority are valid, then it follows that *the semantic conception of apriority that is proposed by the epistemic two-dimensional semantics is problematic, since, on the one hand, it is incompatible with semantic externalism, and, on the other hand, it loses its explanatory power if semantic internalism is assumed.*

However, an acceptance of semantic internalism does not by itself commit one to a notion of apriority that is being proposed by the epistemic two-dimensional semantics. Furthermore, from an acceptance of semantic externalism does not follow that there can be no plausible notion of apriority either. What does seem to follow though is that if there is to be a notion of apriority at all, it needs to be explained in a different way.

1. GROUNDS OF APRIORITY: CONTEXTUALIZING THE DEBATE

1. 1 Two Accounts of What Apriority Might Be

Usually it is maintained that a priori knowledge is knowledge that is *justified* independently of experience, where “independence of experience” generally means independence from checking how the world is. Thus, apriority is usually understood as a feature of justification: justification of a particular proposition, or a belief, is supposed to be a priori if and only if it does not owe its justificatory status to the world.² However, to maintain that apriority is a feature of justification that is not dependent on experience, or on checking how the world is, is not to give an explanation of *how* can there be this kind of justification or to say in virtue of which facts one can attain such justification of the propositions believed. If there is justification that is a priori in the sense described above, then one must also say what *grounds* the possibility of such justification.

Nenad Mišćević (2008) distinguishes two kinds of theoretical attempts to explain the grounds of a priori justification. One group of theories – the “referential accounts” – focuses only upon the domain of reference and claims that apriority is an ability to *see* the referential domain directly with the “eye of one’s mind”. As Mišćević puts it, referential accounts focus

[...] upon the domain of reference of the components of propositions under consideration and on the domain of reference in general. [...] They further offered tentative accounts of our sensitivity to the objects in the referential domain, which used the metaphor of seeing, transferring the notion of perceptual capacity to an intuitional one: the sensitivity is basically the capacity to “see” the domain directly with the eye of one’s mind. The approach typically claims that the knowledge of this referential domain is basic, whereas conceptual knowledge is derived. (Mišćević 2008: 236)

² Or to put it alternatively: “S’s belief that p is justified a priori if and only if S’s justification for the belief that p does not depend on experience” (Dancy, Sosa & Steup (2010: 43)).

Some of the contemporary defenders of the referential accounts include James Robert Brown (1991) and Laurence BonJour (1998, 2001, 2005).

The other group – the so-called “conceptualists” – maintains that the grounds of apriority are conceptual, or semantic:

The opposite philosophical team, our conceptualists, have started from the notion of a priori as being grounded in “relations of ideas”. [...] Its point is to preserve substantial and philosophically interesting a priori, but to try to account for it in an austere fashion, starting from the generally accepted idea that being conceptual entails being a priori. (Mišćević 2008: 236-237)

So contrary to referential accounts, for the conceptualists “apriority is a phenomenon at the level of sense, not reference, and so on this moderate rationalists’ theory must be traceable to the nature of the concepts involved” (Peacocke 2000: 264). Paul Boghossian, one of the conceptualists, maintains that the central feature of semantic accounts of apriority is

[...] a desire to explain the possibility of a priori knowledge without having to postulate [...] a special faculty, one that has never been described in satisfactory terms. The question is: How could a factual statement *S* be known a priori by *T*, without the help of a special evidence-gathering faculty? (Boghossian 1996: 363)

Some of the representatives of the conceptualists’ camp include Christopher Peacocke (1993, 1998, 2000), Paul Boghossian (1996, 2001, 2003), David Chalmers (2002a, 2002b, 2002c, 2003, 2004, 2006, 2007, forthcoming-a, forthcoming-b), and Frank Jackson (2000, 2001), among others.

In spite of the fact that different theorists offer different theoretical frameworks and employ different notions in explaining apriority, all of them tend to share the assumption that the grounds of the possibility of a priori justification are semantic and that being conceptual entails being a priori. The conception to be discussed in this thesis belongs to the semantic accounts of apriority, since it defines it, and thus grounds it, in terms of meaning.

1. 2 Theoretical Features of the Semantic Explanation of Apriority

But how epistemic properties of justification of the truths that are expressed by sentences can be derived from, or grounded in, semantic properties of sentences? Boghossian suggests that “clearly, the answer to this question has to be semantical: something about the sentence’s meaning, or about the way that meaning is fixed, must explain how its truth is knowable in this special way” (Boghossian 1996: 366). A suggestion that it must be something about the meaning, or about the way that meaning is fixed, resembles Peacocke’s proposal that on the semantic accounts, apriority “must be traceable to the *nature* [italics mine – M.G.] of the concepts involved” (Peacocke 2000: 264).

In order to get a clearer picture about theoretical features of the semantic accounts of apriority, it might be useful to introduce the distinction drawn by Robert Stalnaker (1997) between what he calls “descriptive” and “foundational” semantics.³ A descriptive-semantic theory

[...] is a theory that says what the semantics for the language is, without saying what it is about the practice of using that language that explains why that semantics is the right one. (Stalnaker 1997: 535)

Furthermore, it is a descriptive-semantic theory that “assigns *semantic values* to the expressions of the language, and explains how the semantic values of the complex expressions are a function of the semantic values of their parts” (Ibid.). Hence, the widely shared theoretical assumption of the principle of compositionality lies at the descriptive part of a semantic theory.

The question asked by the foundational semantics is the following:

What is it about the situation, behavior, or mental states of a speaker that

³ For a similar kind of suggestion, although made using different terms, see also David Lewis’ distinction between a “theory of languages” and a “theory of language” (1975), David Kaplan’s distinction between “semantics” and “metasemantics” (1989a: 573 ff.), Jeff Speck’s distinction between a “semantic theory” and a “foundational theory of meaning” (2010: § 1).

makes it the case that a particular [expression], as used by that speaker in a particular linguistic community, has the semantic value that it has? (Stalnaker 1997: 166-167)

Given such a distinction, it seems that theoretical adequacy of a semantic explanation of apriority would depend upon both parts of semantics. First, such an explanation must say what the semantic values of language are. So if *SV* is a semantic value of an interpreted language, then the semantic explanation of apriority should use *this* value in its conception of what apriority is. But it seems that the nature of the descriptive semantic feature – namely, *SV* – in terms of which apriority is being defined, might depend upon assumptions made in the foundational part of semantics: namely, about the facts in virtue of which *SV* is being fixed or determined. Consequently, if theoretical adequacy of the semantic explanation of apriority depends upon the *nature* of the concepts involved, then if one's conception of the nature of concepts depends upon assumptions made about how meaning, or concepts, get fixed and determined, then theoretical adequacy of the semantic explanation of apriority would also depend upon assumptions being made in foundational part of semantics.

Since explanatory burden of semantic accounts of apriority rests upon assumptions being made with regards to the nature of meaning and its determination, the successive chapters are devoted to a detailed analysis, and critical evaluation, of the semantic framework that is being used to provide the semantic conception of apriority that will be analyzed. The analysis is supposed to disclose what kind of assumptions about meaning are being made by the semantic framework in order to vindicate the conception of apriority that is being proposed, and to examine what kind of views could undermine it and thus would be incompatible with it.

2. INTENSIONAL ONE AND TWO-DIMENSIONAL SEMANTICS

2. 1 Intensional Semantics

The general theoretical field of semantics is usually seen as the study of linguistic meaning, although there have been, and still continue to be, a wide variety of different theoretical frameworks and approaches to this subject. But the semantic conception of apriority to be discussed here follows the tradition which began, roughly, in the 19th century, and defined the task of semantics as that of giving a systematic account of the truth conditions of sentences. However, there have been different ways of approaching this task.

One major paradigm in truth-conditional semantics was inaugurated by Donald Davidson (1967) who aimed at giving a purely extensional treatment of the truth conditions of sentences by identifying the meaning of a sentence with extensionally individuated truth conditions. However, the semantic framework that is being used by proponents of the semantic conception of apriority to be discussed, is influenced by Gottlob Frege (1892, 1918), and sees the project as that of associating *propositions* with sentences. The general idea is that sentences express propositions which are the meanings or contents of them. But what are propositions more precisely?

One way of thinking about them, which can be traced back at least as far as C. I. Lewis (1944) and Rudolf Carnap (1947/1958), suggests thinking of propositions as being functions from possible worlds (or rather possible states of the world) to truth-values.⁴ On this approach, functions from possible worlds to extensions are called *intensions*.⁵ In Carnap's words, "the intension of a sentence is the proposition expressed by it" (Carnap 1947/1958:

⁴ Possible states of the world, or possible worlds, are counterfactual alternatives to the way the actual world is.

⁵ The extension of a singular term is an object, the extension of a predicate is a set of objects, and the extension of a statement is a truth-value.

27).⁶ Hence, the meaning of a sentence is an intension, which assigns extensions relative to possible worlds, and is individuated by a set of them: namely, a set of worlds for which it returns the value *true*. Due to the commitment to possible worlds and intensions, this semantic theory became known as “intensional semantics” or “possible worlds semantics”, and is a version of a cluster of semantic theories that share a common model-theoretic approach to the study of linguistic meaning.

In summary, one can say that intensional semantics is anchored in four ideas.⁷ First of all, it assumes that meaning is representation in the sense that the literal meaning of sentence can be equated with how a sentence represents things as being.⁸ Secondly, it is maintained that the representational content of a sentence is encapsulated in its truth-conditions. Thirdly, truth-conditions, on this account, are truth value distributions over possible worlds. So the meaning of some sentence is represented by a set of possible worlds with respect to which that sentence is true. Fourthly, theoretical assumption of the principle of compositionality is applied to extensions and intensions of the expressions: the extension of a sentence is determined by the extensions of its parts, and the intension of a sentence is determined by the intensions of the terms they contain. From these ideas “a significant meta-semantic conclusion follows: meaning is intimately linked to modality (i.e. to possibility and necessity)” (Nimtz 2008: 2).

⁶ Lewis suggested that an intension “comprises whatever must be true of any possible world in order that the proposition should apply to it or be true of it” (Lewis 1943: 243).

⁷ I am here following Nimtz (2008: 1-2).

⁸ There are many notions of ‘meaning’ and many ways of what theoretical role it should play in one’s semantic theory. So it is clear that “although this meaning of ‘meaning’ – the representational meaning, as we will sometimes call it – is one thing people have often meant by ‘meaning’, it is obviously not the only thing people have meant, and have properly meant, by the term. Those philosophers who say that the meaning of a sentence is how it is used, or that the meaning of a sentence is the totality of the inferences in which the sentence figures, or perhaps some proper subset of that totality, are not denying (I trust) that (most) sentences represent how things are. [...] The key point for us [and for the purposes of this paper – M.G.] is that there is no competition with what we mean by ‘meaning’ here, *unless* these theories are being offered as ways of denying that sentences represent how things are” (Jackson 2000: 322-323).

2. 2 Two-Dimensional Semantics

In one-dimensional intensional semantics one starts with a language and a set of possible worlds. The language then gets interpreted by assigning intensions to it. Intensions are the meanings of linguistic expressions and sentences that are construed of them. However, the traditional one-dimensional framework has been developed and extended to capture a way in which the ordinary sentence intension is *itself* dependent upon a possible world. As Stalnaker puts it,

[...] it is a matter of fact that an utterance has the content that it has. What one says – the proposition he expresses – is itself something that might have been different if the facts had been different. (Stalnaker 2002: 148)

In contrast with standard one-dimensional possible worlds semantics, two-dimensional semantics assigns extensions to expressions relative to two possible world parameters, rather than just one. So the two-dimensional semantic framework provides finer-grained semantic values than those available within standard one-dimensional possible world semantics, while using the same basic model-theoretic resources.

The two-dimensional framework has been interpreted in different ways for different explanatory purposes. For example, Frank Vlach, building on work by Hans Kamp, developed a two-dimensional account of tense logic. The same framework has been applied for modal logic by Lennart Åqvist, Krister Segerberg, and Bas van Fraassen. Logicians were using the apparatus to develop formal systems for representing valid inferences about time and possibility. Other antecedents of the contemporary use of the framework might be also found in works on context dependence by Richard Montague, David Lewis and David Kaplan.⁹

⁹ For references to their works and details, see Davies & Stoljar (2004).

The core idea of two-dimensional semantics is that there are two different ways in which the extension of an expression or a sentence depends on a possible world, and consequently two roles that a possible world can play. First, worlds might determine what is said – the proposition expressed. Second, they might determine whether what is said is true or false. In two-dimensional semantics, a possible world playing the first role is said to be a world *considered as actual*; naturally, other worlds than the actual world might play this role. A possible world playing the second role is said to be a world *considered as counterfactual*. As Chalmers puts it,

First, the actual extension of an expression depends on the character of the actual world in which an expression is uttered. Second, the counterfactual extension of an expression depends on the character of the counterfactual world in which the expression is evaluated. (Chalmers 2006: 59)

Following Stalnaker (2001), one might distinguish three kinds of interrelated intensions which are defined in the abstract framework of two-dimensional semantics: two-dimensional intensions, primary intensions and secondary intensions. As in one-dimensional semantics, each kind of intension is a function whose argument is a possible world. Stalnaker suggests that

[...] we can think of a two-dimensional intension as a function taking an ordered pair of possible worlds to extensions. So a two-dimensional sentence intension [...] is a function from possible worlds to propositions, or from pairs of possible worlds to truth-values. (Stalnaker 2001: 145)

Thus a two-dimensional sentence intension can be used to define two different propositions, which represent the two ways in which the extension of an expression depends on a possible world. One proposition would be the value of a two-dimensional intension where the argument of it is the actual world. In technical jargon of two-dimensional semantics, this proposition is called “secondary intension” (Chalmers), “C-intension” (Jackson) or “horizontal proposition” (Stalnaker). The other kind of proposition is the one that is true in

world x if and only if the proposition that is the value of the two-dimensional intension in world x is true in world x . This proposition specifies how the value of the two-dimensional intension depends on a possible world, and is called “primary intension” (Chalmers), “A-intension” (Jackson) or “diagonal proposition” (Stalnaker).

Let me illustrate the above mentioned formal characteristics by using a classical example of Twin Earth thought experiment proposed by Hilary Putnam (1972). We have a *sentence* “water is H_2O ”, and ask how its extension depends upon the two ways a possible world might play. In the two-dimensional matrix, the dependence can be represented as follows:

W-C-C W-C-A	EARTH	TWIN EARTH
EARTH	T	T
TWIN EARTH	F	F

- — primary intension (Chalmers) / A-intension (Jackson) / diagonal proposition (Stalnaker)
- — secondary intension (Chalmers) / C-intension (Jackson) / horizontal proposition (Stalnaker)

The worlds in the vertical column on the left represent worlds considered as actual (W-C-A). The worlds in the horizontal upper row represent worlds considered as counterfactual (W-C-C). Thus, the matrix represents how the extension of “water is H_2O ” depends upon the two roles the possible world might play.

It is clear that a purely formal characterization of the two-dimensional framework and three kinds of intensions remain silent about the epistemic properties of intensions and about facts in virtue of which those intensions get assigned to language. However, this framework

has been used for more ambitious philosophical purposes. Philosophers like David Lewis, Frank Jackson and David Chalmers argue that it can be used to isolate an aspect of meaning that could ground apriority.

Many proponents of the semantic accounts of apriority are also defending an idea of *a priori* conceptual analysis. Mainly because of the inordinate ambitions of the verificationist theories of meaning, *a priori* conceptual analysis was out of fashion. However, those days are over. Contemporary philosophers have made developments in philosophical semantics to formulate a conception of it that would avoid the counterintuitive consequences of verificationism, and thus could provide a basis for *a priori* conceptual analysis. Recent advocates of *a priori* conceptual analysis include figures like George Bealer (1987), Alan Sidelle (1989), David Lewis (1970, 1980, 1994), David Chalmers (2001¹⁰) and Frank Jackson (1998), among others. For example, Lewis claims that “my reductionism about mind begins as part of an *a priori* reductionism about everything” (Lewis 1994: 291). Jackson believes that *a priori* conceptual analysis is a necessary prerequisite if one wants to do serious metaphysics, since the later requires solving the so-called “location problem”: a problem of saying how “matters described in one vocabulary are made true by matters described in another” (Jackson 1998: 41). From the perspective of this thesis, there is no problem with the activity that Jackson and other philosophers call “conceptual analysis”. The question is about the epistemological status of this activity, and thus about whether being conceptual entails being *a priori*.

Since this thesis is devoted to an analysis of the conception of apriority that is being proposed by Chalmers’ and Jackson’s interpretation of two-dimensionalism, the following chapter and its sections will be restricted only to a discussion of their means which, according to them, can show how semantics can be the source of *a priori* knowledge and truth.

¹⁰ Co-authored with Frank Jackson.

3. APRIORITY IN THE EPISTEMIC TWO-DIMENSIONAL SEMANTICS

3. 1 Generalized Kaplan Paradigm

Kaplan (1989a, 1989b) has applied two-dimensional framework to represent the interaction of how content of context-dependent expressions – namely, indexicals and demonstratives – depend upon context. The meaning of sentences that contain such expressions does not by itself determine the content of what on some particular occasion they are used to say. For example, the sentence “I am here now” does not by itself say anything. Thus, just knowing what this sentence means does not suffice to know what is said by it when it is used on some particular occasion. The meaning (what Kaplan calls “character”) of such context-dependent expressions in formal semantics is represented as a function from context to content, where the content (intension) itself is a function from possible worlds to extensions. Thus, one gets a two-dimensional intension. It is important to indicate here, however, that Kaplan’s application of the two-dimensional framework was introduced to explain the semantics *only* of context-dependent expressions and not of *every* linguistic expression in natural language. *Prima facie*, this seems to be a right way to do, since in contrast to personal pronouns and demonstratives, other expressions do not seem to have a systematic semantic rule that would say how extension of an expression depends upon context, or which one would need to know in order to be semantically competent when using a term.

Chalmers and Jackson, however, believe that the formal two-dimensional framework can be used to represent an important aspect of the meaning of *all* expressions. Due to this assumption, their application of the framework in the philosophical literature is sometimes called “generalized two-dimensional semantics” (Schroeter 2010: § 2) or “generalized Kaplan

paradigm” (Stalnaker 2003: 208).¹¹ So, according to this view, to be semantically competent with terms like “Aristotle” or “vixen” is to implicitly grasp a criterion that determines exactly which object count as Aristotle or vixen in any possible situation, where an implicit grasp of a criterion plays two key theoretical roles:

1. Semantic competence: Two speakers (or one speaker on two occasions) share the same meaning just in case they associate the very same criterion with their expressions.
2. Reference determination: The criterion a speaker currently associates with an expression determines which things fall into its extension in every possible situation.¹²

The first claim implies that if two speakers (or one speaker on two occasions) do not share the very same criterion with their expressions, then they do not share the same meaning. The second claim requires that a criterion which one associates with an expression would be veridical.

Given that Chalmers’ and Jackson’s interpretation of two-dimensionalism is an extension of Kaplan’s application of the same formal framework, it is of little surprise that on their account secondary intensions are derivative from and determined by primary intensions in the same way in which Kaplan’s content is determined by character (and context). When discussing their approach to natural kind terms, Christopher Nimtz notes that on their account,

These [primary – M.G.] intensions do not only yield extensions for worlds considered as actual; they also determine the secondary intensions of our kind terms. [...] The secondary intension of a kind term *k* in some world considered as actual *w* picks out what *k*’s primary intension singles out in *w* in every world considered as counterfactual. (Nimtz 2004: 142)

More specifically,

[...] the secondary intension is determined by first evaluating the primary intension at the actual world, and then rigidifying this evaluation so that the same sort of thing is picked out in all possible worlds. (Chalmers 1996: 59)

¹¹ For example, Chalmers notes that he is using Kaplan’s framework in a more general way than Kaplan himself have intended (Chalmers 1996: 365-6, n. 25).

¹² I am here following Schroeter (2010: § 2.1).

The proposed “rigidification” of evaluation is done either by attaching a *dthat*¹³ or an *actually*¹⁴ operator to the primary intension. Thus secondary intension is a disguised primary intension that is *rigidified* after its extension relative to a possible world considered as actual is determined.

Since secondary intensions depend on how things turn out in the actual world, they could not vindicate a notion of apriority, since in order to determine the secondary intension of an expression or a sentence, one must check what the world is like. But in two-dimensional framework there are primary intensions: functions from possible worlds to secondary intensions. Chalmers and Jackson believe that these intensions, given a particular characterization, can be used to provide the semantic conception of apriority.

3. 2 The Core Thesis

The conception of apriority that is proposed by Chalmers’ and Jackson’s two-dimensional semantics is motivated by a traditional picture of meaning where apriority and necessity coincide. However, both of them are aware of the challenging examples that were presented by Saul Kripke in *Naming and Necessity* (1972). If Kripke is right, then there are contingent a priori and necessary a posteriori truths. His example of the former is the statement “stick S is one meter long” that expresses a proposition that is proclaimed to be knowable a priori, but is contingent. The most well known examples of the latter are the statements “water is H₂O” and “Hesperus is Phosphorus” that express propositions whose truths are knowable only a posteriori, but that are necessary, if true. Thus, anyone who is convinced of the plausibility of Kripke’s examples, and holds that apriority is coextensive with necessity, must provide an

¹³ As done by Chalmers (1996: 59). See Kaplan (1989a: 521-522; 1989b: 579-581) for a detailed analysis of *dthat* operator.

¹⁴ As done by Jackson (1998: 217, ft. 12).

alternative interpretation of Kripke's cases. Chalmers and Jackson use the formal framework of two-dimensional semantics in order to do so.

Since language and thought on this framework gets associated not with one, but with two intensions, one can use those intensions in order to reinterpret Kripke's conclusions. Primary intensions then might be associated with apriority and aposteriority, whereas secondary intensions with the domain of necessity and possibility that is relevant for Kripke's cases (the so-called "metaphysical" necessity and possibility). Thus, one can say that *no single intension* is both necessary and a posteriori or contingent and a priori. This allows retaining the idea that apriority is coextensive with necessity, however, given Kripke's examples and the two-dimensional framework, one must add that it is coextensive with the necessity of *primary*, and not *secondary*, intension. This is what Chalmers does by proposing the Core Thesis ¹⁵:

(CT) A statement is a priori if and only if it has a necessary primary intension.¹⁶ (Chalmers 2006: 64)

As it was suggested in section 1.2, a semantic conception of apriority must propose a conception of it that would define it in terms of descriptive-semantic features of language, i.e. in terms of the semantic values of language that gets interpreted. Since on Chalmers' and Jackson's interpretation of two-dimensionalism, which is a generalization of Kaplan's application of the same framework, primary intensions are supposed to represent the meanings of expressions and sentences that are construed of them, the semantic conception of apriority that is given in (CT) satisfies this requirement.

The two-dimensional matrix depicted in section 2.2 shows that a sentence "water is H₂O" does not have a necessary primary intension. This seems to give an intuitively right

¹⁵ Equivalent, although not so explicit and definitive characterization is also provided by Jackson (1998: 52). Thus, for the sake of brevity and convenience, Chalmers' definition will be used throughout the thesis.

¹⁶ Alternative formulations of the Core Thesis are the following: "For any sentence S, S is apriori iff S has a necessary 1-intension" (Chalmers 2004: 165) and "Two expressions 'A' and 'B' have the same 1-intension iff 'A = B' is a priori" (Chalmers 2006: 64).

result – namely, that the proposition it expresses is not justified a priori: one needs to do empirical investigation to know whether it is true. Chalmers and Jackson agree. However, on their view, the following “application conditional” (term due to Chalmers & Jackson 2001: 325) is a priori:

- (1) H₂O covers most of the Earth.
 - (2) H₂O is the watery stuff of our acquaintance.
-
- (3) Therefore, water covers most of the Earth.¹⁷

It is clear that the conclusion of this conditional does not follow purely in virtue of form. But in virtue of what then does one know that the conclusion is not only true, but that it is justified a priori? Jackson answers in the following way:

Although the passage from (1) to (3) is a posteriori, the passage from (1) together with (2) to (3) is a priori in view of the a priori status of ‘Water is the watery stuff of our acquaintance’. (Jackson 1998: 82)

So the conditional “If (1) and (2), then (3)” is a priori due to the concealed premise “water is the watery stuff”. The truth of this premise, it is maintained, is justified a priori. As it is noted by Schroeter, on the epistemic account of two-dimensionalism, “conceptual competence puts one in a position to have a priori knowledge of conditional claims of the form ‘If my environment is thus and so, then water = H₂O’” (Schroeter 2006: 562). But if “water is the watery stuff” is a priori, then its primary intension must be necessary by the standards of (CT) – namely, this *sentence* must be true with respect to all worlds considered as actual. Furthermore, this implies that on Chalmers’ and Jackson’s interpretation of two-dimensional framework, there are no sentences that express irreducible necessary a posteriori truths. Even sentences that deliver contingent information about the world (such as “water is H₂O” or “Hesperus is Phosphorus”) will be reduced to a truth that is knowable a priori and is

¹⁷ Example from Jackson (1998: 82).

necessary (such as “water is the watery stuff”), and a truth that is knowable a posteriori but is contingent (as (2)).

Since on Chalmers’ and Jackson’s interpretation of two-dimensionalism apriority is defined in terms of the necessity of primary intensions, the crucial question is the following: “can we define 1-intensions [primary intensions – M.G.] so that the Core Thesis is true?” (Chalmers 2006: 64).

3. 3 Defining Primary Intensions

In “The Foundations of Two-Dimensional Semantics” (2006) Chalmers makes a distinction between what he calls “contextual” and “epistemic” understanding of two-dimensional semantics. When discussing the contextual interpretation of two-dimensionalism, he gives a detailed analysis of a wide variety of different types of primary intensions (Chalmers 2006: 65-75) that might be characterized on this account and the way they are being assigned to expressions. However, in spite of the differences of the characteristics of primary intensions, the essential feature of the contextual interpretation of the framework is the following:

On the contextual understanding of two-dimensional semantics, the possibilities involved in the first dimension represent possible *contexts of utterance*, and the intension involved in the first dependence represents the *context-dependence* of an expression’s extension. (Chalmers 2006: 65)

Let me briefly present how the contextual account of two-dimensionalism defines primary intensions and assigns them by using Stalnaker’s contextualistic interpretation of the framework which he calls “metasemantic”.

Stalnaker’s account of two-dimensionalism begins by noting that whatever the meanings are that a semantic theory for a language associates with its expressions (or with expressions in context), the fact that particular expressions have the semantic values that they have will be a matter of contingent fact. If one put it in the framework of possible worlds

semantics, it would imply that a given linguistic expression or a sentence will have different meanings (semantic values) in different possible worlds. On this interpretation of the framework, it is assumed that one kind of semantic value that an expression has (on a particular occasion of use) is just a one-dimensional intension, whereas

[...] two-dimensional intensions and so-called primary intensions of expressions are derivative from the secondary [one-dimensional – M.G.] intensions that those expressions have in the different possible worlds. (Stalnaker 2001: 149)

Since primary intensions are derivative from secondary ones, metasemantic interpretation “is not an extension of the Kaplanian semantics, but a different (though complementary) use of a formally similar bit of machinery” (Stalnaker 2007: 259).

As Schroeter notes,

[...] what’s distinctive of a contextualist approach is (i) that a token of the target expression must be located within the world considered as actual, and (ii) that the expression is assigned an extension on the basis of *how it’s used in that world* [italics mine – M.G.]. (Schroeter 2010: § 2.3.2)

This implies that on this approach, what extension an expression *would* have with respect to other possible worlds considered as actual, depends upon what intension it would have *in that world*. And the intension that it would have in that world is determined by an interpretation of a linguistic expression *as it is used in that world*.

Chalmers claims that “there is no way to define contextual intensions so that they satisfy the Core Thesis” (Chalmers 2006: 75), since on this view, “there are worlds in which the string “bachelors are unmarried” means that horses are cows” and thus “the Core Thesis is obviously false” (Chalmers 2006: 67). For this reason, in order to vindicate (CT), one needs to offer a different account of what primary intensions are and how they should be assigned to expressions. Chalmers and Jackson do this by providing an alternative – epistemic – interpretation of two-dimensional framework.

Contrary to the contextual interpretation, on the epistemic understanding of two-dimensionalism, the value of the primary intension (its extension) is determined not by some properties of counterfactual tokens of linguistic expressions, but rather “turn on the epistemic properties of an expression in the actual world” (Chalmers 2007: § 5). Thus, characterization of primary intensions on this interpretation starts with a proposal that “the intensions involved in the first [primary – M.G.] dimension represent the epistemic dependence of the extension of our expressions” (Chalmers 2004: 176). But what is “epistemic dependence” more precisely? Chalmers and Jackson suggest thinking of it in the following way:

Let us say that an epistemically possible hypothesis characterizing the total state of the world corresponds to an epistemic possibility. [...] Then sufficient information about an epistemic possibility *enables a subject to know* [italics mine – M.G.] what a concept’s extension will be, under the hypothesis that the epistemic possibility in question is actual. (Chalmers & Jackson 2001: 324)

It is interesting to note here that the above described means, or procedure, by which primary intensions get determined and associated with expressions and sentences strongly resembles Carnap’s (1955) procedure of how one should assign intensions to expressions and sentences. As Scott Soames notes, “Carnap’s defense of intension rests heavily on modal claims about what a predicate *would* apply to, or what truth value a sentence *would* have, were certain possible circumstance to obtain” (Soames 2009: 437). So intensions, according to Carnap, are determined by asking subjects about what term’s extensions *would be* in some counterfactual scenarios. In this respect it resembles Chalmers’ and Jackson’s means to determine and assign primary intensions by reflecting upon what extension expressions *would* have if some epistemic possibility in question is actual.

It is clear that on the epistemic two-dimensional semantics, possibilities that are involved when one considers them as actual are *epistemic*, and that primary intensions are supposed to represent the dependence of an expression’s extension when their argument is an

epistemic possibility. But what is an “epistemic possibility”? Here is the informal characterization of how Chalmers understands it:

There are many ways the world might be, for all we know. And there are even more ways the world might be, for all we know a priori. The oceans might contain H₂O or they might contain XYZ; the evening star might be identical to the morning star or it might not. These ways the world might be correspond to epistemically possible hypotheses, in a broad sense. Let us say that a claim is epistemically possible (in the broad sense) when it is not ruled out a priori. Then it is epistemically possible that water is H₂O, and it is epistemically possible that water is XYZ. It is epistemically possible that Hesperus is Phosphorus, and epistemically possible that Hesperus is not Phosphorus. (Chalmers 2006: 75-76)

So epistemic possibility represents many ways the world might be for all we know. For example, it is epistemically possible that Putnam’s Twin Earth is an actual world. If Twin Earth is an actual world, then “water” refers to XYZ. The fact that it refers to XYZ (or rather that a subject would apply a term “water” to a substance that in Twin Earth is XYZ) and not to something else is supposed to show that the term “water” has an intension that determines extensions relative to various counterfactual scenarios when they are considered as actual. But what is crucial here is that this intension on Chalmers and Jackson’s interpretation is supposed to be part of the meaning of “water”, and since it determines extensions relative to various epistemically possible worlds, it is sometimes called “epistemic intension”. Given such a conception of primary intensions, Chalmers claims that

[...] there is a strong *prima facie* case that they satisfy the Core Thesis. When *S* is a priori, we would expect that every scenario verifies *S*. And when *S* is not a priori, $\sim S$ is epistemically possible, so we would expect that there is a scenario that verifies $\sim S$. If these claims hold true, then *S* is a priori iff *S* has a necessary epistemic intension (one that is true at all scenarios). (Chalmers 2006: 77-78)

Recall that according to the proponents of the epistemic two-dimensionalism, “water is the watery stuff” is a priori. If it is a priori, then one should expect that every epistemic possibility would verify it: namely, that with respect to every epistemically possible world its

extension would be *true*. But such a statement can be true with respect to all such epistemic possibilities if and only if the *meaning* of “water” and “the watery stuff” coincides. Unsurprisingly this is confirmed by Chalmers:

As a rough approximation we might say that the primary intension [of “water” – M.G.] picks out the dominant clear, drinkable liquid in the oceans and lakes; or more briefly, that it picks out the *watery stuff* in a world. (Chalmers 1996: 57)

This implies that on the epistemic interpretation of two-dimensionalism, the meaning of “water” (or any other term) is equivalent to some description, which shows that the epistemic two-dimensional semantics shares the same conception of meaning and reference determination that is implicit in the description theory of meaning and reference.¹⁸ Arguably, this is why some interpreters call the epistemic account of two-dimensional semantics as a new version of descriptivism.¹⁹

Let me briefly summarize how the epistemic interpretation of two-dimensional semantics defines primary intensions and the means by which they get determined. It is proclaimed that “once a subject is given enough information about the character of the actual world, then they are in a position to make rational judgments about what their expressions refer to and whether their utterances are true” (Chalmers 2007: § 3.4). In other words, the proposed ability determines any expression’s primary, or epistemic, intension in the following way: once sufficient information about a possible world is given, a subject can determine what extension of a particular expression *would be* if that possible world were actual. The primary intension is the function from epistemically possible worlds to extensions that is generated by considering these worlds as actual. A statement is *a priori* if and only if it has a

¹⁸ Description theory of meaning and reference maintains that the *explanation* for a relation between a term and its referent is factorable into to parts: first, a relation between the expression and a purely general concept that is equivalent to some definite description; second, a relation of “fit” between the definite description and the referent. Semantic competence on this view is a matter of the first part in the sense that to use a term competently is to associate it with the *right* descriptive concept or definite description. (I am here following Stalnaker (1999: 210).

¹⁹ For example, see Nimtz (2004), Petitt (2004), and Schroeter & Bigelow (2009).

necessary primary intension: that is, when its extension is *true* with respect to every epistemically possible world.

4. DEBATING THE CONCEPTION OF APRIORITY OF THE EPISTEMIC TWO-DIMENSIONAL SEMANTICS

4. 1 Semantic Externalism and Primary Intentions

4. 1. 1 Semantic and Epistemic Status of Primary Intentions

As it was shown in section 3.1, Chalmers and Jackson are the proponents of what is called a “generalized Kaplan paradigm”, and thus are defending an idea that in order to be semantically competent and to determine reference of one’s expressions, one must implicitly grasp a specific reference-fixing condition that is equivalent to some description: an idea that is implicit in the description theory of meaning and reference. On Chalmers and Jackson’s account, reference-fixing descriptions are primary intensions which are the meanings of terms. Thus, two speakers (or one speaker on two occasions) share the same meaning only if they associate the same primary intension with their expressions, and the primary intension a speaker associates with an expression determines which things fall into its extension in every possible situation.

However, in the 1970’s, semantic externalists (Donnellan (1970), Kripke (1972), Putnam (1970, 1972)) used a variety of examples to argue that such an account of meaning yields an unrealistic picture of semantic competence and reference determination. Proper names and natural kind terms were used as examples in order to demonstrate how the description theory of meaning and reference generates counterintuitive results. Contrary to indexical or demonstrative expressions, one does not need to know any specific rule or reference-fixing description for identifying a person in any possible world in order to count as being semantically competent with a name. Moreover, no such knowledge seems to be required for the use of a name to pick out the relevant person in every possible world. Similarly, one does not need to know precisely what it takes for something to count as, say,

water in any possible world to be competent with using “water” or for that word to pick out H₂O in every possible world. In fact, it seems that making room for the possibility of ignorance and error about reference-fixing descriptions (i.e. primary intensions) is crucial to explaining inquiry into the nature of whatever one is inquiring about, and vindicating an idea that one *can* refer to things whose nature is not fully understood. Thus, if semantic externalists are right, then the description theory of meaning and reference, that is implicit in Chalmers’ and Jackson’s account of two-dimensionalism, is untenable. Moreover, it implies that semantic externalists should reject the “generalized Kaplan paradigm” that uses two-dimensional framework to represent meanings of expressions or sentences that are construed of them. Thus, for the externalist,

2D matrices will not represent *meanings* – a specific aspect of understanding that is required for linguistic or conceptual competence and which figures in a compositional semantic theory that determines truth-conditions for sentences. On an externalist interpretation, 2D matrices merely reflect one aspect of a subject’s *partial semantic understanding* of what her words and thoughts represent. (Schroeter 2010: § 3.1)

So on externalists’ picture, primary intensions (reference-fixing descriptions) reflect speaker’s current assumptions and partial understanding about the subject matter that they are being used to fix. But if that is how primary intensions are understood, then it seems reasonable to assume that they might differ from speaker to speaker and for the same speaker from time to time. Thus, in order to vindicate a commonsensical idea that two speakers, or the same speaker at different times, might share the same meaning even if primary intensions that they associate with their terms are *not* the same, externalists should deny that they are the meanings of terms. But if primary intensions reveal only partial understanding, and fallible assumptions, about the subject matter that has been fixed by using them, then this would seem to imply that statements involving those descriptions are not necessarily true with respect to all epistemically possible worlds, and thus, given (CT), are not a priori.

Let me illustrate how this works with a worn-out example. Say we have a sentence “water is the dominant clear, drinkable liquid in the oceans and lakes”. It is maintained that primary intension, or reference-fixing description, of “water” is “the dominant clear, drinkable liquid in the oceans and lakes”. If one adopts an externalistic understanding of primary intensions, then it would seem to imply that with respect to some epistemically possible worlds “water is the dominant clear, drinkable liquid in the oceans and lakes” might be false. Moreover, it might be false without a change of meaning of the term “water”, since primary intensions on externalists’ view are not part of the meanings of terms. But if it might be false with respect to some epistemically possible world, then this statement does not have a necessary primary intension. Consequently, it is not *a priori*.

Furthermore, an externalistic conception of primary intensions would also imply that conclusions that are drawn from what Chalmers and Jackson calls “application conditionals” would be justified on the basis of empirical and theoretical assumptions about the subject matter in question: assumptions that might include evidence that is originally based on experience and thus are corrigible in the light of further experience. Consequently, contrary to what Chalmers and Jackson maintain, conclusions that are drawn from “application conditionals” should count as being *a posteriori*.²⁰

Let me elaborate an externalistic conception of primary intensions from a different angle. It is maintained that the primary intension of “water”, or its reference-fixing description, “picks out the dominant clear, drinkable liquid in the oceans and lakes” (Chalmers 1996: 57). Recall that on Chalmers and Jackson’s account, primary intension is supposed to give the meaning of the term “water”. But clearly being *liquid* cannot be part of the meaning of “water”, since then it would rule out water in its solid forms. Being *clear* is not a better candidate either, since water might be impure. If *in the oceans and lakes* is part of

²⁰ This is argued, for example, by Byrne & Pryor (2006: 43).

the meaning of “water”, then it would entail that anyone, who lives in a desert, just by using the term “water” would be able to know that water is in the oceans and lakes, but that is clearly implausible.

Jackson claims that for something to be water, not *all* features that go into the specification of primary intension must be satisfied – it must satisfy only “enough of the foregoing” (Jackson 1994: 171). But the problem is not (only) with “enough”, but with whether semantic competence or “conceptual analysis” of the term (or perhaps the “concept” of) “water” puts one in a position to *know* which of them are the ones that *should* or *should not* be satisfied in order for something to count as water.²¹ One of the main problems with this view is that categorization does not require any implicitly knowable principles, or criteria, in order to operate. For example, Stephen Laurence and Eric Margolis maintain that even

[...] it’s important to the categorization of birds that they fly, lay eggs, produce songs, etc., but all the same it isn’t analytic or a priori that birds have these features. Similarly, people often form judgments about other people’s sex on the basis of hairstyle, clothing, etc. Yet it’s certainly not analytic or a priori that, say, women have longer hair. (Laurence & Margolis 2003: 267)

Thus, if externalists are right, then characteristics that enter into primary intensions that one associated with one’s terms, contain empirical and theoretical assumptions about the subject matter in question: assumptions, that might be defeated, and thus might be false with respect to some epistemically possible worlds.

However, Jackson thinks that some sort of description theory of meaning and reference must be true, since otherwise it would not be possible to “define our subject” and “to effect a partition among the possibilities independently of how things actually are”

²¹ For example, Block and Stalnaker (1999) argue that understanding a concept of *life* does not give us a priori knowledge about the fact that any of the characteristics that is attached to it are essential to it: “Nothing in the concept of life rules out the possibility that there could be living beings that are immortal, and don’t reproduce, that are tree-like (so don’t locomote), get their energy by electromagnetic induction (so don’t digest or excrete), and have no need for any substance in the air (so don’t respire)” (Block & Stalnaker 1999: 14).

(Jackson 1998: 53). In his brief discussion of what does it mean to “define our subject”, Jackson uses an analogy with a handbill that describes a wanted person:

When bounty hunters go searching, they are searching for a person and not a handbill. But they will not go very far if they fail to attend to the representational properties of the handbill on the wanted person. Those properties give them their target, or, if you like, define the subject of their search. Likewise, metaphysicians will not get very far with questions like: Are there *K*s? Are *K*s nothing over and above *J*s? and, Is the *K* way the world is fully determined by the *J* way the world is? in the absence of some conception of what counts as a *K*, and what counts as a *J*. (Jackson 1998: 30-31)

But what does it mean to say that the handbill *defines* the subject of the search? Does it mean that the subject of the search is whatever or whoever fits the description provided in a handbill? But isn't it possible that one can bring the wrong person even if he fits the description? If reference-fixing conditions, or primary intensions, “define our subject”, then one should say that it is not: the target of the search is, *by definition* and *a priori*, whoever fits the description. But are bounty hunters looking for a man who satisfies a description, whoever he is, or for a person who is described in a handbill, and that if someone brings *him*, then it would be correct to say that they found him?

The question is not about whether there is or there is not some description, or no handbill, but about the claim that such a description is known a priori to apply to the target of the search, or that it reveals a priori knowledge about it. It is no doubt that bounty hunters must have a description of a person in order to find him, but that does not by itself imply that such a description, or primary intension, is known a priori.

One of the lessons of Kripke's critique of the description theory of reference was the epistemological side of the story: namely, that it is a contingent, empirical fact that a term has a reference-fixing description that it has, and thus that it is not connected a priori with a term. If Kripke is right, then reference-fixing descriptions, or primary intensions, are known a posteriori to fit the target of the search, and thus they represent not some implicit criterion of

what the subject matter (or the target of one's inquiry) is, but assumptions about it that might be discarded.

Thus, even if one agrees with Jackson that “it is not magic that ‘water’ [or any other term – M.G.] picks out what it does pick out” (Jackson 1998: 82, ft. 36), and so that “we can be confident that there is a reference-fixing story to tell” (Ibid.), that is not by itself a sufficient reason to conclude that: (i) primary intensions, or reference-fixing descriptions, are the meanings of terms in the sense that one needs to implicitly grasp a specific reference-fixing description in order to be semantically competent with some term or to determine its reference; (ii) that they are the semantic grounds of apriority, since, if externalists are right, they only represent assumptions and partial knowledge about whatever subject matter they are being used to fix, and thus might be false with respect to some epistemically possible worlds.

It is clear that Jackson is explicitly committed to descriptivism²², but Chalmers tries to get around the arguments of externalists by proposing the following:

There is no reason to think that grasping an epistemic intension requires any sort of descriptive articulation of a concept by a subject. *The epistemic intension is a function, not a description* [italics mine – M.G.]. It is revealed in a subject's rational evaluation of specific epistemic possibilities, not in any sort of explicit definition. Even where such a definition exists, a subject need not be able to articulate it to grasp the epistemic intension. Indeed, we usually evaluate the plausibility of such definitions precisely by deploying our prior grasp of a term's epistemic intension, to see how whether the definition gives the right results in specific cases. [...] So epistemic intensions are more basic than descriptions, and should not be assimilated with them. (Chalmers 2002a: § 4)

This argument, however, is not very compelling. First of all, Chalmers *does* assimilate primary intensions with descriptions: “primary intension [of “water” – M.G.] picks out the dominant clear, drinkable liquid in the oceans and lakes” (Chalmers 1996: 57). This is a description, even if an intension is a function. Secondly, according to his and Jackson's

²² See Jackson (1997; 1998: 201).

account, it is primary intensions that determine extensions with respect to all worlds considered as actual, and thus irrespective of the fact that “a subject need not be able to articulate it” or give an “explicit definition”, it is clear that reference is determined by them as it is determined by a description (or a cluster of them) on the description theory of reference. Lastly, and most importantly, according to the epistemic interpretation of two-dimensional semantics, these intensions are part of the meanings of terms and are supposed to provide semantic grounds of apriority. But that is what semantic externalists deny. On their view, reference-fixing descriptions, or primary intensions, are not the meanings of terms and are not known a priori. Thus, their arguments apply to Chalmers as well. The claim that intension is a function does not help to evade them.

4. 1. 2 Determination of Primary Intensions

As it was shown in section 3.3, Chalmers’ and Jackson’s means of determining expressions’ primary intensions strongly resembles Carnap’s procedure of determining intensions. The general idea is the following: primary intensions are determined by reflecting on counterfactual scenarios which supposedly enables a subject to *know* and *determine* what extension some expression or sentence *would* have with respect to those scenarios. As Chalmers emphasized, extensions of primary intensions are determined not by properties of counterfactual tokens of expressions, but rather “turn on the epistemic properties of an expression in the actual world” (Chalmers 2007: § 5). A statement is a priori if and only if it has a necessary primary intension: namely, when a subject concludes that statement’s extension is *true* with respect to all counterfactual scenarios.

If one finds Carnap standing on the one side, it is hard to imagine how one would not find Quone standing on the other. Thus, let me make here a Quinean commentary that might be relevant for Chalmers’ and Jackson’s means of determining primary intensions.

W. V. O. Quine in his paper “Two Dogmas of Empiricism” (1953) maintained the following:

It becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements, which hold come what may. Any statement can be held true, come what may, if we make drastic enough adjustments elsewhere in the system... [...] Conversely, by the same token, *no statement is immune to revision* [italics mine – M.G.]. (Quine 1953: 43)

Quine’s suggestion that no statement is immune to revision is based on his rejection of the analytic-synthetic distinction.²³ However, it is not the aim of this thesis to examine the plausibility of his suggestion, and of the rejection of a distinction on which the thesis rests. Thus, Quine’s proposal will only be considered with respect to what consequences it might have for Chalmers’ and Jackson’s means of determining expressions’ primary intensions and thus of vindicating (CT).

Suppose one follows Chalmers’ and Jackson’s suggestion to determine statement’s “water is the dominant clear, drinkable liquid in the oceans and lakes” primary intension. But if Quine is right, then there will always be a counterfactual scenario with respect to which it would be false: that is, with respect to which a subject would reject it. If it is false with respect to at least one of them, then this statement does not have a necessary primary intension, and thus is not a priori.

Sometimes it is suggested that Quinean scenarios involve a change of meaning (Chalmers forthcoming-b: § 5; Grice & Strawson 1956). So people who claim that “water is the dominant clear, drinkable liquid in the oceans and lakes” is false, or rejects it, use the term “water” with a different meaning than those who claim that it is true. If they used it with the same meaning, then its primary intension would be necessary, and thus it would show that they are a priori. Let me make two points with regards to this suggestion.

²³ A distinction, as he puts, “between truths which are *analytic*, or grounded in meanings independently of matters of fact and truths which are *synthetic*, or grounded in fact” (Quine 1953: 20).

First, if “change of meaning” means change of the primary intension of the term “water”, then such scenarios do *not* involve a change of meaning of the term if one assumes an externalistic conception of primary intensions according to which they are not parts of the meanings of terms. Second, even if one *assumes* that primary intensions are the meanings of terms, one cannot use this as an objection in this case, since Chalmers and Jackson are describing *means* by which primary intensions (i.e. meanings) get *determined* and *assigned* to expressions and statements. Thus, if with respect to some counterfactual scenario a speaker would reject the statement “water is the dominant clear, drinkable liquid in the oceans and lakes”, then this would *show* that its primary intension is contingent, and thus, given (CT), that it is not a priori. In other words, the fact that its extension would vary with respect to different counterfactual scenarios entails that its primary intension is not necessary, and not that such cases show that there was a change of something that is getting determined.

Externalist arguments proposed by Tyler Burge (1979, 1986) provide another type of materials which seem to undermine the procedure suggested by Chalmers and Jackson following which a subject is supposed to determine expressions’ primary intensions by assigning extensions to them with respect to epistemic possibilities. Consider Burge’s character Bert, who has a belief which he would express with a sentence “arthritis can occur in the thigh”. Moreover, Bert is willing to accept a correction on this matter from those who he takes to be better experts than he is himself. Or, to put it in Burge’s terms, he is willing to *defer*. Therefore, it is epistemically possible for Bert that his belief is false, and thus that extension of the statement “arthritis can occur in the thigh” with respect to some epistemic possibility is false. If it might be false with respect to at least one of them, then it does not have a necessary primary intension. Consequently, given (CT), it is not a priori.

Burge argued that very many of our expressions are deferential:

It would be a mistake [...] to think that incomplete understanding, in the

sense that the argument requires, is in general an unusual or even deviant phenomenon. *What I have called ‘partial understanding’ is common or even normal in the case of a large number of expressions in our vocabularies* [original italics – M.G.]. ‘Arthritis’ is a case in point. [...] ‘Brisket’, ‘contract’, ‘recession’, ‘sonata’, ‘deer’, ‘elm’ (to borrow a well-known example), ‘pre-amplifier’, ‘carburetor’, ‘gothic’, ‘fermentation’, probably provide analogous cases. Continuing the list is largely a matter of patience. The sort of ‘incomplete understanding’ required by the thought experiment includes quite ordinary, nondeviant phenomena. (Burge 1979: 35-36)

If he is right, then many (if not all) of our expressions are deferential and that one never has a *complete* understanding of whatever subject matter one is talking or thinking about. But let me make two remarks here about what I think does and does not follow from Burge’s proposal. The fact that a person possesses a concept “deferentially” *does not* entail that anyone who uses it does not understand what one says or thinks, or that “we can say how things are *conditional* on..., but can never make an unconditional claim about how things are” (Jackson 1998: 53). The claim is about the *epistemic* status of a subject’s claims and beliefs, and not about whether she can make an “unconditional claim”. What it *does* seem to entail, however, is that one does not need to have a complete, or implicit, understanding of a subject matter in order to be semantically competent when using various expressions.

Chalmers is aware of Burge-style cases and describes them in the following way:

Here, the crucial factor is that Bert uses the term ‘arthritis’ with semantic deference, intending (at least tacitly) to use the word for the same phenomenon for which others in the community use it. We might say that this term expresses a deferential concept for Bert: one whose extension depends on the way the corresponding term is used in a subject’s linguistic community. It is clear that for deferential concepts, extension can depend on a subject’s environment, as can subjunctive [i.e. secondary – M.G.] intension. (Chalmers 2002b: 35-36)

So it seems to be a consequence of Chalmers’ view that a person who uses and possesses some concept deferentially does not know truths that involve that concept a priori, since it would always be epistemically possible for such a person that other members of her linguistic community would deny her beliefs involving that concept.

The Burgean thesis of “semantic deference” also seems to undermine the idea that the values of primary intensions turn on the epistemic properties of an expression in the actual world. Recall that the epistemic two-dimensionalism claims that “sufficient information about an epistemic possibility enables a subject to know what a concept’s extension will be, under the hypothesis that the epistemic possibility in question is actual” (Chalmers 2007: § 3.4). But for all Bert knows, “arthritis can occur in the thigh” might be false or it might be true: it is epistemically possible that arthritis can occur in the thigh, and it is epistemically possible that it cannot. If an extension of this statement turned on epistemic properties of the concept of “arthritis”, then Bert *would* be able to determine its extension with respect to those possibilities. However, since “it is clear that for deferential concepts, extension can depend on a subject’s environment” (Chalmers 2002b: 36), then Bert (and everyone who is willing to defer) cannot determine that its extension is *true* with respect to epistemically possible worlds.

One might reason in the following way. Speakers cannot determine extensions of deferential concepts and statements that contain them relative to epistemically possible worlds due to their cognitive limitations. Perhaps if they were not bounded by cognitive limitations, they *could* determine extensions of deferential expressions with respect to epistemically possible worlds, and thus could justify beliefs that involve those concepts a priori. In fact, Chalmers seems to be sympathetic to such reasoning, although the scope of beliefs that are supposed to be justified a priori is not limited only to deferential concepts:

[...] the notion of apriority is understood so that it idealizes away from a speaker’s contingent cognitive limitations. A sentence token [...] may be a priori even if the speaker’s actual cognitive capacities are too limited to justify the corresponding thought a priori. *What matters is that the thought could be justified a priori on idealized rational reflection.* [italics mine – M.G.] (Chalmers 2006: 99)

The above quoted passage seems to suggest that it is not that a thought, or a proposition, *is* actually justified a priori, since justification, one might reasonably assume, is done by using speaker's "contingent cognitive limitations". It is rather that it *could* be justified if one idealized away from them and justified the belief on "idealized rational reflection". Given (CT), this would entail that a statement *could* have a necessary primary intension if one idealized away from one's cognitive limitations and determine extensions of it relative to all counterfactual scenarios. But this seems to be devastating. Epistemology, or theory of knowledge, is supposed to characterize the nature of justification of beliefs of actual human beings that use actual cognitive capacities. Unless Chalmers can provide an argument why idealization from them could be theoretically relevant for such a theory, there seems to be no reason to conclude that subjects who inevitably use their *actual* limited cognitive capacities in order to justify their beliefs (irrespective of whether they involve deferential concepts), *do* justify them a priori.

4. 2 Semantic Internalism and Primary Intensions

The arguments and criticisms provided in subsections 4.1.1 and 4.1.2 seem to suggest that externalistic conception of primary intensions is incompatible with the conception of apriority that is proposed by the epistemic two-dimensional semantics due to the following reasons. Firstly, on externalistic understanding primary intensions are not part of the meanings of terms and they represent only one's partial knowledge, and current fallible assumptions, about the subject matter that has been fixed by using them. Consequently, statements that involve primary intensions might turn out to be false with respect to some epistemically possible scenarios, and thus, given (CT), would not count as being a priori. Secondly, if one follows the procedure suggested by proponents of the epistemic two-dimensional semantics by which

primary intensions are supposed to get determined and assigned to expressions, then one cannot vindicate (CT), if one accepts the Burgean thesis of “semantic deference” and follows Quine in rejecting the analytic-synthetic distinction.. Thus, it seems that if one assumes semantic externalism, then one cannot have statements that would have necessary primary intensions and would be a priori by the standards of (CT). Consequently, it entails that semantic externalism is incompatible with a conception of apriority that is proposed by the epistemic two-dimensional semantics.

Perhaps it is no surprise that the epistemic two-dimensional semantics rejects an externalistic conception of primary intensions and suggests conceiving of them in an internalistic way: namely, in a way that would characterize them as being fixed, and determined, only by the internal properties of the speaker. As it is indicated by Schroeter,

Generalized 2D semantics [...] posits an extra aspect of meaning for all expressions (the intension corresponding to the diagonal [primary intension – M.G.] of a 2D matrix) that is fully determined by a subject's internal states, and which in turn determines objective truth-conditions for her sentences. (Schroeter 2010: § 3.1)

If primary intensions are determined purely by subject's internal state, then they would represent a content of speech and thought that is “narrow”, as it is confirmed by Chalmers:

Why is epistemic content [primary intension – M.G.] narrow? On the surface, this is because a thought's epistemic content is *rationaly prior to any knowledge of a subject's environment* [italics mine – M.G.]: it captures the way a thought's truth-value depends on the character of the environment, and so is *independent of the environment itself* [italics mine – M.G.]. More deeply, it may be because epistemic content is defined in terms of the rational properties of thoughts, where the relevant rational properties are internally determined. For example, if one subject has a thought that is justifiable a priori, a corresponding thought in any intrinsic duplicate of that subject will also be justifiable a priori; if so, *a thought's epistemic necessity is determined by the internal state of the thinker.* [italics mine – M.G.]. (Chalmers 2002b: § 6)

It is clear from this paragraph that primary intensions are conceived as being determined purely by subject's internal states, and thus that it presupposes and internalistic

conception of them. But Chalmers claims that epistemic content is narrow in a sense that it is prior to any *knowledge* of a subject's environment. This seems to imply that if primary intensions are understood in an internalistic way, then they are representing what is knowable a priori: that is, what is *prior* to any *knowledge* of what the world is like. But if narrow epistemic content represents what a speaker or thinker knows a priori, then Chalmers' and Jackson's semantic conception of apriority seems to lose its explanatory power.

Recall that according to (CT), a statement is a priori if and only if it has a necessary primary intension. If one adapts an internalistic conception of primary intensions, and maintains that primary intensions are narrow in the sense that they represent what is prior to any knowledge of a subject's environment, then, given (CT), it would imply that a statement is a priori if and only if it has a (necessary) primary intension that represents what is knowable a priori. This shows that the epistemic property about justification – namely, apriority – is being defined in terms of primary intension which itself is defined in a way that presupposes the epistemic property that needs to be explained.

In fact, one might trace an implicit commitment to apriority and internalistic conception of primary intensions in Chalmers' and Jackson's suggestion of how such intensions should be defined and determined. Recall that primary intensions were *defined* as functions with the subset of epistemic possibilities which were characterized “as ways the world might be, for all we know a priori” (Chalmers 2006: 75-76), and that something “is epistemically possible (in the broad sense) when it is not ruled out a priori” (Ibid.). So in order to determine and assign primary intensions, Chalmers and Jackson suggested *starting* from considering ways the world might be, for all we know *a priori*. Thus, characterization of primary intensions as functions with the subset of epistemic possibilities as their range presupposes the epistemic notion of apriority. If that is so, then primary intensions could not be used as providing *semantic* grounds for apriority without begging the question.

Of course, there might be various ways to understand what narrow content” is: ways that perhaps might have nothing to do with apriority or epistemic properties at all. However, Chalmers maintains that “to understand narrow content, one must ground the notion in epistemic terms” (Chalmers 2003: 46). But if primary intensions are supposed to be narrow (that is, if one assumes an internalistic conception of them), then they would be *grounded* in epistemic terms from which would follow that the *semantic* conception of apriority that is proposed by the epistemic two-dimensional semantics would lose its explanatory power: it maintains to provide *semantic* basis of the epistemic notion of apriority by grounding *that* basis on that same notion.

The rationale of critical evaluations of the epistemic two-dimensional semantics and its semantic conception of apriority suggests the following: given that semantic externalism is incompatible with the conception of apriority proposed by the epistemic two-dimensionalism, and since it loses its explanatory power if one assumes semantic internalism, the conception proposed seems to be deeply problematic, and cannot provide semantic grounds for a priori knowledge and truth.

CONCLUSION

The main aim of this thesis was to get clearer about the proposed connection between the epistemic notion of apriority and the semantic notion of meaning. Due to the variety of different accounts present in the philosophical literature that are aiming at explaining apriority in terms of meaning, the scope of the thesis was narrowed to an analysis of one particular conception of it: namely, to the conception proposed by the epistemic two-dimensional semantics.

In the first chapter two types of accounts – “referential” and “conceptual” (or semantic) – that aim to explain the nature of a priori justification were discussed in order to emphasize theoretical differences between them and to locate the conception that was analyzed in this thesis in a broader context. Then, some theoretical features of the semantic explanation of apriority were indicated. It was suggested that the semantic explanation of apriority should propose a conception of the epistemic notion that defines it in semantic terms – namely, in terms of descriptive-semantic features (i.e. semantic values) of an interpreted language. Moreover, it was hypothesized that theoretical adequacy of the semantic explanation of apriority will depend upon one’s assumptions about the nature of such values and the way they get determined.

In the second chapter the basic notions and methodological assumptions of the formal framework of intensional one and two-dimensional semantics were discussed in order to indicate and clarify assumptions that are made about the way linguistic meaning is approached by the framework that is proposing the discussed semantic conception of apriority. Consequently, the successive third chapter was devoted to a detailed analysis of one particular interpretation of the two-dimensional framework – the epistemic two-dimensional semantics – and the semantic conception of apriority that is being suggested by proponents of

the epistemic interpretation of the framework. The analysis showed that the proposed conception of apriority is motivated by a traditional picture of meaning where apriority and necessity coincide and that the framework that is being used to characterize semantic value in virtue of which it defines apriority, is a combination, and an extension, of (i) Kaplan's application of the two-dimensional framework and (ii) the description theory of meaning and reference. Moreover, it was maintained that the means by which the epistemic interpretation of the two-dimensional framework suggests to determine and assign semantic values in terms of which it defined apriority, strongly resembles Carnap's procedure of determining and assigning intensions.

Critical evaluation of the epistemic two-dimensional framework and its conception of apriority was done in the last, fourth, chapter. The arguments and objections that were raised in section 4.1 indicated that one cannot vindicate a notion of apriority that is suggested by the epistemic two-dimensional semantic if one assumes semantic externalism, and thus the externalistic conception of semantic values in terms of which it is being defined. This is so due to the following reasons: (i) values (i.e. primary intensions) in terms of which apriority is defined by the epistemic two-dimensionalism on externalistic understanding are supposed to represent partial knowledge, and current fallible assumptions, about a subject matter that has been fixed by using them, and they are not part of the meanings of expressions with which they get associated; (ii) if one follows the procedure suggested by proponents of the epistemic two-dimensional semantics by which such values are getting determined, then one cannot vindicate the suggested conception of apriority if one accepts an externalistic thesis that many (if not all) of our concepts are deferential or rejects the analytic-synthetic distinction. However, if one assumes semantic internalism, and thus an internalistic conception of values in terms of which apriority is being defined, then the notion of apriority that has been suggested by the epistemic two-dimensional semantics loses its explanatory power, since the

epistemic notion of apriority is presupposed in the characterization and determination of values in terms of which it is being defined. Thus, the conception of apriority that has been suggested by proponents of the epistemic two-dimensional semantic seems to be deeply problematic: it either cannot be vindicated, or it cannot be used to provide *semantic* grounds of apriority without begging the question.

Finally, let me make two points with regards to apriority and semantic internalism/externalism. First, an acceptance of semantic internalism does not by itself commit one to a notion of apriority that is being proposed by the epistemic two-dimensional semantics, although results of the analysis suggest that if one aims at providing a *semantic* conception of apriority, then it could not get off the ground if an internalistic conception of semantic values, in terms of which apriority should be defined, presupposes that those values should be grounded in epistemic terms. Second, from an acceptance of semantic externalism does not follow that there can be no plausible notion of apriority, but if one wanted to represent a *semantic* conception of it by using two-dimensional framework, then if it rested upon a traditional idea of meaning according to which apriority and necessity coincide, such a conception could not be vindicated. What does seem to follow though is that if there is to be a notion of apriority at all, it needs to be explained in a different way.

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