

What ‘Science of Consciousness’? A Phenomenological Take on Naturalizing the Mind [1]

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IWM Junior Visiting Fellows’ Conference Proceedings, Vol. XXI © 2006 by the author

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Introduction

The problem of how to conceptualize the subjective aspects of human experience has been one of the centrepieces of any philosophical theory of the mind ever since Descartes. Following decades of ignorance in the wake of behaviourism and, simultaneously, the postmodernist farewell to the Cartesian heritage, the problem of subjective consciousness has once more become a focal point of attraction both in contemporary philosophy of mind and in the cognitive neurosciences. By now, debates about the conceptual boundaries and the empirical possibilities of explaining consciousness within the best available framework of the natural sciences are reaching far beyond the narrow academic frontiers of traditional epistemology.

The omnipresent ‘consciousness talk’ in contemporary philosophy of mind typically comes down to a particular set of questions, put forth in the title of hundreds of influential papers, questions like: ‘Is Consciousness a Brain Process?’, ‘What is the puzzle of Consciousness?’, ‘Explaining Consciousness: What would Count?’ or perhaps most prominently ‘What is it like to be a Bat?’.[2]

So what is the ‘consciousness boom’, as some call it, actually about? What exactly is at stake when philosophers and cognitive scientist jointly propose to engage themselves in the project of ‘naturalizing the mind’? Are we just dealing with what is well-known as the popular version of the Cartesian mind-body problem, which again has been taken up by Anglo-saxon philosophers of the late twentieth century by asking, at first glance, somewhat naïve questions like ‘Can We solve the Mind-Body problem’[3], – only to conclude either ‘no, we cannot in principle’, or: ‘there is no such problem at all’? If so, that is if the naturalism debate over the problem of consciousness amounts to nothing but the mind-body-problem, what does this tell us about the underlying metaphysical assumptions of the recent naturalistic projects that gather round the cognitivist camps for

establishing an overall ‘science of consciousness’? In short, the central questions are the following: First, what is meant by the term ‘naturalization’? And second, what precisely is the *object* of naturalization in the project of naturalizing consciousness?

In what follows I shall outline a possible set of answers to these two questions against the general background of an alternative theory of consciousness, namely: the “phenomenology of consciousness” fashioned by Edmund Husserl about a hundred years ago. To be sure, Husserlian phenomenology was for its own part, not least an explicit critical rejoinder to the naturalism of the time.[4]

Accordingly, I will proceed in two steps: First I will roughly sketch what I take to be an adequate metatheoretical framework for a phenomenological critique of the current naturalistic models of the mind. In the second part of my paper I shall focus on the phenomenological concept of consciousness with regard to the basic epistemological problems facing naturalistic theories.

I. Towards a Phenomenological Critique of Naturalizing Consciousness

To begin with, there is an alarming *conceptual confusion* regarding the entity at issue. Some philosophers claim that contemporary philosophy of mind is facing a “hybrid concept of consciousness”[5], constantly oscillating between related concepts like ‘self-consciousness’, ‘transitive’ and ‘intransitive consciousness’, ‘reflective’ and ‘pre-reflective awareness’ etc. Others rather blame the empirical neurosciences for notoriously confusing the so-called “hard problem of consciousness”, that is, the subjectivity of conscious experience with the so-called “easy”, i.e. philosophically non-relevant problems of its related cognitive capacities, like the ability of monitoring internal states, controlling behaviour, reporting information about oneself and so on and so forth.[6]

This confusion about the conceptual nature of consciousness is not merely a terminological or philological debate, which could be once and for all settled by some future history of ideas. The conceptual entanglement considering the nature, function and epistemic extension of the concept of consciousness is part and parcel of the very metaphysics underlying the ontological determination of the place of mind in nature. Thus, what is at issue – beyond being yet another academic turf-battle – is first and foremost the very *scientific legitimacy* of the respective ontologies in describing the relation between mind and nature. In other words: The conceptual confusion in the naturalism-debate in view of consciousness is a matter of epistemological justification and ontological foundation.

In a first approach, the ordinary usage of the term consciousness in non-philosophical contexts might be revealing. If we want to know if somebody is conscious, or ‘is aware of something’, or if somebody is conscious of something, we typically refer to purported ‘internal’ properties like attention, awareness, alertness etc., that we, in turn, directly infer from their external (e.g. bodily) forms of manifestation, like responsive behaviour, perceptual and affective reactions etc. Normally, when applying this type of description, we do not further specify the correlation between the supposedly internal or intrinsic and

external or contingent properties of conscious mental states in terms of causality, functional determination or the like. This type of default-ascription of mental events and psychic states to physical organisms represents what has been dubbed ‘folk-psychology’ by those naturalist philosophers who champion a reductive explanation of our cognitive architecture in terms which do not make any appeal to the ‘mentalist idiom’ whatsoever.[7] In fact, from the objectivist viewpoint of the natural sciences, our pretheoretical horizon of understanding the phenomenon of being conscious is not only embedded in a naïve ontological dualism regarding the psycho-physical correlation, but has led to the traditional mind-body problem in the first place.

Now, what is the general metatheoretical background assumption guiding the philosophical projects of naturalizing consciousness? I believe the overall project of philosophical naturalism depends on the presupposition that the integration of mental and phenomenal properties into the causally closed make-up of physical nature is not only empirically possible, but will in the long run provide the best available explanation of ourselves as parts of that physical universe.

Most naturalists hold that there are no principled reasons, intrinsic to human nature, why this intergration should fail; furthermore, many naturalist philosophers claim that the means of this integration will be provided by the future course of empirical sciences, and not by philosophers themselves. These assumptions usually rely on an epistemological justification, according to which solely the methodological framework of the natural sciences is entitled to claim any legitimacy with regard to the explanation of reality. In short: Philosophical naturalism typically relies on scientific realism.

Countless technical subtleties putting aside, one can basically identify two dominant lines of argumentation in the contemporary philosophical debates on naturalism, namely: reductive and non-reductive accounts of the mental-physical-correlation.[8] The line of division is closely linked to the epistemological claims about the *autonomy* of the mental in the presupposed ontological framework of a causally determined physical reality.

Reductive materialists or physicalists endorse the view that the integration of the mental reality into the basic physical network poses no deep philosophical problem, for – so the argument goes – there just is no distinctive mental reality in any relevant ontological sense at all. According to this view, the properties we ordinarily ascribe to our allegedly mental states by the descriptive tools of folk-psychology (like, for example, the mental event or state of having pain) are in fact nothing but the physically and neurobiologically determinable properties (like, for example, the stimulation of C-fibers in the human nervous system). The two entities ‘having pain’ and ‘stimulation of C-fibers’ are essentially identical; there is simply nothing else to be explained regarding the correlation or the experience of pain over and above the neurobiological design of the nervous system. Consequently, in order to obtain a truly scientific description of our experience of reality (included ourselves in the midst of it), we must translate our ‘mentalist language’ into a ‘physical vocabulary’ or, better, simply *eliminate* the mental altogether.[9]

This highly controversial and yet influential position within contemporary philosophy of mind, labeled ‘eliminative materialism’, might be regarded as the neuroscientific descendant of the already much-contested identity-theories of the first half and the mid-20 th century.[10]

Non-reductive naturalist theories entail a much weaker ontological claim with regard to the nature of the mental. The distinctive feature of non-reductive accounts of consciousness in comparison with reductive accounts is that the former do not question the autonomy of the mental within physical reality in principle. The arguments of non-reductionists rather revolve around the epistemological question of *how* the integration of the mental reality into the materially preconceived order of states of affairs could possibly take place. Naturalization, on these accounts amounts to a description of the mental as an entity that is in principle amenable to scientific treatment. Thus construed, the integration of the mental into the physical reality is to be performed within an explanatory framework that is at least in basic concord with the logics of natural science, without being reducible to this logic alone.

The essential question in the debates of non-reductive materialists however, is whether such an integration is possible without necessarily implying a fundamental *epistemic loss of sense* on the part of the phenomena in question.[11] Given that there seems to be an “epistemic asymmetry”[12] between the subjective phenomena of experience and the objects of experience, the question arises of how to close the resulting “explanatory gap”. [13]

Hence, the key issue in the debate of naturalizing consciousness seems to be the question of how the objectification of reality could possibly be expanded so far as to include the subjective perspective of the point of view itself, from which the objectification originally sets out. To put it somewhat technically: Is it possible to establish a point of view by means provided by the natural sciences alone, from which the criteria of determining the legitimacy of describing reality are themselves verifiable by the natural sciences? Thomas Nagel, one of the most prominent figures in the history of 20 th century philosophy of mind, has described the “objective blindness” of physicalism in his programmatic book *The View from Nowhere* with utmost clarity:

The limit of objectivity (...) is one that follows directly from the process of gradual detachment by which objectivity is achieved. An objective standpoint is created by leaving a more subjective, individual (...) perspective behind; but there are things about the world and life and ourselves that cannot be adequately understood from a maximally objective standpoint, however much it may extend our understanding beyond the point from which we started. A great deal is essentially connected to a particular point of view, or type of point of view, and the attempt to give a complete account of the world in objective terms detached from these perspectives inevitably leads to false reductions or to outright denial that certain patently real phenomena exist at all.[14]

The methodology applied by the positive sciences is guided by the ideal of dispensing the limited point of views of the concrete theoretizing subject. However, it is decisive to see that the empirical description of nature can be called *naturalistic* in the proper sense if

and *only* if it makes the universal metaphysical claim to capture the totality of aspects of our natural world-view including all aspects of our subjective experience of reality.

In sharp contrast to both reductionist and non-reductionist accounts, the methodological assumption that lies at the heart of a transcendental phenomenology is the idea that the problem of consciousness can only be properly addressed in a non-naturalistic and non-objectivistic ontology, which is metaphysically neutral with regard to *both* common-sense psychology and the scientific realism of the natural sciences. The primary task of a phenomenological analysis of consciousness is to lay bare the irreducible, metatheoretical horizon of sense displaying *on this side* of the ontological mind-world-dualism, a distinction that marks the very epistemological condition of opposing the point of view of the experiencing subject and the overall objective world-view of empirical description. It has to be emphasized that since phenomenology's main epistemological interest lies in clarifying the conditions of possibility of our *natural* attitude towards the objective world; by performing the so-called *epoché*, phenomenology first refrains from any judgement concerning a *naturalistic* ontology.[15]

Thus phenomenology is critical of naturalism only in a methodologically limited sense; phenomenology can be regarded as anti-naturalistic only inasmuch as the phenomenological clarification of the modes of appearance, through which the *natural* world is objectified for the experiencing subject, amounts to an epistemological clarification of the conditions and limits of an overall *naturalistic* determination of this same world.[16]

Phenomenologists defend the view that regardless of any ontological determinations concerning the status of subjectivity in the world as object of the natural sciences, there is in principle an epistemic asymmetry between the verificational-criteria for objects of the natural sciences and those for subjective mental states and their intentional contents. Due to its intrinsic intentionality, the mode of being of consciousness is epistemologically distinct from the mode of being of physical objects. Instead of being a spatio-temporal object in the (physical) world, intentional consciousness designates the mode in which a subject entertains a relation to the world and to itself. Thus, the mode of being of consciousness fundamentally differs from the object status of entities like 'brains' or 'neuronal systems of representations'. Unlike the latter, the former can only be adequately described with regard to its specific (epistemic) perspectivity.

Unlike the exclusively *third-person-perspective*, that is constitutive for the positivist description of empirical reality, phenomenological description operates with the methodologically disciplined *first-personal* account of the reflexive subject of experience. Phenomenology's 'first-person-method', however, in no way relies on the type of introspectivism attacked by behaviourism.[17] It should also be noted that the first-personal "region of sense"[18], which designates the field of inquiry of phenomenology, is not to be confused with the pre-theoretical realm of the above-mentioned folk-psychology. The guiding epistemological task of phenomenological analysis is rather to account for the conditions of the possibility to hold different epistemic attitudes towards different phenomenal appearances of one and the same reality.

Husserlian phenomenology is concerned with the analysis of the *apriori* structure of the correlation between subjectivity and objectivity. The term ‘*apriori*’ designates the formal-constitutive genesis of the correlation between the subjective modes of experiencing and the experienced objects. It is in this sense that Husserl speaks of the necessity of a “systematic analysis” of the “universal correlational apriori of the experienced object and the modes of givenness”[19] of this object as the main task of phenomenology from the *Logical Investigations* (1900/01) onward. In his second major work, the *Ideas* (1913), Husserl formulates this correlation in terms of the intentional relation between the (noetic) act of experience and the (noematic) sense or meaning of the experienced object. The analysis of this correlation is tantamount to the analysis of the non-causal constitution of subjectivity as being intrinsically related to and embedded in the natural order of objectivity.

Generally viewed, intentional consciousness is the overall concept employed in phenomenological analysis. For Husserl, consciousness is not an object of research like any other characteristic mental property or cognitive faculty whatsoever (like e.g. memory or attentiveness) but rather the general horizon of phenomenological description. Consequently the intentional analysis of the correlation between subjective consciousness and objective world is not an additional analysis to phenomenological description but the core of its being a transcendental analysis.

II. The Phenomenological Concept of Consciousness – Or: What is the problem of naturalizing consciousness?

Given these brief methodological preliminaries, according to the phenomenological account, consciousness is to be conceived as a *multi-relational epistemic entity*. More precisely, consciousness is a *threefold* epistemic phenomenon. Consciousness is first and foremost defined by its intentional aspect, i.e. the feature of being constitutively related to its objects. The much-quoted phenomenological concept of the intentionality of consciousness is usually characterized by the fact that consciousness – in its very mode of being – is always consciousness of something. Furthermore, the intrinsic feature of intentional ‘aboutness’ or ‘reference’ of conscious mental states necessitates that there is a subject for whom objects become apparent. The concept of intentionality is necessarily bound to the idea that there is a subject entertaining or undergoing a relation to something other than itself. Finally – and this is another often ignored, yet constitutive aspect of intentionality – consciousness of an object for a subject embedded in the world means that the object of a conscious mental act is always and only *given in a specific way*. It is in this sense, that ‘consciousness of something’ necessarily implies ‘consciousness that thus-and-so’ or ‘consciousness of this rather than that’.

Hence there is the threefold relation; the phenomenological concept of consciousness involves a conscious subject being conscious of a specific object. To put it differently: The meaning or phenomenological content of the predicate ‘being conscious’ or ‘having consciousness’ is identical to the epistemic relation expressed by the sentence ‘*somebody is conscious of something in a specific way or from specific point of view.*’

Thus, to be conscious means to hold a certain, subjective point of view. Consciousness on this picture is not a factual thing, property or event in the world, which could be described from an objective – i.e. from a non-subjective – point of view. In this respect, the very mode of being of consciousness is radically and principally *unlike* its material realizations in neurophysiological brain processes or publicly observable behavioural manifestations. Correspondingly, the possibility of objectifying certain aspects of the world is always bound to certain points of views from which the objectification sets out.

However, the phenomenological fact that subjective consciousness and the objective world are constitutively interwoven, does not amount to epistemological relativism. Contrary to prevalent criticism, the phenomenological analysis of the constitutive relation between mind and world does not entail any form of metaphysical idealism (à la Berkley e.g.). The prime goal of phenomenological investigation is rather to elucidate the intentional structure of consciousness by analysing the various subjective modes of givenness of an objective entity. The mode in which an intentional object is given for a subject correlates to the subjective mode of appearance, by which the object is present to consciousness. So for example, the perceptual grasp of a present spatio-temporal, and thus only perspectively appearing, physical object, like a pair of nice shoes, categorically differs, say, from the intentional act of representing a mathematical formula in the logical space of sense, or the act of remembering the shoes being thus-and-so. Accordingly, the mode of givenness, i.e. the appearance of the respective objects, essentially differs in nature.[20] As Husserl puts it in the *Ideas*:

There is a certain, extraordinarily important two-sidedness in the essential nature of the sphere of experience concerning which we can also say that in experiences we must distinguish between a *subjectively and an objectively oriented* aspect ($\frac{1}{4}$) a division (though not any real separation) between two different sections of inquiry, the one bearing on pure subjectivity, the other on that which belongs to the ‘constitution’ of objectivity *as referred to* subjectivity .[21]

The general distinction between the object of experience and the appearance of the object as constitutively referred to the subject of experience represents not only the core of Husserl’s theory of intentional consciousness; by distinguishing between the two respective spaces of phenomenological inquiry, it yields a significant impact on the naturalism-debate. The properly understood phenomenological concept of intentionality enables us to distinguish between objects as observable and describable entities independent of their relation to a conscious being on the one hand and their intrinsically subject-dependent modes of appearance on the other hand. What is interesting about Husserl’s transcendental approach in this respect, is that – unlike the current ‘crypto-cartesian’ standard-positions on both sides of the naturalism debate, be they materialists or anti-materialist[22] – it does not advocate any of the metaphysically handicapped versions of realism or idealism.[23]

According to Husserl’s transcendental idealism the properties of the external reality of the consciousness-transcendent world are not transformed to pure subject-relative mental contents in a phenomenalist manner. Transcendental phenomenology does not imply phenomenism. On the contrary, based on the fundamental distinction in every

intentional act between “the appearance as intentional experience and the apparent object (the subject of the object predicates)” Husserl explicitly refutes the phenomenalist idea that the object of an intentional act is identical with the complex of the inner sensations that the subject experiences.[24] Transcendental subjectivity does not solipsistically constitute the objects of its experiences but rather gives rise to the horizon of the meaningful interpretation to which these objects are subjected. In short: It constitutes the openness of the mind to the world of meanings. More properly, transcendental subjectivity is nothing but the phenomenological title for this openness. The fact that the world appears to the mind means that the world bears objective sense for a subject.

Thus, the very gist of the phenomenological account of subjectivity is that the issue of constitution of both consciousness and the reality of the objective world is *constitutively* – though not causally – interwoven. The ‘constitutive sphere’ wherein this inter-relatedness takes place is, what Husserl calls transcendental subjectivity. As Husserl has stressed throughout his work, this constitutive sphere – precisely in its being constitutive for the very ‘(self-)differentiation’ of the mind and its relation to the (‘extra-mental’) world – must not and cannot be located intra- or extra-mentally.[25]

The non-causal concept of intentional constitution within the framework of Husserl’s transcendental idealism has no ontologically constructive function – neither external nor internal – but the formal function of sense-constitution. It is not the real object, external to consciousness, that is constituted through the intentional act; nor is the intentional object constituted through inner mental representations cut off the external world. What then is constituted in living through the intentional experience of the real object is the *intentional* object. It has to be noted that Husserl does not ontologically dissociate the real object from the intentional one. The distinction between the two entities is based on an epistemological distinction, resulting from the bracketing of all judgments about ontological status of the realm external to consciousness. This bracketing, the *epoché*, is performed by the phenomenological reduction to the realm of pure immanent experience. [26]

However, transcendental consciousness must neither be confused with a quasi-cartesian idea of a solipsistically ‘self-contained’ or “epistemically encapsulated mind”[27] nor with the prevailing cognitivist picture of a (materially realized) functional system (of the brain), whose rule-governed activity brings forth some ‘inner’ mental representations of the ‘external’ reality.[28] The phenomenological dimension of consciousness is rather to be conceived as the interplay of the intentional mode of being conscious of something and the phenomenal mode of simply being in a mental state – the phenomenological dimension being, as it were, the ‘interface’ between objective reality and subjective consciousness.[29]

The point I wish to highlight in the present context is the following: In every instance of intentional consciousness, one must markedly distinguish between two correlative epistemic aspects. One aspect bears on the objective reference entertained by every mental state, i.e. its *transitive* character of being about something, whereas the other epistemic aspect is constituted by the experiential, *intransitive* character of undergoing a state of consciousness or performing the intentional relation to an object. Husserl

succinctly points out the ontological consequences of this epistemic distinction, when he says: “The being of living through an experience is not the being of an object.”[30] – “Thus a basic difference arises between *Being as Experience* and *Being as Thing*.”[31]

At this point, it is about time to return to the question posed above regarding the object of the project of naturalizing consciousness. Considering what has been said so far, we can identify the genuine object of naturalization as the perspectivity manifest in the intransitive, performative aspect of every conscious experience. The immediate, non-propositional character of the ascription of mental states to oneself as the subject undergoing such states represents the phenomenological gist of the much discussed ‘in corrigibility-thesis’. What this thesis states is that specific forms of first-personal propositions, propositions like ‘I have headache’ or, paradigmatically, the proposition ‘I am conscious’ intrinsically express an unmediated mode of evidence; the truth value of these propositions, determined by the relation between the belief (that I have headache) and its reference (being in pain) seems to be immune to both verification and falsification from a third-person perspective.[32] There simply seems to be no sense in asking somebody questions like: ‘Are you really sure that you are conscious?’ Or ‘Do you really feel that you have headache’, or: ‘Do you really feel your headache?’, – as if one would have to reflectively or introspectively observe oneself to assure oneself of ones own dispositional mental or psychic states.[33]

What is important to see here is that the subjective aspect of the experiential mode of being conscious cannot in principle be captured from the third-person description of a natural scientific account. It is true, that every consciously performed intentional act retrospectively and self-reflectively can be turned into a full-fledged intentional object by a succeeding meta-representation. This is the case when somebody reflects on his or her past jealousy or on the simple perceptual experience of having just seen red tomatos. But what are thus objectified are solely the referential properties or representational contents of the experience, not the specific subjective aspects of actually undergoing the experience.[34]

It is precisely this phenomenologically fine-grained distinction which constitutes the epistemological foundation upon which rests the distinction between first-person and third-person perspectives. By analysing the intentional dimension of consciousness, phenomenology concerns itself with the relation between the experiential dimension of subjectivity and scientific objectivity. Ultimately, transcendental phenomenology is concerned with the relation between the experientially immediate, subjective character of evidence of the first-person perspective and the empirically verifiable character of those objects of experience describable from the third-person perspective.

Yet the task of providing a proper explanatory account of this epistemic asymmetry is not only phenomenology’s central concern; it also represents the touchstone for the epistemological success of the project of naturalizing consciousness.[35] In fact, phenomenologically viewed, the very nature of transcendental subjectivity marks both the conditions of possibility for and the conceptual limits of such a project. Here is Husserl’s characterization of this double-binded nature of the transcendental dimension of human subjectivity:

“Thus the limit of possible *naturalization*: the mind may well be conceived as dependent on nature and naturalized on its own part; however there is a certain limit. A determinative account of the mind that reduces it to sheer causal dependencies or natural relations is unconceivable. To the mind, there is no plain analogy within the descriptive framework of the natural sciences. Subjects cannot be exhaustively taken up with being nature, for otherwise, there would be nothing that would bestow nature with its very sense.”[36]

Conclusion

Given these preliminary phenomenological clarifications with regard to the conceptual nature and epistemic structure of consciousness, what can be said about the future prospect of a full-blown ‘science of consciousness’?

What I have been trying to show is that, along with anti-naturalistic philosophy of mind, Husserl’s contribution ought to be taken seriously for the purposes of critically assessing the reductive explanation of our mental reality in the manner of much of the contemporary neurosciences.[37] It is my contention that, contrary to the recent, highly questionable cognitivist efforts to naturalize Husserlian phenomenology itself,[38] Husserl’s transcendental idealism ought to be conceived as an epistemological position alternative to the ongoing cognitivist standard-debate of either externalizing or internalizing the mind[39]. The central point I have made is that Husserl’s phenomenology of consciousness convincingly challenges any attempt to naturalize the subjective dimension of our experiencing both the world and our genuinely first-person relation to ourselves within this world. Transcendental phenomenology investigates the primordial fact that it is the subjective performance of an intentional experience that constitutes the *sense* of appearance for both worldly objects and the place that the subject of experience occupies among these objects. Following Husserl, we can conclude that the attempt to reduce this space of sense to the space of matters of fact misses the very point of human experience and cognition.

So, the lesson to be drawn from the phenomenological account of consciousness in view of the project of naturalizing the mind is this: If naturalizing means to provide an explanatory framework of the intentional relation between the mind and the world that is capable of being integrated into the realist ontology of the natural sciences, then the naturalization of consciousness must fail in principle. For the analysis of intentionality, the hallmark of a phenomenology of consciousness, marks the bounds of sense between the epistemic properties of how reality appears to the mind and the ontological properties of what this very reality is made of. Phenomenology does not intend to question the relevance of a naturalistic approach to the mind for the sake of a better understanding of our neuro-cognitive architecture. What transcendental phenomenology is questioning however, is, whether a neuroscientific account of the mind, deprived of its specific intentional and phenomenal aspects, can still be called a science of *consciousness* at all.

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Notes:

1. This paper is part of a dissertation project supported by the DOC-programme of the *Austrian Academy of Sciences*. Furthermore, I would like to thank the IWM for offering a Junior Visiting Fellowship and the Editors of this volume for their helpful comments on earlier versions.

2. See Place 1956; Bieri 1992; Van Gulick 1995 and Nagel 1974.

3. Cf. McGinn 1989.

4. For Husserl’s most programmatic text on this issue, see Husserl 1911.

5. Block 1995, 375.

6. See Chalmers 2002.

7. Cf. e.g.: Churchland 1994 and Dennett 1971; Dennett 1981.

8. Chalmers 2002 offers a thorough critical survey of the specific types of reductive and non-reductive argumentation within the naturalism debate.

9. See Churchland 1981.

10. Cf. Kripke’s (Kripke 1971) canonical refutation of these theories.

11. For the classical version of this so-called ‘knowledge argument’, see Jackson 1982.

12. Güzeldere 1997, 24.

13. Cf. Levine 1983.

14. Nagel 1986, 7. An interesting, recent comparison of Nagel’s and Husserl’s critique of naturalism is found in Ratcliffe 2002.

15. Cf. Husserl 1984, 98; 153.

16. Cf. the concept of a phenomenological “non-naturalism”, phenomenology’s “methodological anti-naturalism” in Rinofner-Kreidl 2003, 1-3 and Rinofner-Kreidl 2004b. In a similar manner Martin (Martin 2005, 205) characterizes Husserl’s theory of consciousness as “an *unnatural* science of the mind.”

17. Cf. Thomasson 2005.

18. Husserl 1974, § 48.

19. Husserl 1954, 169.

20. Cf. Zahavi 2003, 31-35.

21. Husserl 1913, 180.

22. Cf. Bennett/Hacker 2003, 261-63.

23. For the ongoing debate on whether Husserl's epistemology is to be conceived as (scientific) realist or idealist and whether his transcendental idealism entails an ontological anti-realism or solipsism, see amongst others: Drummond 1988; Gutting 1978; Hall 1976; Hall 1982; Holmes 1975; Philipse 1995 and Smith 1995.

24. Cf. Husserl 1901a, 371.

25. Cf. Sokolowski 1964, 45-46: "The problem of objects of reference leads (¼) to the concept of intentionality. Every conscious act, according to Husserl, is referred to an object, and another way of saying this is that every act is by nature intentional. Consciousness is not a self-enclosed island, but essentially involves reference to an object. It is always consciousness *of* something. By such assertions, Husserl excludes the concept of consciousness that is locked within itself and knows only its immanent elements or states. (¼) Consciousness is not insular, but puts us into a real intentional contact with things. How intentionality achieves this, how objectivity becomes present to consciousness, is precisely the problem of constitution." See also Husserl 1974, 237-239.

26. Cf. Husserl 1959.

27. Willard 2002, 72.

28. Cf. e.g. Husserl 1979, 305. In this connection, see the debate on whether Husserl's account of consciousness represents a computational version of internalism or if it is rather immune to such an interpretation, cf. the Introduction to Dreyfus 1982; McIntyre 1986; Haaparanta 1994.

29. Cf. Hintikka 1995.

30. Husserl 1901b, 669.

31. Husserl 1913, 133.

32. Cf. Rorty 1970.

33. Cf. Shoemaker 1984.

34. Cf. Rinofner-Kreidl 2004a.

35. Cf. Baker 2000.

36. Husserl 1952 , 297.

37. Cf. Meixner 2003.

38. I refer to the contributions in the canonic volume ed. by Petitot et al. 1999 and a series of articles like Varela 1997; Gallagher 1997; Lutz/Thompson 2003 and others. For a critical discussion of this project, see: Overgaard 2004; Zahavi 2004a; Bruzina 2004.

39. For a recent comprehensive survey of the key problems of the internalism/externalism debate, see: Schantz 2004. Zahavi 2004b offers a critical evaluation of the metaphysical presuppositions of this debate from the perspective of Husserlian transcendental phenomenology.

Preferred citation: Szanto, Thomas. 2006. What 'Science of Consciousness'? A Phenomenological Take on Naturalizing the Mind.
In: History and Judgement, eds. A. MacLachlan and I. Torsen, Vienna: IWM Junior Visiting Fellows' Conference Proceedings, Vol. 21.