

# A Question of Objectivity

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## Abstract

In this paper, I discuss some interesting new thoughts and concepts in quantum physics and in consciousness studies (Bitbol, Varela, and Görnitz) and how they may shed new light on the questions of mind and/or consciousness. For instance, whether it is possible to provide a coherent naturalistic account of the emergence of the mind (Ule). I will try to present a rather different paradigm of what “nature” really is and, consequently, what we should understand by the term “naturalistic” or “naturalization.”

**Keywords:** quantum physics, consciousness studies, naturalism

## Vprašanje objektivnosti – povzetek

V tem prispevku obravnavam nekatera zanimiva nova razmišljanja in pojme iz kvantne fizike in študij zavesti (Bitbol, Varela in Görnitz) ter ugotavljam, kako bi ti lahko prispevali k razrešitvi problemov duha in/ali zavesti. Denimo pri vprašanju, ali je mogoče izdelati koherentno naturalistično teorijo emergence duha (Ule). Poskusil bom predstaviti precej drugačno paradigmo o tem, kaj »narava« v resnici je in kako naj bi zato razumeli izraz »naturalističen« oziroma »naturalizacija«.

**Ključne besede:** kvantna fizika, študije zavesti, naturalizem

The paper presents fragments of a silent dialogue with Andrej Ule on mind in physical reality (Ule, “Mind in Physical Reality, its Potentiality and Actuality,” 2012). There is a book on quantum physics with the rather revealing title *Constituting Objectivity* and the subtitle *Transcendental Perspectives on Modern Physics* (2009). Apart from this, there is a quite elaborated text by one of its editors and contributors, Michel Bitbol: “A Cure for Metaphysical Illusions: Kant, Quantum Mechanics and the Madhyamaka” (2003). He investigates in minute detail the issues of the transition from classical physics to quantum physics in the twentieth century. As shown already by the Neo-Kantian movement, a transcendental reflection on natural science, on physics, could avoid the problems of a relatively naive background ontology – or even metaphysics – of the notions of experience and objectivity as well as of the concept of reality, which acted in a manner viewed as rather obvious within the framework of these sciences. With the advent of quantum mechanics, many changes occurred in this regard, including with regard to epistemological, logical and ontological problems that still puzzle scholars. Bitbol points out that

the Neo-Kantian cure does not suffice. Even in the new quantum-physical paradigm he can detect many hidden, old-fashioned, quasi-ontological and metaphysical assumptions. Scientists, despite following the new methodological standards, often could not separate themselves from the older views, and gain a new, adequate, picture of what was really at stake with quantum physics. For example, he writes: “From the very beginning, quantum logic was aimed at restoring realism in quantum physics against Bohr’s view” (2003: 15). Other similar examples are Einstein’s EPR and Schrödinger’s cat.

Bitbol, therefore, tries a stronger cure. It stems from the so-called Middle Way School of Buddhism, especially Nagarjuna, one of the most radical “deconstructive” thinkers, not only for Eastern thought, but possibly even for Western standards (e.g. Derrida). In a far-reaching, detailed and encompassing sketch, Bitbol demonstrates, with the help of Nagarjunaian means and concepts, how most “metaphysical illusions” of basic ontological and epistemological assumptions, which have led to many inconsistencies that plague most quantum physicists and philosophical interpreters, could be dispelled. His demonstration is impressive: Nagarjuna thoroughly succeeded where Neo-Kantian criticism could neither solve nor change. Consequently, Bitbol advocates a kind of mixed – or “integrated” – concept of modern physics and essential (epistemological, ontological) basic structures of Buddhism.

This is undoubtedly a strong stance. Nevertheless, one could be interested – or at least curious – to look for possible alternatives. As it happens, I (like Andrej Ule) have for a long time dealt with the philosophical questions of quantum physics. I was especially acquainted with the rather ambitious project of laying the foundations of quantum physics by Carl Friedrich von Weizsäcker and his group. Recently, a German-language book summarizing and building on this project was published under the title *Von der Quantenphysik zum Bewußtsein: Kosmos, Geist und Materie* (T. Görnitz and B. Görnitz, 2016), thus providing one possible alternative to Bitbol.

The author Thomas Görnitz worked with von Weizsäcker for nearly thirty years. In the book, he provides a consistent summary of von Weizsäcker’s construction of quantum physics on an information-theoretical basis, and further develops these information-based concepts, which von Weizsäcker himself did not manage to accomplish. To von Weizsäcker’s so-called “Ur-Theory” of basic binary alternatives which form the foundation of all quantum-physical experiences, Görnitz added new mathematical constructions concerning black holes and cosmological items. Thereby he managed to overcome some serious shortcomings of von Weizsäcker’s own project, and close the gap on mainstream quantum physics (indeed, you can still read in the introduction to “Constituting Objectivity” that von Weizsäcker’s project “failed,” although this is not that obvious). Görnitz was able to provide a highly generalized and abstracted concept of information, which can replace von Weizsäcker’s “simplest ur-alternatives.” Because at this level of abstractness and simplicity this information is devoid even of any “meaning,” he decides to replace the term “information” with the – not quite well chosen – notion of

“Protyposis.” In this way, he was able to demonstrate – in the strong sense of Einsteinian matter-energy equivalence – the equivalence of the three levels, namely matter-energy-information, analogously to the aggregate states of H<sub>2</sub>O (water-ice-vapor).

This means that the cosmological evolution starts with the simplest and most abstract state of “quantum information,” a “Qbit” (quantum-bit), the closest possible to the Big Bang, then leads to “matter,” “energy,” and subsequent forms of now more meaningful “information.” Critical to this informational development is the emergence of living organisms. Because of their constitutive instability (e.g. Prigogine and others), they need and use informational devices to stabilize themselves. As a result, information now becomes the all-known “meaningful” information. Here we have the origin of the different stages and kinds of consciousness, including its higher traits of self-feeling and self-reflecting.

This sketch suggests a strong move towards the simpler forms of the Copenhagen quantum-physical concept, ahead even of the already much more sophisticated form at Weizsäcker. Görnitz’s view offers permanent checks and criticisms of (1) the older ontological and metaphysical-realist frameworks and basics of classical physics, and especially of (2) the many remnants of such thinking present even in the development of quantum mechanics, quantum physics, and quantum theory. By means of internal reflections – not only conceptual-philosophical, but for the most part also mathematical-physical – on the essence of quantum physics, Görnitz successfully criticizes “metaphysical illusions” very similarly to Bitbol’s Nagarjunian criticism, but exclusively by quantum-theoretical means. Thereby it is demonstrated that matter, the matter/mind dualism, objectivity, and even the understanding of “nature” itself are not the same when viewed from the quantum-physical perspective or from that of classical physics and “natural sciences.” The changes are not only methodological and/or epistemological, but also in what the subject of modern physics may be at all, in the overall structure of what we are to take as “reality” (we are to find a new meaning for an ancient notion).

Now, there is another field where the aforementioned problems of “metaphysical illusions” and false claims of “objectivity” are to be found, namely that of consciousness studies. Here, Bitbol finds himself looking for another cure for the aforementioned mind/matter or mind/nature dualism (Bitbol, 2008). And this different kind of cure is, as he surmises, the research program found in Francisco Varela’s “Neurophenomenology” (1996). Varela is special because, as a renowned researcher and professor of neuroscience at various scientific institutions, he also showed great interest in phenomenological methods and ways of immediate experience. He even methodically studied the personal experience involved in the traditions of meditation and spiritual insights. And most importantly, he was interested in bringing together the manners of gaining and practicing knowledge, in establishing an integrated scientific field for and out of both. Varela argues that the field of neurophenomenology must have the strict character of hard science, that is, it must be a form of “naturalization” of subjective experience without reducing, however, one component to the other.

This raises certain problems pertaining to the so-called “hard problem” of consciousness (Chalmers, 1995), or the “explanatory gap” between immediate conscious experiences and neuroscientific consciousness studies, or between first-person and third-person data. What follows if Varela’s intention is “not to *close* the explanatory gap, but rather to *bridge* it?” (Ataria, 2017: 10). Or, in his own words, in case he wants to create “meaningful bridges between two irreducible phenomenal domains” (Varela, 1996: 340). What we have is a performance of two kinds of concrete empirical studies, a pragmatic model of searching for “how the 3pp can help us to improve our understanding of the 1pp and vice versa. This kind of criss-cross (1pp↔3pp) approach...” (Ataria, 2017: 26). Because of this, it is opposed to the metaphysical cases by simply ignoring the metaphysical issues (inherent in the two-realm talk). And, as such, it is indeed in its own right a different kind of “cure for metaphysical illusions.”

What consequences does this have for the “Neurophenomenological Research Program” (NRP) and for the NRP’s postulated standards of “naturalization”?

Let’s have another look at Yochai Ataria:

In sum, if we accept the notion according to which (a) as long as subjective experience remains un-naturalized, it is excluded from the hard-core, objective, scientific project, and (b) as long as we are not able to naturalize our phenomenological data, we will not be able to create a real dialogue with 3pp data, then we must try to find a way to naturalize subjective experience while minimizing the losses (in this process). It seems that, under current constraints, if one refuses to give up even the slightest dimension of subjective experience then the result will be two separate scientific paradigms: 1pp paradigm versus 3pp paradigm. With this in mind, the NRP’s most important challenge is to find a way to naturalize subjective experience with minimal losses and without pretending to capture subjective experience in its fullness. (Ataria, 2017: 26f)

Now, Ataria’s claim appears to be that wanting to capture a subjective experience in its fullness falls under what Bitbol baptized “metaphysical illusions” for which he prescribed his special cure. Moreover, the idea is that by not willing to accept certain losses (of subjective experience, by trying to get or fix it in a quasi-absolute way), one falls back on dualism, this time that of “the two separate scientific paradigms.” The explicit goal of Görnitz’s extensive book was to overcome this dualism (together with all the others) as radically as possible. And what losses are at stake here? The renunciation of metaphysical conceptions of objectivity, certainty, quantum-physical probability, and indefiniteness, of being objective and not a mere matter of our own not-knowing, of “reality” and all together of what it is to be “nature.” Despite curing all these “absolute” concepts of scientific performance, Görnitz nonetheless advocates the hard science character of quantum physics in whose name he makes his criticisms, changes, and cures.

What we have now concerning Andrej Ule’s research of these topics is a double picture. He seems rather critical of the scientific, hard science part of the accountability

of subjective experience because he wants to avoid the mere “reductionism,” while the above sketch is more optimistic regarding the possibility of a face-to-face (“vice-versa”) connection of both parts. As for the “losses” that both pictures have to concede, it is estimated that a bigger loss allocated to hard sciences would be more regrettable.

At this point, another look at quantum physics could be decisive, namely whether or not we might be able to find an emerging free space appropriate for the connection of science with subjectivity in the field of quantum physics. I know that Professor Ule is still working on this issue, therefore we can expect further solutions.

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