

INTRODUCTORY: PERSPECTIVES ON REALITY AND “THE WORLD” IN THE REALISM DEBATE

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Abstract: One of the “characteristic parameters” dividing up analytical and Continental philosophizing is the interpretation of the concepts of “reality” and “the world”. The paper offers an analysis of this characteristic parameter with regard to the relations between epistemologically centred and hermeneutically oriented doctrines of realism.

Keywords: hermeneutic construal of the world; interrelatedness of practices; interpretative appropriation of possibilities.

I.

It is a commonplace to admit that the poles in the realism debate are those between orthodox scientific realism and radical anti-realism (expressed in a certain version of instrumentalism, empiricism, conventionalism, pragmatism, or constructivism). In fact, all doctrines located on the spectrum between these poles share not only basic epistemological assumptions, but also the presumption that epistemology enjoys the status of a privileged point of reference in coping with the complexity of the science-reality relationship. Yet there are various hermeneutic and phenomenological doctrines that go on to deny the primacy of the epistemological reflection in dealing with this relationship. They are guided not by a sheer anti-realism about the nature of (scientific) knowledge. These doctrines are rather looking for a “stronger” (ontological) concept of reality. As a rule, they put forward variants of Continental philosophy of science that display discontent with the opposition between the context of discovery and the context of justification—an opposition that legitimizes the priority of normative epistemology in the rational reconstruction of science’s cognitive structure and dynamics. In so doing, however, the champions of the phenomenological and hermeneutic doctrines of science are not trying to fuse both traditional contexts of science studies. Their task is rather to elaborate on a new context of constitution, in which the cognitive specificity of scientific research is investigated through extending phenomenological models of the constitution of meaning in a manner that allows one to address the issue of the formation of scientific domains. In the perspective of this investigation, reality is not to be detached from the open horizons of meaning articulation. The subject-object cut (regardless how it is defined from an epistemological point of view) is always embedded in such horizons (like the life-world of the pre-scientific experience, the horizons of

the effective-historical experience, or the interpretative horizons of scientific communities to mention only three examples). To be sure, however, analytical philosophy of science suggests several good arguments against the claim of the “derivability” of the subject-object relation.

The concept of this Special Issue is to shed some light on the realism debate by placing emphasis upon the spectrum between the poles of epistemological and interpretative-ontological centrality in developing a relevant concept of reality. There is no attempt at evaluating the merits and the deficiencies of both orientations. We have not attempted also to be exhaustive. There are many important positions between the poles that this Special Issue does not discuss. The whole project has to demonstrate only important points of convergence and divergence between the two types of debating science-reality relationship.

Michael Bradie’s essay is the natural starting point for this volume. Many doctrines in the philosophy of science tacitly admit that methodological naturalism (the presumption that scientific accounts involve a rejection of any appeal to meta-natural agenda, entities and factors) is an ingredient of scientific realism. Bradie’s paper provides us among other things with the pros and cons for integrating methodological naturalism in scientific realism. The discussion of Darwin’s selectionist account leads to the view that the kind of realism which scientists are inclined to adopt in their research work depends essentially on their criteria for methodological naturalism. Consequently, if a kind of naturalistic account rules out the division between the external and the internal world (as this is the case with some programs in AI) then a sort of realism without Cartesian dualism would take place. Yet Bradie’s elaborations could be read in another key as well. On this reading, inasmuch as each philosophically elaborated version of scientific realism involves metaphysical assumptions there is an insurmountable conflict between methodological naturalism and scientific realism. Accordingly, methodological naturalism would be solely compatible and congruent with what Arthur Fine calls “natural ontological attitude”.

Timothy Lyons’ variant of deployment realism, however, demonstrates convincingly that one can look for scientists’ realist position by proving that some constituents deployed in key successful predictions are approximately true. Lyons’ approach to the scientific realism debate invokes the dialogue between philosophy and history of science: Deployment realism requires identifying through historical case studies those constituents which are genuinely deployed in novel successes, but which, by the light of contemporary science fail to qualify as even approximately true.

Notoriously, the aforementioned dialogue takes a central place in discussing the meaning of science’s theoretical terms. *Harold Brown* approaches the scientific realism debate by distinguishing five versions of the thesis of theory-dependent evidence (the theory-ladenness thesis), each of them having a significant impact on developing a realist philosophy of science. He goes on the claim that a meta-scientific theory of the interplay between interpretation and constraint in revealing the meaning of science’s theoretical terms will allow one to advocate the position that the growth of evidential constraints on the fundamental scientific theories is the only reason for believing that we are moving towards true beliefs. Since the interplay in question takes on the form of an intra-theoretical hermeneutic circularity, the defence of scientific realism is to be provided in terms of an interpretative philosophy of science as well.

The importance of an intra-theoretical hermeneutics can be placed in the broader context of the tensions regarding basic epistemic concepts which is addressed by *Joseph Margolis*’ paper. In this context—so his argument goes—one can stress several reasons for rejecting any adherence to a firm epistemological code of scientific rationality. Epistemological opportunism without chaos is the principle that paves the road to a comprehensive version of scientific

realism. This opportunist credo is in line with some aspects of Hacking's interventionist realism and Brandom's logic of material inference. Yet a version of scientific realism based on epistemological opportunism opposes the algorithm-minded proposals regarding scientific inquiry. In many respects Margolis' paper marks off the points of transition from analytical to Continental philosophy of science in debating realism.

It goes without saying that the "objective reality" neither coincides with nor is reducible to the physical reality. Human beings are living in historical worlds, and the epistemological and ontological identification of the reality of human existence's historicity is an issue of prime importance not only in historiography but in all historically oriented human sciences. Václav Černík and Jozef Viceník's paper addresses this issue. In a highly sophisticated and innovative manner the authors manage to relate the realism debate in the philosophy of science to the narrativism debate in the philosophy of history (and the methodology of historiography). On Hayden White's celebrated view, the authority of the historical narrative is the authority of reality itself. It is this narrative (as embodied in the historical account) that in speaking itself speaks to us by imposing a formal coherency upon past events and processes, making them thereby a coherent reality. This is the formal coherency that only stories possess. Thus, the identification of the historical reality is intimately related to narrative emplotment. The historical narrative's plot reveals to us—so White's argument goes—a world that is putatively "finished". Of course, a historiography that gets rid of any identification of reality in terms of the philosophy of history promises to demonstrate that the plot of a historical narrative is always an embarrassment. In so doing, the research programs of this historiography ascribe objectivity and truth to the historical representation that is independent of narrative techniques. White, however, is eager to make the case that the poetic (fictional) fore-structure of narrativizing operates even in the epistemologically most objectivist historical representations. While attributing a restricted validity to White's views, Černík and Viceník argue that there is enough room for objectivity and truth in historiography.

Paul Stenner is the only participant in this project who is a working scientist. Being critical to any kind of philosophical indoctrination, he looks for the best balance between analytical and Continental traditions in his invigorated version of social constructionism. What dominates in Stenner's conception is a commitment to existential hermeneutics that is expressed by the following claim: The choice of a realist or anti-realist standpoint is by all means made with regard to the "textuality" of Being-in-the-world that always already fore-structures the construction and interpretation of scientific theories. Furthermore, Stenner's paper spells out the basic political aspects of the realism-constructionism debate. There is no interpretation of scientific knowledge that can be disentangled from ethical and political contexts. Realism based upon epistemological representationalism, objectivism, scientism, and social constructionism are philosophical doctrines with political agendas. Interestingly enough, Stenner's constructionism leads not to a post-metaphysical stance, but to a re-engagement with that metaphysics which gets rid of the ontological bifurcation between the natural world and the psychosocial world.

Gregor Schiemann's paper typifies the reception of the realism debate in the phenomenological tradition. Guiding here is the principle that reality only becomes a problem when controversies arise among different modes of experience. Life-world and quantum mechanics are conceived of as modes of experience that constitute different meaningful realities (i.e., realities that come into being within ongoing constitution of meaning). The comparison of different modes of experience acquires a special actuality in light of recent developments in physics that ascribe quantum properties to macroscopic systems. Being inspired by such

developments, Schiemann argues that realist interpretations laying claim upon universal validity of quantum mechanics gain new momentum. It remains an open question of whether one is able to reveal quantum phenomena present in the life-world.

The search for deeper possibilities for hermeneutic phenomenology of science than have hitherto been explored characterizes *Robert Crease's* paper. Hermeneutic philosophy of science implies a particular version of realism based upon the interpretative unity of being-in-the-world. Crease specifies "hermeneutic realism" by elaborating on the phenomenological notion of formal indicators. Science's theoretical concepts are serving both a referring-prohibitive and a reversing-transforming function. They get thereby a status of formally indicative concepts (i.e., concepts that make explicit the temporality of the grasp). Crease's approach helps one to understand why hermeneutic realism (and the corresponding philosophy of science) are irreducible to a kind of social constructionism.

II.

Since the philosophers of science (presumably the readers of this issue) are not so familiar with the interpretative-ontological viewpoint about the science-reality relationship, the remainder of the present paper spells out some assumptions that contradict basic views about reality in the analytical tradition.

The distinction between hermeneutic and objectivist understanding of the world will play a leading role in my considerations. In contrast to the objectivist construal of the world, the hermeneutic one does not restrict the world to a reality that is represented by human beings' cognitive abilities. Within the scope of the objectivist construal I include not only views stressing exclusively the role of "passive representations" mediated by semiotic tools, but also views paying in the first place attention to the images that result from intervening through technological instruments. Any kind of "interventionist realism" (in particular, the version supported by Ian Hacking) should admit that the world is out there as a field of possible interventions effectuated by scientific practices. Accordingly, a mind that designs practices is not the place of representing what is going on in the world, but a source of constant intervening by means of which what is out there gets provoked. It is this intervening that provides the resources for singling out natural kinds (in particular, those that are envisioned by science's theoretical entities). Since the world is the manifold of natural kinds, it depends heavily on the interventions carried out by practices of scientific research.¹ The world is constantly under construction—interventionist construction of natural kinds.

Yet despite the dependence on interventions in construing the notion of the world, the assumption that the mind (as a designer of practices) is opposed to the world out there remains intact. Thus, there is in interventionist realism a strong commitment to the primacy of the subject-object cut as it is promulgated by the objectivist construal. The main reason for preserving the Cartesian dualism intact is the assumption that the mind is working behind the interventions in the world. Under this assumption, the hypostatization of the mind is unavoidable. By contrast, the hermeneutic construal of the world asserts that human thought (and the mind) is always already in the reality within the world. In the perspective

¹ On interventionist realism, it is causal efficacy achieved by interventions through experimentation (and explanatory power) that demands realism. In this perspective, science's theoretical objects are understood as tools to intervene in nature, constructing thereby specific natural kinds. Interventionist realism is after a practical basis for realism about theoretical objects. See Hacking (1983, 29).

of hermeneutic philosophy, “the world” is not to be defined by assuming the primacy of the subject-object cut.

The principal characteristic of the hermeneutic construal I should like to stress in a preliminary manner is the commitment to the idea of the transcendence of the world. According to it, human beings with all the cognitive abilities they have are born and thrown in practices. Yet practices are by no means to be regarded as a reality *sui generis*. Any reification of them would mean a justification of a new kind of essentialism. Practices in their interrelatedness do not have an existence independent of human beings’ thrownness in them. The co-dependence of interrelated practices and the thrownness of practitioners is to be thought on the model of circularity that dissolves any sort of determinism in scrutinizing practical existence. Later I will spell out the reasons for treating it as a hermeneutic circularity. It is the existence as being thrown in practices that has a primacy over the existence authenticated through the emancipation of mental activities by means of which objectification becomes possible. By implication, the construction of representations and images is only a process of being involved in particular cognitive practices that are mingled with material practices.

To be sure, this construction sometimes requires taking a reflexive distance from the immediate involvement in practices. However, it does not mean abandoning the world of practices. The cognitive construction of epistemic images rather comes into being by transformations within the practical existence itself. From this perspective, epistemic images are only tools within practical existence. Furthermore, the distinction between cognitive and material practices as it was stressed in the foregoing considerations is solely a conventional one, and does not mark off a philosophically significant demarcation. Human beings are always already operating in the world where material-instrumental, discursive-communicative, symbolic-expressive and cognitive practices are interwoven. Furthermore, practices are organized in co-referential configurations. Being thrown in such configurations amounts to being involved in possibilities for operating within the world. These possibilities are engendered by the very co-referentiality of configurations that characterizes the existence as being thrown in practices. Doubtless, the ways these possibilities come into being are not to be disentangled from practitioners’ volitional, cognitive and emotive peculiarities. However, there is a trans-subjective dimension (a dimension related to the world’s transcendence of subjectivity) characterizing the constant opening up of possibilities within the world—a dimension informed by the interrelatedness of practices. Thus the unity of engendering (opening up), appropriating and actualizing possibilities within the world is to be assigned to the circularity between the totality of co-referential configurations of practices and the thrownness of particular practitioners. In another formulation, the unity is rooted in the interplay of the trans-subjective horizons of the world and the empirical dispositions of practitioners as manifested in their situatedness within the world. In fact, the irreducibility of Heidegger’s Dasein to an empirical-anthropological complexity is due precisely to the non-eliminability of the trans-subjective dimension displayed by the ability to understand the world by appropriating possibilities within the world. Thus considered, trans-subjectivity is not to be confused with inter-subjectivity which is always an empirical phenomenon stemming from actualized possibilities.

Against the background of the foregoing considerations, the following conclusion is to be drawn: Existence as being thrown in the world of practices engenders constantly possibilities for operating within this world which are independent of any conscious devising of possibilities for rational behavior, i.e. possibilities stemming from a mental activity that is planning such a behavior, providing thereby an algorithm of how to choose and appropriate possibilities. The possibilities generated by the interrelatedness of practices are always already projected before

those (human beings) who are involved in the world of practices. Yet at this point again it should be stressed that the possibilities (like practices) do not have an autonomous reality *sui generis*. Any suggestion of a pure presence of possibilities in existence would rehabilitate essentialism in a new form. They are not independent of the ways of their actualization. More specifically, the projection of possibilities by configurations of interrelated practices is always entangled with choosing and actualizing them. Here is another version of the same (hermeneutic) circularity already mentioned.

Being thrown in the world of practices implies that this world transcends each kind of contextual involvement in particular practices (including the kinds of involvement that lead to construction of representations of a world out there). In other words, there is a constant transcendence of the world persisting in all possible involvements in contextual configurations of practices. By implication, each particular kind of being in the world of practices is constantly situated within the horizon of possibilities this practical existence (as a kind of being thrown in the world) can appropriate and actualize. "Situated transcendence" is a key figure in the hermeneutic construal of the world. The epistemic cut between subject and object is also situated in the world that transcends the rational organization (in accordance with epistemological norms, standards, and criteria) of the objective knowledge about thematically given world out there. In other words, each kind of epistemologically (normatively) organized objectifying delimitation of thematic region takes place in the world of practices. Any particular kind of such an objectification is due to the actualization of possibilities projected by a particular interrelatedness of practices (say, normal-scientific practices setting up the routine everydayness of a research community).

The philosophical version of the objectivist construal of the world is known as "metaphysical realism". It states that human thought does not belong to the objective reality (the world) since this reality exists independently of human thought. The world consists of the fixed totality of mind-independent objects. As a consequence, the "mind-dependent objects" exist outside the world.² Metaphysical realism leads to the view that the world must contain "self-identifying objects" since it is the world (and not the particular epistemic subjects) that sorts things into kinds. A metaphysical realism tacitly committed to the assumption of God's Eye point of view does not have resources to explain how the self-identification of the objects takes place in the world.

Notoriously, the view of internal realism is entitled to eliminate this deficiency of metaphysical realism by emphasizing the role the conceptual frameworks (schemes) play in formulating criteria for objectivity and truthfulness. To hold that the way of defining the objectivity of the world is a task that only makes sense to address within the framework of a theory does not amount to admitting that minds and mind-dependent objects are always already in the world. Internal realism does not provide resources for asking the question of how the epistemological relationship comes into being. On a celebrated formulation of internal realism, the semiotic tools expressing representations and images do not intrinsically correspond to objects, independently of how these are employed and by whom. They are rather employed—so

² Notoriously, Putnam (1981, 54-56) stresses that metaphysical realism depends crucially on the view that there is exactly one true and complete description of the world. He relates the possibility of such a description to the "externalist perspective of a God's Eye point of view", opposing it to the perspective of internalist realism. In a tentative manner I should like to point out that the hermeneutic construal of the world does not suggest a restriction or a relativizing of God's Eye point of view. This construal rejects rather the very distinction between internalist and externalist perspective (in Putnam's sense).

Putnam's argument goes—in a particular way by a particular community. Therefore, a class of semiotic tools can correspond to particular objects within the conceptual scheme of the respective community of users. By stressing the priority of the pluralism of conceptual schemes in which the issues of the objectivity of the world can be tackled, one goes on to reify the subject-object cut not as a unique epistemological relationship but as a diversity of divisions between particular frameworks and particular sets of mind-independent objects. The hermeneutic construal of the world opposes in a radical manner any kind of cognitive (and linguistic) relativism by spelling out the view of the transcendence of the world.

The insistence on the transcendence of the world implies that each conceptual framework (and the mind-independent objects relevant to it) is situated in an open horizon of possible modifications and extensions of that framework. Furthermore, these modifications and extensions take place in the world of interrelated practices. The open horizon is informed by the potentially infinite configurations of practices in which the framework might be modified and extended. Regardless of how strong the conceptual framework is epistemologically and semantically codified, it is always already open to possible changes. Internal realism takes for granted the semantic completion of the conceptual schemes which entails that the corresponding classes of objects are fixed. It is this assumption that the realism promulgated by the hermeneutic construal of the world (or, the “hermeneutic realism”) opposes. By elaborating on the transcendence of the world, the hermeneutic construal suggests a radical philosophical strategy for overcoming cognitive (and linguistic) relativism. Putnam is also preoccupied with preventing a collapse of internal realism to a kind of cognitive relativism. In fact, however, he does not provide us with *philosophical* arguments against cognitive relativism. Putnam only appeals to empirical factors in choosing a better conceptual scheme. Internal realism is based on the assumption that by getting access to the way these factors are influencing the choices, one will be able to avoid the destiny of “Anything goes”.

The hermeneutic construal of the world gets rid of the dualism of scheme and content. There is in analytical philosophy a seminal approach to dissolving this dualism as well. Donald Davidson who is the principal champion of this approach makes the case that without such a dualism there is no rationale for holding conceptual relativism. Davidson (1984, 153-198) shows convincingly the wrongness of the idea that different conceptual frameworks cope with reality in importantly different ways. On his main argument, neither the network of basic concepts nor the structure of language is a filter through which knowledge of the world must pass. Though there is an objective world independent of the cognitive schemes about it, the admission of uninterpreted (empirical) content must be repudiated. In this repudiation Davidson brings Quine's criticism of the analytic-synthetic distinction to its extreme point. If one gives up this distinction—so the argument goes—one abandons the conception of meaning that goes with it. Yet the idea of the empirical content is still not rejected. Thus, while giving up the empiricist doctrines of meaningfulness and analyticity one retains the idea of language as embodying a conceptual scheme that refers to empirical content. Accordingly, Davidson stresses that one can figure out a sort of empiricism founded only upon scheme-content dualism. His Tarskian philosophy of language is devised as an alternative to this empiricism.

By getting rid of the “third dogma of empiricism”, one is no longer obliged to assume that there is “something neutral and common that lies outside all schemes.” Davidson suggests that by accepting the view of radical interpretation (as an alternative to the incommensurability thesis as related to the pluralism of conceptual frameworks) one can elaborate both on a workable theory of meaning and an appropriate theory of belief. Through this view one is able to show how communication is possible between adherents to different schemes, without

assuming uninterpreted (empirical) content as a neutral ground. By holding the view of radical interpretation, the Davidsonian anti-empiricist is able to show how all kinds of cognitive and linguistic relativity go by the board. What remains is an unmediated touch with familiar objects. To sum up, the way of overcoming the dualism between scheme and content via radical interpretation depends crucially on the plausibility of those assumptions which are promoting Davidson's vision of "an unmediated touch with familiar objects".

In discarding the theory of a "translation manual", Davidson (1984, 125-146) tries to develop radical interpretation in a theory for which the evidence can be stated without essential use of linguistic concepts like meaning, interpretation, and synonymy.³ What is wrong in the theory of radical interpretation from a hermeneutic point of view is the reduction of language to interpretable sentences related (in the sense of correspondence theory of truth) to "sequences of objects". From the hermeneutic viewpoint, discourse (as an interrelatedness of discursive practices) has a priority (*pace* Saussure) over language.⁴ Furthermore, discursive practices are not to be detached from the world as a totality of interrelated practices.

What Davidson's theory forgets to take into consideration is the fact that all radical interpretation of particular sentences takes place in this world that is always understood and interpreted. With regard to the understanding and interpretation of possibilities projected by practices radical interpretation is only a secondary process. As I will make the case, the interpretative appropriation of such possibilities stipulates ontological conditions for having a being in the world of the constitution of meaning whereas radical interpretation is only a specific cognitive process. Davidson's theory ignores the fact that radical interpretation as such a process occurs on a horizon of projected possibilities of an ongoing discursive-practical articulation within the world. His assumptions that each utterance has its own interpretation, and truth is a single property attachable to utterances, are acceptable from a semantic point of view that recasts in linguistic terms the objectivist construal of the world. However, they are unacceptable from a viewpoint guided by the hermeneutic construal of the world.

The hermeneutic construal of the world does not lead to social constructivism. In fact, social constructivism does not violate the tenets of the objectivist construal of the world. By claiming that all scientific knowledge is socially constructed, one shifts the place of the ultimate objective reality—from the world of scientific objects to the world of social processes. The position

³ Davidson admits that the important undefined semantic notion in his theory is that of satisfaction which relates sentences to infinite sequences of objects. Each sequence belongs to the range of the variables of the object language. Obviously, this claim expresses a linguistic version of the objectivist construal of the world (or, a version in terms of an analytical philosophy of language). Not by accident, Davidson appeals to an ontology of sequences and the objects ordered by the sequences. The whole theory of radical interpretation is built upon the model of Tarski's theory of truth. The object language is meant to be a linguistic representation of the world as objective reality. Davidson's theory proceeds in a completely reductionist manner. It specifies, on the one hand, the conditions under which a sequence of objects satisfies a complex sentence on the basis of satisfaction of simpler sentences, and on the other, the conditions under which the simplest sentences are satisfied. When the interpretation of natural languages is at stake the issue of satisfaction becomes much more complicated for these languages are replete with indexical features.

⁴ Heidegger (1962, 203-210) develops this view in Section 34 of *Being and Time* where he is preoccupied with elaborating on the existential concept of grammar. In analyzing this concept, one can draw the contours of a "Heideggerian existential-hermeneutic linguistics". In the perspective of the latter, discursive articulation is grounded upon a hermeneutic circularity between discursive genres (horizons) and particular speech acts, where the whole circularity gets specified in the very process of articulation.

of objectivist essentialism is advocated now by appealing to the reality of (say) processes of negotiations or networks of interactions in which the natural world has a non-existent role in the construction of science's cognitive body. Relativizing the epistemic rationality of science as championed by a strong program's symmetry principle is not a remedy against essentialism since in doing so one does not overcome the essentialism about the primacy of the subject-object cut. Finally, social constructivists speak often about "interpretative flexibility". Yet they refer this expression only to the adjustment of scientific results to particular social milieus. For them, interpretation is no more than an epiphenomenon of social negotiations in the production of knowledge.

There is also another feature of social constructivism (in particular, the constructivist programs of cognitive sociology of science) that is in conflict with the hermeneutic construal of the world. Strangely enough, these programs are still committed to a sharp distinction between theory and practice. Very often cognitive sociologists are inclined to explain conceptual innovations in science by placing discrepancies between theory, instrumentation, and experimental practice in particular social contexts. In such cases, they treat theory as a body of knowledge that is somehow pre-given to scientific practices. Although cognitive sociologists insist on the social construction of theoretical knowledge, their approach is still succumbed to the knowledge-practice dichotomy. Treating theoretical knowledge as something that exists alongside the interrelatedness of scientific practices is a procedure for saving the primacy of a particular version of the subject-object cut, while discarding not only representationalist epistemology but the normative-epistemological theories of scientific rationality as well. The search for the ways in which the world as a horizon of meaning-constituting practices gets objectified and the epistemological relationship takes shape, goes beyond the scenarios of investigation devised by social constructivism.

Let me now repeat from a slightly different perspective claims I have already formulated. The hermeneutic construal of the world makes the question of how thought can reach out and grasp what is out there (i.e. "external") a meaningless question. On this construal, the world is not a reality out there, but a totality in which all minds operating with representations are entangled. The construction of representations is an outcome of practices within the world. Thus, the hermeneutic understanding of the world implies that there is no world (however its objectivity might be determined from an epistemological point of view) that is to be isolated from the totality of being-in-the-world which is ontologically prior to the relation between subject and object. The hermeneutic construal of the world entails that mind (or mentality, or consciousness, or cognitive abilities) is always already within the world. Regardless of the framework in which one is addressing the issues of representation (including its special form consisting in the construction of images of the world through instrumental interventions) the epistemic subject predicated on the ability to represent is generated by events taking place in the world as changing configurations of practices. From the viewpoint of hermeneutic philosophy, there is no "entity" that is beyond, behind or outside the world. By implication, the world is always already transcendent with regard to those events which provoke the reflexive disentangling of a subject from the interrelatedness of practices who in so doing gets involved in a process of objectifying the world. (Here again the reflexive disentangling is not an isolation from the world of practices since it takes shape within specific configurations of practices.)

On a corollary to the hermeneutic construal of the world, the interrelatedness of practices (as organized in changing configurations) has an ontological priority over the particular practices. More specifically, each particular practice gets its meaning always situationally, i.e. through a configuration of practices with which it is related in a certain situation. The very act

of an isolated description of a particular practice implies a reification of that practice. Such a description gets its possibility on the condition that one is no longer taking into consideration the horizontality of the world of practices.

The world of practices in which practitioners are thrown is also the world in which the ways of carrying out scientific research take place. There is no kind of scientific objectification that might occur out of a configuration of practices. The most sophisticated theoretical constructions (e.g., adjusting a mathematical formalism to procedures of getting empirical data) are outcomes of discursive practices. This is why it is non sequitur from a hermeneutic point of view to say that the world of practices is opposed to a theoretical world. “Hermeneutic realism” (to make use again of an expression introduced by Patrick Heelan [1983]) rejects any kind of ontological autonomy of the theoretical world (the world of scientific theories, the Popperian “third world”, etc.).⁵ There is no theoretical world that is constituted outside of a horizon of possibilities projected by an interrelatedness of scientific practices. Furthermore, the particular mode of being-in-a-theoretical-world (say, the mode of existence of a scientific community) does not amount to being determined by a conceptual framework since the latter is always situated in practices whose dynamics might revise it. To reiterate, the open horizon of interrelated practices transcends each and every conceptual framework, exposing it thereby to possible extensions and modifications.

The mode of being-in-a-theoretical-world is rather the way of being involved in an ongoing interrelatedness of “theoretical practices” like eliminating ad-hoc hypotheses, constructing data models for interpreting a system of partial differential equations, carrying out an experiment for verifying the validity of a theoretical prediction, modifying a mathematical formalism for the sake of achieving better conceptual homogeneity of a theory, repeating an experiment with the purpose of integrating a new explanatory scenario in an established theory. The mode of existence within horizons of theoretical possibilities takes on the form of an instrumental dealing with things that are ready-to-hand for those who are involved in the interrelatedness of theoretical practices.

In the preceding discussion I made the case that the interrelatedness of practices projects its being upon horizons of possibilities. In trying to elucidate this claim further, let me concentrate on an ambiguity hermeneutic philosophy brings into play. It is an ambiguity about the notion of the world as it was discussed so far. On the one hand, the notion is associated with the interrelatedness of practices; on the other—with the horizon of possibilities. In fact, the totality of interrelated practices and the choices of projected possibilities are not two parallel processes. To overthrow the ambiguity requires reformulating the circularity between interrelatedness of practices and practitioners’ thrownness in terms of a hermeneutic circularity.

To begin with, the notion of being-in-the-world unites in one structure two attributive ingredients of the existence distinguished by the constitution of meaning: the open horizontality of the world of practices and the intrinsic articulation of the reality within the world achieved by practitioners’ appropriation and actualization of possibilities. Being at once trans-subjective horizons of possibilities and an ongoing practical articulation of meaningful objects, the world

⁵ Yet the rejection of this autonomy does not imply a dismissal of science’s cognitive autonomy. Quite the contrary, hermeneutic realism is a doctrine that provides one with stronger arguments for advocating this autonomy than the arguments suggested by scientific realists. On hermeneutic realism, scientific research constitutes its cognitive autonomy by projecting specific horizons of possibilities, creating thereby a specific mode of being-in-the-world.

is first and foremost an interpretative openness for a continuous constitution of meaning. Those who are involved in the interrelated practices understand the world with regard to the possibilities they can appropriate and actualize through their involvement. Yet the more possibilities they appropriate, the more new configurations of practices are activated which project new horizons of open possibilities. Since in the hermeneutic construal of the world “understanding of the world” is tantamount to the “world as a horizon of understanding”, the ongoing articulation of the reality within the world prompts an ongoing extension of the horizon of understanding. It is with respect to this extension that the talk of the world as an interpretative openness makes sense in the first place. At the same time, the extending horizon of understanding and the continuous articulation of meaningful objects within the interrelatedness of practices are obviously building a kind of hermeneutic circularity—there is interplay between the whole of projected possibilities and each particular outcome of the articulation. This hermeneutic circularity makes explicit the interconnection between the open horizontality of practices and practitioners’ thrownness.

The world as the totality of configured practices and the world as open horizons of possibilities are interconnected within that hermeneutic circularity which characterizes the modes of being-in-the-world (including scientific research as a particular mode). Being thrown in the milieu of interrelated practices entails an ongoing articulation of the world (the horizon of understanding) through choices of possibilities that are projected by the very interrelatedness of practices. Neither the possibilities nor the choices are determined by a hidden structure or invariant essence of the world. The world is a horizon of understanding since those who are “ecstatically involved” in the interrelatedness of practices (e.g., a scientific community involved in the research practices of normal science) are able to understand themselves with respect to those projected possibilities they can appropriate and actualize. This is a kind of “existential understanding” that precedes hermeneutically each kind of elaborated understanding as a cognitive procedure. (To put it in a tentative manner, the existential understanding of the world is to be attributed to the trans-subjectivity of being in the world.⁶)

The unity of the world as an interrelatedness of practices and the world as a horizon of projected possibilities reveals a potentiality-for-being. On the ontology advanced by the hermeneutic construal of the world, the transcendence of the world leaves room only for being that is always already projected upon possibilities. In other words, the world has a being only in its ongoing interpretative articulation through situational appropriation of possibilities. The world is transcendent in the way in which it is both projected as an open horizon of understanding and interpretatively open to further articulation.

⁶ With regard to the existential status of understanding and interpretation, there is a direct way of elucidating the very idea of hermeneutic phenomenology. Being always involved in projected horizons of possibilities (horizons of understanding the world as possibilities that can be actualized) and articulating constantly the world through interpretative appropriation of possibilities are empirically universal features of human existence—all cultural practices are fore-structured by understanding and interpretation of the world. By implication, all cultural practices take place in a world that is always already understood and interpreted. Yet if one is willing more than the simple observation of the empirical universality of understanding and interpretation, then one is in need of a proof based on transcendental arguments. Heidegger’s analytic of existence aims at forging such arguments. The transcendental proof of the empirical universality makes understanding and interpretation existentially universal features, providing conditions for the possibility of the constitution of meaning within the world.

Here again I have to stress a basic difference between the hermeneutic potentiality-for-being and a view that gained currency in analytical philosophy—Kripke's (1980) theory of possible worlds. From the Kripkean standpoint, each situation in which the agents employ modal idioms, subjunctive conditionals, and other non-truth-functional modes of speech is a "possible world". Thus considered, the possible worlds are some set of interconnected (in certain cases, mutually exclusive) conversational situations. What is presupposed in this formulation is a sentential picture of language rooted in the objectivist construal. All semantic and epistemological versions of the possible worlds conception take for granted that language provides in the first place sentential descriptions of the objective reality out there. By contrast, the starting point of the hermeneutic talk about the potentiality-for-being is the horizontality of language (as informed by the interrelatedness of discursive practices). Consequently, before having modal descriptions of the world (possible worlds), we are amidst the possibilities of world's discursive articulation (as a particular form of practical articulation). In the perspective of the hermeneutic construal, the projected possibilities as open horizons of understanding have nothing to do with modal idioms and subjunctive conditionals involved in linguistic descriptions.

The hermeneutic construal of the world is developed chiefly (but by no means only) in the tradition of phenomenology. As a phenomenological conception it is distinguished by a kind of constitutional analysis (i.e. an analysis of the constitution of meaning). At stake in this analysis is the nexus of understanding and interpretation. According to hermeneutic realism, there is nothing in the world that can exist without being constituted meaningfully within the world of interrelated practices. What kind of constitutional analysis is to be associated with that claim?

The constitutional analysis of meaning (on a pre-epistemological level) is a distinctive feature of all kinds of phenomenology. As a particular paradigm of such analysis, hermeneutic phenomenology has a transcendental and an ontological dimension. The constitution of meaning is not located in the acts of consciousness (in Husserl's sense) that make the world meaningful. All possible acts of consciousness take place always already within the world. In other words, the world is not co-relatively given to the intentional life of consciousness but embraces all possible intentional acts, making thereby the transcendental ego a superfluous point of departure of meaning constitution. In paying predominant attention to the trans-subjective character of the constitution of meaning, let me address that specificity of the hermeneutic model of constitutional analysis.

The constitution of meaning is a continuous process whereas the construction of knowledge is always expressed by discrete structures (statements, hypotheses, conceptual structures, models, theories). It is the former process that serves the function of fore-structuring the epistemic structures. This is an assumption shared both by Husserlian and Heideggerian phenomenology. Nevertheless the paradigms of constitutional analysis suggested by these phenomenological doctrines are essentially different since they are approaching the phenomenon of transcendence in completely different manners.

For Husserl (2001), the world is an immanent transcendence within the intentional life of consciousness (the continuity of consciousness' intentional acts). Because the constitution of meaning is distinguished by a pre-epistemological status, the world cannot be conceived of as something opposed to the intentionality of consciousness. The constitution of meaning takes place entirely on the territory of the intentional life, and the world that is made constantly meaningful is immanent to this life. Husserl is no longer committed to the metaphysical presumption that beyond the intentional life there is a reality that is a pure non-attainable presence. There is no (non-meaningful) reality that is irrelevant to the agenda of constitutional

analysis. The world is as transcendent reality directly given to the consciousness' intentionality. This is why this reality comes into being as manifolds of meaningful objects.

The idea of immanent transcendence implies that in the constitution of meaning the world cannot be cut off from the consciousness. The world as an immanent transcendence gets this status against the background of the idea of the correlative *a priori* that presupposes a pre-epistemic subject—the transcendental ego. By replacing the intentional life of consciousness with the “facticity” of existence, the immanent transcendence of the world becomes a situated transcendence within the world. There is no more need of a hylemorphic construal of the world. Heidegger ascribes to Dasein an ecstatic character—it is essentially outside itself being able at the same time to come back to itself and remain in itself. This ecstatic character of being-in-the-world eliminates the need of singling out a correlative *a priori* and hypostatizing a transcendental ego. In attributing the constitution of meaning to the way of being situated within the world of practices that is transcendent, one gets rid of that ego who bears within her the world as a meaningful totality and who, in turn, is necessarily presupposed by this totality.

On the level of existential ontology (i.e. the level of being's disclosedness within the constitution of meaning) there is an ecstatic transcendence of Dasein within the world of practices and things ready-to-hand that corresponds to the transcendence of the world. A particular aspect of Dasein's trans-subjectivity and its irreducibility to isolated subjectivity consists in the fact that it is dispersed over the (potentially infinite) possible settings of dealing with things ready-to-hand in which possibilities get actualized. On the paradigm of constitutional analysis put forward by hermeneutic phenomenology, the “ecstatic-transcendence-structure of Dasein” states transcendental conditions for having empirical existence distinguished by the constitution of meaning.

To the trans-subjective horizons associated with the interrelatedness of practices belongs the aforementioned existential understanding of the world that is indispensable for those who are situated in changing configurations of practices. In most of the cases in which hermeneutic phenomenology proceeds as a paradigm of constitutional analysis of meaning, the term “understanding” is tantamount to the term “horizon”. I already mentioned the manner in which this paradigm operates with the notion of horizon of understanding—understanding of the world as open horizons of possibilities. Yet alongside this formulation, understanding connotes also the way of how one understands oneself in accordance with the possibilities of dealing with those entities which one has ready to hand in one's thrownness in settings of instrumental-practical comportment. Being always involved in choosing, appropriating and actualizing possibilities, the practitioners are able in each situation to understand themselves with regard to what they are able to appropriate. (From a radically existentialist point of view, those who are thrown in the world are identical with the choices of possibilities they make.)

Being thrown in the world and having a being projected upon possibilities are ontological characteristics of that being-in-the-world in which the practitioners constantly create their situatedness within the world by articulating the world. According to this formulation, the articulation is the outcome of the interpretative appropriation of possibilities in different settings of instrumental-practical comportment. Now, it becomes clear why the nexus of understanding and interpretation informs a hermeneutic version of constitutional analysis. To make explicit this nexus requires reflecting upon the interpretative-articulative process through which practitioners are in ecstatic unity with what is ready-to-hand. This is a transcendental reflection upon the transcendence of the world of interrelated practices in which practitioners are in such a manner thrown that they create constantly their situatedness through ongoing appropriation of possibilities of how to deal with what is ready-to-hand. Manipulating interpretatively the

instrumental readiness-to-hand is at the same time a pragmatic appropriation of the possibilities of how to make more functional the equipments through which one recognizes a situation of one's being-in-the-world.

The claim that the articulation of meaning within trans-subjective horizons amounts to appropriating possibilities through interpretation assumes that the configurations of practices are predicated on having interpretative potentiality. If these practices are more sophisticated, which is the case with scientific practices then they can be treated as readable technologies. In this case, the situatedness within an interrelatedness of scientific practices gets created by employing readable technologies for interpretative manipulation of primary (immediately ready-to-hand) research objects. Due to this manipulation the articulation of a domain of scientific research takes gradually shape. Furthermore, each configuration of scientific practices informs a regime of how to read the things that are ready-to-hand within the configuration. There is always a cognitive outcome produced by such a configuration—reports on observations or experiments, construction of diagrams, comparative tables of measurements, analytical techniques for selecting control parameters in investigating dynamic behaviour, etc. To be sure, these outcomes are always semantically integrated in larger theoretical frameworks. Yet all situational cognitive outcomes as well as the very process of their semantic integration are fore-structured by the interrelatedness of practices. The situatedness within the latter implies that each cognitive structure of scientific research is interpretatively fore-structured.

Let me conclude these introductory considerations by stressing briefly the ontological aspect of the hermeneutic version of constitutional analysis. Since there is no essence behind or beyond the interrelatedness of practices that might determine the choice of possibilities, the being in the world of interrelated practices gets revealed by the interpretative understanding that articulates the meaning within this world (or the meaningfulness of the world). There is no being of existence but the being of constituting meaning within the world. For the interpretative understanding is always an appropriation of possibilities, the interrelatedness of practices reveals by necessity not a static being but a being within the process of reading through practices' readable technologies. The transcendental reflection upon the transcendence of the world involves necessarily an ontological moment that refers to the whole revealed in the situated transcendence of the reading process that articulates the reality within the world. In its irreducibility to its components (reading process, interrelatedness of practices, projection of possibilities, articulation within the world) the whole revealed by means of the hermeneutic version of constitutional analysis has a character of being. On a corollary to this analysis, all types of "essentialist ontology" (like the ontology of the physical objects in space-time continuum, the ontology of biological morphogenesis, the ontology of the structures of social interactions, the ontology of the basic cultural patterns, the ontology of the semiotic systems or semiosphere, etc.) are tacitly presupposing the primacy of the existential ontology of the meaningful world that always already transcends each contextual configuration of human practices.

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