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Özgür AKTOK
Dr. Öğr. Üyesi | Assit. Prof. Dr.
İzmir Kâtip Çelebi Üniversitesi, Sosyal ve Beşerî Bilimler Fakültesi, Felsefe Bölümü, İzmir, TR
Izmir Kâtip Celebi University, Faculty Of Humanities and Social Sciences, Department Of Philosophy, Izmir, TR
ORCID: 0000-0003-3730-334X
ozgur.aktok@ikc.edu.tr

On the Inevitable Failure of Social Constructionism: The Transcendental Self-Contradiction of an Empty Concept[1]

Abstract: The question of how sociality is related to the scientific conception of physical reality brings up a philosophical tension between the conception of science as an *autonomous* enterprise and the conception of science as *one of the various cultural products* of society. Basically, there have been two approaches in sociology of science to resolve this tension. On the one side, we encounter *classical sociology of science*, which defends the autonomy of science while denying any constitutive role to sociality in the formation of the content of scientific theories. On the other side, there is *social constructionism*, which criticizes traditional sociology of science and reduces the content of scientific theories simply to *a function of social structures*; to something which is *caused*, *produced* or *realized directly* by social phenomena. This paper aims to show that although social constructionism has a point in its critique of the classical conception of science, this point is never formulated and expressed in a sufficient conceptual rigor and clarity. It will be demonstrated that the basic concept of "social construction" as encountered in the key texts from social constructionism is actually an *empty concept* because it is *transcendentally self-contradictory*. Consequently, as the paper argues, the *emptiness of the concept* of construction leads to an inability in making a distinction between real cases of social construction –if there are any- and cases of politically coercive, brute social interference with science.

Key Words: Ontology, Social constructionism, Sociology of Science, Nature, Social Philosophy.

[1] This paper is produced ouf of Chapter II of my PhD thesis. This paper version is formulated only as a *negative critique* of social constructionism. Therefore, it has the minimalist goal of *diagnosing* and *formulating* the problem with the concept of "social construction" without offering a solution to it. The original chapter in the thesis, however, works out a possible solution by offering a Heideggerian, phenomenological reduction of the concept of "construction" to the Kantian concept of "constitution", as well as through a development of the concept of *ontoparadigm*. See Aktok 2012.

Sosyal İnşacılığın Kaçınılmaz Başarısızlığı Üzerine: Boş Bir Kavramın Transandantal Öz-Çelişkisi

Öz: Sosyalliğin, fiziksel gerçekliğin bilimsel kavranışı ile nasıl bir ilişki içinde olduğu sorusu, felsefi bir gerilimi de kendisiyle birlikte gündeme getirir. Bu gerilim, epistemik *özerkliğe* sahip bir etkinlik olarak bilim kavramı ile, toplumun içindeki *çeşitli kültürel ürünlerden birisi* olarak bilim kavramı arasında belirir. Bilim sosyolojisinde bu gerilimi çözmek için, temel olarak, iki farklı yaklaşım ortaya çıkmıştır. Bir tarafta, sosyalliğin bilim teorilerinin içeriğinin oluşmasında herhangi bir kurucu rolü olduğu fikrini reddederek bilimin özerkliğini savunan *klasik bilim sosyolojisi* bulunur. Diğeri tarafta ise, klasik bilim sosyolojisini eleştiren ve bilim teorilerinin içeriğini sosyal yapıların yalnızca bir işlevine indirgeyen *sosyal inşacılık* akımı karşımıza çıkar. Sosyal inşacılık, teorilerin içeriğini, sosyal fenomenlerce doğrudan doğruya neden olunan, üretilen, gerçekleştirilen bir şey olarak kavrar. Böylelikle sosyal inşacılık, bilimin sosyal karakteri uğruna onun özerkliğinden vazgeçmeyi önerir. Bu makalenin amacı, sosyal inşacılığın klasik bilim anlayışını eleştirmekte haklı bir noktaya parmak basmakla birlikte, bu haklı noktanın hiç bir zaman yeterli kavramsal titizlik ve açıklık ile ortaya konmamış olduğunu göstermektir. Makalede, sosyal inşacılığa ait temel kavram olan "sosyal inşa"nın *transandantal olarak kendiyle çelişik* olması nedeniyle *boş bir kavram* olduğu ortaya konmaktadır. Makalenin savladığı üzere, "inşa" kavramının boş olması, gerçek sosyal inşa vakaları (eğer gerçekten böyle bir inşa söz konusu ise) ile bilime politik olarak baskıyla sosyal müdahale etme vakaları arasında bir ayrım yapamamasına neden olmaktadır.
Anahtar Kelimeler: Sosyal inşacılık, Bilim sosyolojisi, Ontoloji, Doğa, Sosyal felsefe.

Introduction

It wouldn't be an exaggeration to suggest that the second half of the 20th century has been an age of *constructions*, as well as *de-constructions* in the history of humanities. A considerable number of "postmodernly" motivated approaches gained an increasing popularity with the rise of similar claims like that *knowledge, science, sexual, racial identities, physical reality*, etc. are various kinds of "social construction". However, before this term became so operative in the humanities, it had already won the status of a popular metaphor as early as in the first half of the 20th century: Bertrand Russell avoided existential claims about entities and wanted to replace them with "logical constructions" (Russell 1918: 155). Following Russell, in his masterpiece *Der Logische Aufbau der Welt*, Rudolf Carnap introduced the "revolutionary" project of creating a totally new, artificial language by

constructing it upon a perfectly logical structure. (Carnap 1928).[2] This ambitious construction project, which eventually failed, was supposed to require an *elimination* of all words that are *not verifiable* through sense experience and are condemned thereby completely to be devoid of meaning.[3] Surprisingly, the decline of logical positivism had not led to a parallel fade-out of the metaphor of "construction" from the intellectual repertoire; constructions simply ceased to be "logical" and survived in a different form that became dominant step by step: especially in the second half of the 20th century, the term became more and more popular in the titles of works from various disciplines and it was applied to almost all regions of phenomena in broader and richer contexts.[4] In 1991, Donna Haraway described how decisive the social constructionist argumentation had become "for all forms of knowledge claims, most certainly and especially scientific ones" (Haraway 1991: 184). Nothing could escape from the range of "social construction" because almost everything -even laws of nature or mathematical/logical truths- was announced now to be mere "social constructs".

What was the motive of attraction behind this new fashion in the humanities? If something is *socially constructed*, then this seems to imply that *it could be otherwise*. In other words, our world is "real" the way it is given to us only because once we –human beings as social animals- made it into a reality through

[2] This line of thought should be traced back to the early Wittgenstein's *Tractatus*, who provided the basic philosophical motivation and source for the early 20th century analytic philosophy arising in Vienna Circle (*Wiener Kreis*). See Tractatus: 1922.

[3] In this famous work, Carnap radicalized Bertrand Russel's project of reconstructing daily language through the discovery of a deeper logical structure hidden behind the surface of language. "Aufbau" means in English "construction". Interestingly, this term is the antonym of the concept "Ab-bau", which Heidegger uses to characterize the phenomenological method of "de-struction". I think that the title of Carnap's crucial work is *mistranslated* as "The Logical Structure of the World" into English: the English term "structure" does not give the original meaning of "Aufbau", which emphasizes both the dynamic process of "constructing" and the final product at the same time, rather than referring to a stable state in the sense of "structure". For the English translation of the work see Carnap 2003.

[4] To mention one famous name from philosophy, who used this word explicitly, is Nelson Goodman. He named himself as "constructionalist". See Goodman, N. (1987). *Ways of Worlmaking*. Indinapolis: Hackett Press, p. 1. Goodman made there the provocative ontological claim that there are various ways of creating our world and all of these ways are equally justified.

constructing it in a certain way. In this "constructionist" picture of contingency, then, reality turns out to lose the painful and omnipotent domination over our will, which it had once just in virtue of its being inflexibly "real". But now, when we come to learn that things have certain characteristics because *we constructed them once in a certain way*, we do not have to accept reality as absolutely given. We can *change* it and *free* ourselves from it just by de-constructing as well as re-constructing it. In his book, *The Social Construction of What?* Ian Hacking points to this "contingency" characteristic of the social constructionist argumentation by giving a general structure of its way of thinking (Hacking 2003: 6):

> Social constructionist about X tends to hold that:
>
> (1) X need not have existed or need not be at all as it is. X, or X as it is at present, is not determined by the nature of things, it is not inevitable.
>
> Very often they go further, and urge that:
>
> (2) X is quite bad as it is.
>
> (3) We would be much better off if X were done away with, or at least radically transformed.

As can be seen, the attraction of social constructionism stems at least partly from the idea that we can change the world just by re-constructing the "so called" facts in an *alternative* way that avoids the defects of former ways of social construction. In this picture, facts are not as brute as they seem to us. This awareness itself could be a starting point for finding better solutions to the current social, political, cultural problems. For example, according to a social constructionist about gender, women suffer from patriarchal system *not only* because they are born *biologically* as women, but more importantly than that, because the seemingly purely scientific biology of masculinity and femininity is *a social construction* and this construction itself *serves* patriarchy. If this social construction serving patriarchy can be overcome by a reinterpretation of it, which would mean a considerable change of an obstinate *belief system* embedded in the

practice of social norms, then patriarchy, too, would lose its social power over women and society.

Social constructionism is most commonly criticized on the ground of *its anti-realist* and *relativist* implications. If not only social reality, but even physical reality is reduced to a mere social construct, this seems to imply that physical nature does not have an independent, objective reality of its own, and its "whatness" is *relative* to the framework of a contingent social construction, which *could be otherwise*. Epistemological as well as ontological relativism of social constructionism, which is seen as undermining the autonomy and authority of rigorous sciences as a rational, objective, reliable source of universal knowledge, has always become a main target of objections (Schwandt 2003; Burr 2003; Sismondo 1993; Craib 1997). As a result of its relativist approach, social constructionism is accused for disregarding the achievements provided by physical sciences by leveling them down to mere social constructs among all other cultural products. It has been the main concern of these objections against social constructionism that sciences lose their traditional epistemic legitimacy against other narratives and turn out to be only an arbitrary *option* among others like religion, ideology, arts, rhetorics (Sokal & Bricmont 1998; Koertge 1998). Based on this general framework of critique, a group of objections attacks social constructionism for its negligence of the influence of physical, biological, psychological facts about human nature on social behavior. Accordingly, social and cultural factors are so overemphasized in social constructionism that even innate factors concerning human nature are considered not to play a *causal* role in the so called "construction" of human identity, gender, race, etc.: biological/medical/psychological facts about human beings are either ignored, or downplayed and distorted (Bury 1986; Barkow & Tooby 1992; Slingerland 2008; Pinker 2016).

As this paper aims to show, most of these critiques focus on the *outcomes* of a more basic and deeper defect with social constructionism. In fact, these charges against social constructionism, namely, charges of *anti-realism/relativism*, *the disrespect for science* and *the negligence of nature* (either physical in general or more specifically human nature) are only *secondary symptoms* that stem from a more serious problem with this constructionist perspective. As this paper maintains, this problem with social constructionism is the fact that its main concept of "social construction" is an empty concept[5], and moreover, its emptiness arises from its *transcendentally self-contradictory* characteristic. Finally, this paper proclaims that the philosophical emptiness of the term of "construction" leads to a fatal inability in making a fair distinction between *real cases* of social construction (if there are any) and other ways of social interfering/interaction with science, which are politically coercive. In such a picture, almost every "social interference" with science that is *explicitly not constructive*, even the explicitly most violent one, turns out to mean the same thing as "social construction". This semantic indefiniteness resulting from the transcendentally self-contradictory characteristic of the empty concept of "social construction" makes the whole technical terminology of "social construction" supererogatory. Before formulating the problem of "transcendental self-contradiction" concerning social constructionism in detail in part IV, first, I will sketch out the background in which it emerges as a critique of traditional sociology of science and point to the underlying motives behind this critique in part I, and then, I will offer a positive evaluation of social constructionism in part II. In the next step, I will deal with the question what I mean by "transcendental self-contradiction" and how it relates to the emptiness of a concept in general in part III. In the conclusion part, I will present a purely conceptual analysis aiming to show that the concept of social construction is

[5] By "empty concept" I mean a concept which does not refer to anything, or a concept which refers to a *pseudo-phenomenon*. In part IV of the paper, I will clatify further what I mean by the term "empty concept" and how conceptual emptiness arises as a result of a transcendental self-contradiction.

transcendentally self-contradictory. But before starting to discuss the background of the birth of social constructionism in part I, there are two introductory remarks to be made, which might clarify the purpose of this text for the reader more specifically.

First, this paper does not intend to examine social constructionism in a very general and broad sense as encountered in different disciplines on various subject matters. It has rather the goal to deal only with *the origin of social constructionism*, emerging especially within the discussions carried out in the context of *sociology of science*, which gave birth to the popularization of the idea of social construction in the humanities. A debate initiated by a group of anthropologists and sociologists became apparent especially from the 1970's on as a critique of *classical sociology of science.* These social scientists employed the concept of "social construction" as the key concept for their critique. This paper restricts its scope to this group of scholars.[6] Second, this paper selectively focuses on a group of *basic texts* belonging to the forerunners in the social constructionist movement while leaving the question aside whether the problem formulated here could be addressed properly and/or solved in later discussions on social constructionism in the 21th century. This question is excluded from this paper *not because* it is unimportant, but only because the main goal of this paper is restricted to *the diagnosis* of a *basic problem* with the concept of "construction" as *introduced originally* in the first key texts of the social constructionist tradition. This specific concentration will enable us to question the *original meaning* of the concept of "social construction". However, while paying attention to the diagnosis and formulation of the basic philosophical problem with the concept of "construction", which I call "the emptiness of a concept due to its transcendentally self-contradictory characteristic", I will not work out a concrete solution in this paper. Such a solution is offered in detail in my PhD thesis through a *Heideggerian phenomenological reduction* of the concept of

[6] In the rest of the paper, I will employ the concept of "social constructionism" in this narrower and more specific sense.

"construction" to the Kantian concept of "constitution" (Aktok 2012: 28-61). Consequently, as the next step of this solution, the thesis coins the term *ontoparadigm* developed out as a result of a reinterpretation of Heidegger's conception of *Aletheia* in the context of his lecture on Plato's *Allegory of the Cave* (Aktok 2012: 62-112). Accordingly, it is suggested that social structures cannot construct either "nature itself" or the "content of scientific theories on nature" directly through an *actual causation/production/realization* (construction) process, as the social constructionists declare, but only through a *constitution* of them in terms of their conditions of possibility, *indirectly* via *ontoparadigms* embodied in the whole network of social, political, legal, cultural norms of social structures. In a Kantian sense, ontoparadigms function as hidden historically a priori and normative ontological structures that constitute social and natural phenomena as well as the theoretical content of scientific theories (Aktok: 113-135). In contrast to the thesis, this paper, limits its task to a *negative critique* of social constructionism because working out the *phenomenological solution* offered in the thesis in sufficient detail requires a separate work. In addition, it should be taken into consideration that the main concern of this paper has nothing to do directly with the problems concerning the field of "epistemology"; "sociology of knowledge"; or problems over "methodology" in "philosophy of science". Its direct goal is rather to uncover and problematize either the implicitly or explicitly made *ontological commitments* concerning society and nature behind the social constructionist approach in the context of the debates over how science relates to social phenomena and nature itself.

I. The Birth of Social Constructionism as a Critique of Traditional Sociology of Science

The question of how sociality is related to physical reality brings up a *tension* between the conception of science as an *autonomous* epistemic enterprise

and the conception of science as *one* of the various *cultural* products of society *vulnerable* to social determination: if scientific theories are some sort of cultural product, then how does this *producedness* relate to the scientific conception of physical reality? Basically, there have been two prevailing approaches in sociology of science offered to resolve this tension between autonomy and sociality. On the one side, there are classical sociologists like Mannheim, Merton, Polanyi, Bernal, who radically defend the autonomy of science. Science is supposed to picture the physical world as an external objective reality as accurately as possible. In this picture, *ideally*, sociality cannot/should not interfere with the internal dynamics of scientific activity. This autonomy is not even a problematized theme in their works; it is rather something implicitly *presupposed*. In other words, sociality *ends* where science as a narrative *begins* to describe and explain what *nature is*. Classical sociologists believe that there is an undoubted autonomy of science under ideal social conditions. Epistemic norms are based on purely *rational* and *inner* – logical and linguistic- dynamics of science, which cannot be contaminated with social factors that are considered to be irrelevant to the production of scientific knowledge. Therefore, social interference is conceived only as a *negative violation* of those inner and *non-social* principles of science. Such a deviation is seen merely as a problem with the proper *application* and *realization* of the inner epistemic principles of science rather than as a problem affecting their ideally autonomous status. Thus, the only reasonable solution to such a problem is conceived as providing the ideal social conditions, under which a scientist can work as a free, autonomous individual.

Micheal Polanyi is one of the most important representatives of the classical school of sociology of science. According to his liberalist conception of science, a liberal society provides the ideal institutional norms, which produces an elitist social sphere belonging to the specialized scientists; the ideal epistemic conditions are realized through what Polanyi calls “joint appraisal of an intellectual domain” (Polanyi, 1958). In *Sociology of Knowledge*, another prominent classical sociologist

of science, Robert King Merton, makes a clear distinction between (1) science as a set of characteristic methods, (2) the body of knowledge acquired by the application of these methods, (3) a set of cultural values governing scientific activities and (4) a combination of these three definitions. As a traditional sociologist of science, he declares that he is interested exclusively in (3) (Merton 1973: 268). In this way, Merton distinguishes the content and methodology of scientific theories strictly from sociology of science as a social activity. A third key figure in classical sociology of science, John Desmond Bernal presents a *socialist* and *universalist* conception of science as a social institution. In his well-known book *The Social Function of Science*, socialist society is offered as the ideal social context for the realization of ideal science (Bernal 1943). These are among the best known examples representing the views of classical sociology of science.

This traditional picture of science as an ideal activity immune to social interference has been seriously criticized by the social constructionist tradition, which is popularized by scholars like David Bloor, Barry Barnes, Bruno Latour, Steve Woolgar, Steven Shapin, Simon Schaffer. Unlike the classical sociologists of science, who settle the tension between sociality and autonomy by establishing a sharp opposition between the content of theories and their social context, social constructionists try to overcome this tension by reducing the content to *a function of social structures*; something which is *caused* and *produced* by social phenomena directly. Consequently, it seems that they give up the autonomous character in favor of the social character of science.

Bloor's *Knowledge and Social Imagery* published first in 1976 can be seen as one of the first key texts in the social constructionist critique of the traditional sociology of science. In this book, Bloor introduces "the Strong Programme in the sociology of knowledge." The main point of this project is that there should be *no limits* to the sociological studies of phenomena including the very content and nature of scientific knowledge: nothing can escape from sociology as an impossible

material of inquiry; not even the content of scientific theories that are traditionally conceived as non-social/non-sociological. Bloor even accuses classical sociologists of science like Ben-David, Degre, Merton and Stark for voluntarily limiting their scope of inquiry. He characterizes this attitude as "a betrayal to their disciplinary standpoint" (Bloor 1996: 3). Although Bloor does not reject the existence of causal factors other than the social ones, in the formation of theories, the content of theories that is traditionally seen as non-social, is radically *socialized* through his work.

In their path-breaking work *Laboratory Life: The Construction of Scientific Facts,* Latour and Woolgar seem to go even further than Bloor in their sociological/anthropological enterprise. Bloor makes an *epistemological* claim when he says that scientific *knowledge* is socially constructed, whereas Latour and Woolgar, propose an explicitly *ontological* claim when they argue that *scientific reality* itself is nothing but a *laboratory production*. They explain this idea by using Bachelard's concept "phenomenotechnique" (Latour & Woolgar 1979: 64). Latour and Woolgar propose that scientific facts should be seen as the final products of a long material production process, which they call "literary inscription". A scientific fact, which is established in a published scientific paper, undergoes a long construction process before it deserves its status of scientific facticity. This long journey starts at a stage of "chaos" until it reaches the final stage of "order", where a candidate finally reaches its legitimate status for being counted as a real "scientific fact". Accordingly, we cannot make sense of "what a scientific fact is" unless we consider it in its connection to the whole process of this "social construction" happening between the very *first stages* of *chaos*, which includes collecting and recording data by writing and reading, and the *last stage*, when a fact appears on the intellectual scene of scientific community as a respectful account published in a paper (Latour & Woolgar 1979: 45).

Shapin and Schaffer, two other remarkable names from the constructionist tradition, aim at understanding the *whatness*, namely, the nature of experiments in relation to their *performance* in social context with respect to their "production" of "matters of fact". In order to do this, they contrast Boyle's and Hobbes's rival conceptions of natural philosophy in their work *Leviathan and Air Pump*, since they believe that such a contrast could decipher certain implicit interpretations, presuppositions with respect to "what experiment means," which are taken for granted without being questioned by the historians of science belonging to the "experimental culture" (Schapin & Schaffer 1985). As can be seen clearly, Shapin and Schaffer's goal is *ontologically* not less ambitious than that of Latour and Woolgar: they do not talk simply about *our conception of scientific facts*, but directly *facts themselves*: according to them, "matters of fact" are social products. Again, this is explicitly an ontological claim.

II. A Positive Evaluation of Social Constructionism: Its Correct Diagnosis of the Interwovenness of Science and Social Context in the World of Late Capitalism

It seems that the social constructionist tradition *rightly criticizes* the assumption that nature as narrated to us by science is simply a neutral and objective representation of reality, which is ideally free from the influence of social factors. The internalism defended by traditional sociology presupposes a questionable existence of a purely ontical/epistemic sphere for science, uncontaminated by sociality. The highly complex nature and intensity of the social relations of modern, or perhaps, *postmodern* societies, makes it today even harder to talk about clear-cut distinctions between pure spheres of reality. Therefore, the claim of the classical sociologists that there exists a sphere of purely epistemic/ontical as opposed to purely social reality seems to be untenable and too idealist for our contemporary world. The traditional conceptual contrasts

between science vs. technology; science vs. economical structure seem to be hardly applicable to the current situation where science is interwoven so intensely with other social phenomena.

This transformation process in the relation between science and society is examined meticulously by Henry Etzkowitz and Andrew Webster. In their substantial study of the relationship between science and property rights, "Science as Intellectual Property", they present a new picture of science, scientific and academic institutions, in which the traditional conception of science undergoes a great transformation. The main dynamic of this transformation is that "science and property, formerly independent and even opposed concepts referring to distinctively different kinds of activities and social spheres, have been made contingent upon each other through the concept of intellectual property rights" (Etzkowitz & Webster 1955: 481). Remember Merton's traditional account: in contrast to this new picture, in Merton's picture of classical, traditional sociology, *disinterestedness* and *communism* principles give us the traditional and idealist conception of science, which is sharply opposed to economical activities. There are four "institutional imperatives", which Merton throughout his whole work presents as the four basic norms that should guide scientific activity: (a) universalism, (b) communism, (c) disinterestedness, (d) organized skepticism (Merton 1973). In Merton's conception, science is considered as an *autonomous* activity, which is not directly related to the economic sphere, and it has only a mediated, indirect impact upon the economic growth. However, with what Etzkowitz & Webster call "the capitalization of knowledge," unlike in Merton's picture, scientific knowledge is being transformed into an economic activity. Etzkowitz point to the fact that in our current world, the *mediation* and *distinction* between scientific practice and economic growth disappear, and it becomes more and more difficult to distinguish science itself from the economic structure of society. Today, science appears not only as a "part" of the dynamics of economy, but also the *locomotive* of economic growth.

Etzkowitz & Webster provide us with sound and very convincing arguments. It seems that there is sufficient evidence indicating that science and social structures are now so intensely and closely interwoven that social constructionists have *a point* in their critique of the classical sociology of science, which should be taken seriously. The transformation Etzkowitz & Webster describes in detail can be interpreted rightly not merely as an *epistemological*, but more importantly, also as an *ontological transformation* of science, because it concerns not only epistemological or sociological issues surrounding scientific activity, but deeper than that, it concerns the very way in which science can be *defined* and *exist* as science in late capitalist societies. In this context, the virtue of the social constructionist tradition can be interpreted as making us aware that sociality cannot be left aside as a merely contextual structure, or a convenient habitat, where ideal science is performed. In other words, sociality already has, and must have *something* to do constructive with our conception of nature and the relation between science and sociality requires a new perspective based on an evaluation of the latest developments in capitalist societies.

III. Transcendental Self-Contradiction as a Reason for the Emptiness of a Concept

As already pointed out in the introduction, although social constructionists have a point in their critique of the traditional conception of science and make us realize that sociality has *something* to do with the content of scientific theories, this "something" is never worked out properly by the social constructionists themselves. Social constructionists call this relation between sociality and scientific reality/theory "construction" without elaborating on this concept and giving us a precise idea about its sense/content. However, behind the ambiguity of this term, there is a *defect* to be uncovered and this defect in the content of the concept of "social construction" leads to its inability to refer to a definite

phenomenon in the world. This inability renders it "empty". Before diagnosing this defect, what I mean by "empty concept" should be clarified in detail.

To make a distinction between the *content* of a concept and its *object/referent* is crucial to explain what an empty concept is. Gottlob Frege's famous distinction between "sense" (Sinn) and "reference" (Bedeutung), which constitute two complementary, but different aspects in his analysis of "meaning", offers us a helpful model for such a distinction. (Frege, 1892) Accordingly, the sense of a concept is its content whereas the object this content refers to is its reference. For example, the evening star named *Hesperus* and the morning star named *Phosphorus* are the same object, *Venus*. Thus, the concept of "the evening star" and the concept of "the morning star" refer to one and the same object. In other words, they are *co-referential* concepts. However, their sense (content) is different although they pick up the same object/referent in the world: obviously, "the morning star" and "the evening star" are two different ways of conceptualizing one and the same planet. The sense of a concept might be seen as *a way* in which its referent is reached, but it might differ. Sometimes, a concept which has *sense* can yield us no object; it might refer to nothing. In this case, the concept is empty because its content does not reach and grasp an object. In the light of Frege's distinction, "empty concept" is –as is widely agreed upon in philosophy of language- as a concept with *no referent*.

It should be noted that the reason why a concept has no referent might result from two reasons: One reason might be that the content of the concept has *no corresponding* object in the world. In this case, the concept might be perfectly clear, well-defined, but still not able to pick out any object from the world only because there is no corresponding object falling under it. For example, if some noises in my apartment awakens me in the night and result in my formation of the belief that "there is a thief in my apartment", "the thief in my (Özgür's) apartment at time T" appears here as a concept. But suppose that these noises are made by a

cat that entered my apartment through my open window without my taking notice of it. In this case and at that moment, "the thief in my apartment" is an *empty concept* because there is no corresponding object as intended: there is no thief in my apartment right now, but only a cat, which makes those sounds. In this case, the concept of "the thief in my (Özgür's) apartment at time T" is empty.

However, there is a second possible way for a concept to be empty: the reason why a concept is empty might also result from the fact that the *content* of the concept is so *flawed* that it is *logically* inapplicable to anything. In this case, the emptiness of the concept does not result from the fact that there is no corresponding object, but it results directly from its ill-formed content that fails to satisfy the minimum requirements to be meaningful. Self-contradictory concepts like "married bachelor" can be given as an example of this second sort of emptiness of concepts. The concept of "married bachelor" is an empty concept, namely, it has no referent, not because there is no corresponding object in the universe, but because *there can't be*. By definition, a bachelor as an unmarried man, cannot be married, and "married bachelor" means, "married (and) unmarried man", which is an explicit logical contradiction. It is a fact that there is no corresponding object to be picked out from the universe that is a "married bachelor", but this empirical fact is not the genuine reason that makes the concept empty; this fact is only a consequence of the following and more determinative reason: married bachelors are not even logically possible objects encounterable in our universe, and this impossibility is the genuine reason, why "married bachelor" is an empty concept. I will show in the following pages that this is very similar to the kind of emptiness, which the concept of "social construction" has.

Of course, it might be objected that "social construction" does not imply a *logical contradiction* and that it cannot be seen under the same category of "married bachelors". It is right that "social" and "construction" are two words, which are logically compatible. There is nothing against the laws of logic directly in

the concept of "social construction". However, as I will show in the *conclusion* part, the way "social construction" is used in the key social constructionist texts turns their combination into a self-contradiction. It is right that this contradiction is *not a logical* one: the concept of "social construction" is rather *transcendentally self-contradictory*, in the sense that, if it is used in the absolutist sense of social constructionists, it destroys its own *condition of possibility* and turns out to be self-refuting. Logical contradiction and self-contradiction appears here indirectly and conditionally, depending on a certain way –which I will call the absolutist sense- of employing the concept of social construction. I use the term of "transcendental" in the following minimalist Kantian sense: *if X is transcendental to Y, then X is the condition of the possibility of Y.*

Then, why and how is the concept of "social construction" transcendentally self-contradictory? Before answering this question in the conclusion part, first, we have examine the absolutist use of the concept of "social construction" in part IV in the basic texts of social constructionism to be able to see in the conclusion part, why this absolute sense of social constructionism leads to a transcendental self-contradiction in the concept.

IV. A Negative Evaluation of Social Constructionism: The Absolute Sense of Social Construction

Interpreted as fairly as possible, social constructionists in general use "construction" as synonyms of "causation", "determination" or "actual production." Bloor, for example, uses "construction" and "causation" explicitly as synonyms. Bloor's sociological approach employs four basic principles: sociological explanation should be *causal*, *impartial*, *symetrical* and *reflexive.* According to him, the sociologist should study the causal relations between the content of scientific theories and social phenomena. (Bloor 1996: 7). Latour and Woolgar use the term "construction" in the –almost Hegelian- sense of *realization* (Latour & Woolgar

1979: 45-64). They point to the process in which scientific ideas are turned into material reality, when they talk on construction: "Such a reality, which Bachelard terms the "phenomeno-technique," takes on the appearance of a phenomenon by virtue of its construction through material techniques". Similarly, Shapin and Schaffer, too, talk about *the production of "matters of fact"* through three technologies. These three technologies are (1) *material*, (2) *literary*, and (3) *social* (Schapin & Schaffer 1985). Here the *production* of matters of fact appears as social construction. In this context, "construction" seems to be equated with "production" and "materialization".

At this point, one might think that my previous claim that "social construction" is an empty concept is already falsified because if we examine the social constructionist texts we see that they use the term in a group of senses like *causation*, *actual production*, *realization*, *materialization* etc. How can we claim that this concept is empty? Is it not, on the contrary, a concept rich in meaning?

Unfortunately, giving some synonyms of a term is far away from working it out in a philosophically sufficient conceptual clarity, and such a rigorous conceptual work requires a meticulous examination of the implications of a certain conceptualization when one is faced with the study of real cases. To use "construction" as a synonym of "causation" or realization" is nothing but begging the philosophical question of "what it means for something to be socially constructed?" Explaining away "construction" by synonyms, are not less problematic than using the concept itself without providing a definition, and this multiplication of words does not save the concept from being *empty*, worse, it makes it even *emptier*. Of course, no empty concept is "completely" empty in the sense of being devoid of all meaning. Even the concept of "married bachelor" is not empty in this absolute sense. Otherwise, it would be only a linguistic sign in complete darkness, like a purely *syntactic form* from a completely alien language. "Social construction", too, is not absolutely empty, but can we claim that we

understand what we really mean when we say "X is socially constructed" more than what we really mean when we say "there are married bachelors"? Consequently, it is not surprising that using "social construction" in the sense of "social production", "social causation", or "social actualization" remains as a poor attempt that does not help us to catch a further insight into the meaning of "social construction". The darkness and mystery surrounding the concept simply *grows* and we are more confused now. Moreover, if the social constructionist can use synonyms like "causation" instead of "construction", then why does s/he coin this jargon of "social construction" in the first place? S/he could have preferred "causation", "production", "realization", "materialization", etc. at the very beginning. What is the theoretical contribution of the term "social construction" to the scientific enterprise of social constructionism?

Up until to this point, if I have given the reader the wrong impression that I am against polysemy in philosophy, who is obsessed with conceptual clarity and who tries to reduce all philosophical activity to the art of making strict and stable definitions, then let me correct it: I am fully aware how valuable it is for philosophy to uncover the polysemy and richness of meaning hidden in words and to make use of metaphors and other language games, because many times, philosophical creativity demands from us to force the limits of the ordinary use of language. There are times when a philosopher has to force the limits of logic as well as semantics so that s/he can convey an idea where "pure definitions" are not enough. However, polysemy in thought requires even more rigor and care than the rigor and care needed when conceptual clarity and making definitions is the demand of philosophy from us. Polysemy enters the scene when definitions are not sufficient to narrate a creative and original idea that forces the boundaries of already existing language; not in a context where there is already a poverty in definitions although they are needed; not where low quality and superficiality in thought prevails.

If we forget for one moment our semantic curiosity about the concept itself, which might seem to be a useless philosophical obsession for conceptual clarity, or even as a philosophical arrogance, to some social scientists, and check out to see how well social constructionism deals with concrete cases, there too, we find nothing that surprises or illuminates us: since there is no such direct and brute interaction between natural reality and its social context, which can be called "social construction" (in the sense of causation, production, realization, actualization, etc.), the concept doesn't work at all when applied to make sense of concrete cases. Remember one of the many examples from the history of pseudo-science; the case of *Lysenkoism* in Stalin's Soviet Union. As is known, Lysenkoism was a pseudo-science in the Soviet Russia, which was supported by the Stalin regime because it was suitable to the ideological doctrine of that time. It appeared as a campaign in the Soviet Union against Darwinian *genetics* which was condemned to be "bourgeois science" in favor of Lamarckian views. Lysenko's approach to agriculture, which denies genetic factors in favor of environmental factors, was popularized as good science from the middle of the 1930s to the 1960s. Consequently, Lysenkoism collapsed, leading to disastrous consequences for the Soviet agriculture.[7] This is a perfect example in which social forces fail to give a "constructive" shape to the content of Darwinian scientific theory because nature resists the politically coercive imposition of "Lamarckian views" upon it and does not obey an arbitrary social/ideological construction.

History is full of such counterexamples against the social constructionist view because –I repeat- there is no such direct and brute interaction between natural reality and its social context, which can be described as "social construction", and the concept doesn't work when applied to make sense of concrete cases. However, if I am right in my claim that "social construction" is *transcendentally self-contradictory*, then even the diagnosis that "the concept does

[7] For a detailed account of Lysenkoism in Soviet Russia and its implications for social constructionism see Graham 2016.

not work when applied to make sense of concrete cases" turns out to be *redundant* and even *foolish* because it implies that there is the *empirical possibility* for a transcendentally self-contradictory concept to work in our empirical world and refer to some cases. Actually we are too naïve when we try to evaluate the success of social constructionism by checking out how well its concept works in the empirical world when faced with concrete cases. Such a naïve expectation can be rational only as much as the feeling for the need to make observations in our world in order to falsify the empirical existence of married bachelors or round squares. Of course, the concept of social construction does not work, has not worked, and will never work. How could this be otherwise? This is not because the concept does not have an empirically corresponding object (in the sense of real cases of social construction), but only because we cannot expect from a *transcendental impossibility* to present us as an example of a social case, which is an *empirical possibility*: if "social construction" is transcendentally self-contradictory, then this means that it stands for a transcendental impossibility for our empirical world. The existence or non-existence of married bachelors in our world cannot and need not to be decided on the ground of an empirical examination; they do not exist as a result of their logical impossibility and we know this by the laws of logic, not through empirical evidence. Similarly, if I am right in my claim that social construction -as used in the absolutist sense of social constructionists- is a transcendentally self-contradictory concept, then whether there is something like social construction of scientific theories or nature cannot and need not to be decided on the ground of an examination of social or natural phenomena empirically; it can be decided by applying to *semantics* and *laws of logic*.

Is it an empirical coincidence that we cannot find even one simple positive example in the social constructionist texts, which shows us convincingly how a successful scientific theory is socially constructed, or is this situation an indication of a transcendental impossibility? It seems to me that the second option is true and that is what I promise to show in the conclusion part of this paper. For example,

Bloor offers a case study in which he intends to apply his theoretical account to a particular situation. Disappointingly, he examines *two theories from philosophy of science* rather than choosing a case directly from *natural science itself*. He compares Popper's and Kuhn's philosophy of science, which shows how two different conceptions of science differ from one another (Bloor 1996, Chapter IV). However, the difference in the conception of science from two different philosophers is *not necessarily* a proof for the difference in the content of actual cases of the formation of *scientific theories themselves*. This is far away from being a case study that shows how nature or scientific theories are socially constructed. Similarly, Shapin and Schaffer's work *Leviathan and Air Pump*, either, fail to show how the content of scientific theories concerning physical nature relates to Hobbes' and Boyle's personal political convictions: a meticulous investigation of Shapin and Schaffer's text shows that they do not relate the content of actual scientific theories to the content of political ideas in a sufficient and convincing detail (Schapin & Schaffer 1985).

Do we need to be surprised by *the abundance of counterexamples* that seem to falsify the social constructionist claim that scientific theories are socially constructed in the sense that nature itself is a completely *obedient and passive material* of construction, which does not play any active role in the construction process? Or do we need to be surprised by *the absence of any positive examples* that seem to verify the social constructionist claim that scientific facts are actually socially constructed? Not at all. We do not need to be surprised either at the abundance of counterexamples or at the absence of positive examples because the basic concept of social constructionism is empirically neither verifiable, nor falsifiable: the illness lies rather in the very heart of the concept since its birth from the first time on it is coined as an artificial term. Thus, the fact that "*nature is not a completely passive material waiting there to take any form that human species is willing to impose upon it*" is not an empirical fact to be discovered by the study of cases concerning sociology of science; it is rather a transcendental fact whose

knowledge can be gained by a purely conceptual analysis of the concept of "construction". It is a fact we can know by semantics and logic. In the conclusion part, I will deal with this transcendental fact and show how the concept of social construction contradicts itself in a transcendental sense.

Conclusion

The emptiness of the concept of social construction, which results from its transcendental self-contradictory characteristic, is the genuine reason why the most basic social constructionist texts cannot offer us explicit criteria to distinguish between politically coercive cases of social interference with the content of scientific theories and cases of successful social construction in which scientific theories really survive as legitimate bodies of knowledge while being socially constructed. Since the borders of the concept are so unclear, it is inevitable that it fails to refer to and explain a definite social *phenomenon* in our world. It is not capable in terms of its semantic content to distinguish the so-called "social construction" from the rest of other (social or physical) phenomena. If a concept is not distinguishable from its counter-concepts, then how can we expect it to refer to anything in our world? Reference is possible only when the content of a concept is not ill-formed to such an extreme degree.

Now, we are at a point, where we can finally understand the transcendental nature of this innate problem with the concept; how and why "social construction" in its absolute sense causes it to be transcendentally self-contradictory. In order to do this, all what we need, is a *purely conceptual analysis* of the concept of "construction" as I offer in the following paragraph. Out of this analysis, the transcendental condition for the meaningfulness of the concept of "social construction" will show itself as violated by the absolutist use of the concept of "social construction" by the social constructionist texts.

If one claims that there is something like social construction, then s/he also must presuppose that there should be "something" *out there* as the *material of this construction*. This "something out there" is included analytically among one of the necessary semantic conditions for the meaningfulness of the term "construction". Even if "construction" is used in a metaphorical sense, this metaphorical sense still forces us to ask: if we encounter nature (or nature as the sum of natural facts) as *always* and *already* constructed, then must there also not be nature *prior* to this construction? Otherwise, construction would create nature out of *nothing*, which would make "construction" a synonym of the concept of "creation" in an almost religious sense; an idea hardly acceptable even by the most radical social constructionist. Of course, it is *impossible* for us to have an access to this prior, pure state of nature at its pre-constructed state because whenever we experience *nature as nature*, it is too late for us not to be caught and conditioned by the "already-constructedness" of nature. We are always *too late* to catch a glimpse into the "pure nature beyond all acts of social conceptualization". In other words, one is *always and already* conditioned by a socially inherited conceptual framework that cannot be abandoned and this conceptual framework forces one to see nature only in and through certain ways of construction. But from the fact that we have no access to nature prior to social construction, *it does not follow* that nature does not exist independently of social construction. In fact, from the fact that we have no access to nature prior to social construction, it follows as a transcendental necessity that the concept of construction can make sense only on the condition that we presuppose there is something prior to it, and this "prior something" cannot be reduced to construction. Even though human species and all other alien species -if there are any- that are capable of forming social relations perished from the universe forever, "nature" as this prior "pure material of social construction" would remain out there as a *sort* of *Kantian* "thing in itself" (*Ding an sich*). At least reason forces us to posit the existence of such a nature in the minimalist sense if we want to make sense of the concept we use to describe the relation between

sociality and nature. We cannot describe or know this "nature-in-itself", but it *must be presupposed* as the pure material of construction, if we do not want "construction" -or any other concept we use to describe the relation between sociality and nature- to be an *empty* concept. As we have seen, the key social constructionist texts examined in this paper do not even ask this crucial question about the role of nature. However, it is clearly a *transcendental necessity* in the Kantian sense to posit the existence of a nature-in-itself as the *condition of possibility of construction*. Otherwise, "construction" appears as a *transcendentally self-contradictory* concept in the sense that it rejects its own condition of possibility: *if there is nothing prior to construction, then nothing can be constructed, and no construction can take place at all.* This means that once "construction" as a term in its unrestricted and arbitrarily broad sense is proposed, which swallows up *not only the concept of nature*, but even "nature itself", it turns out to destroy its own condition of possibility of semantic legitimacy. In this way, "social construction" in its absolute sense, functions only as a refutation of its own ground that is the condition of its possibility and thus, turns out to be self-contradictory.

It is a fact that a concept with sound (either logically or transcendentally not ill-formed) content does not necessarily have a referent. If we define a concept with sound content as a "clear concept", then we can say: a clear concept might either have a corresponding object, and if not, then it is a clear, but empty concept. This is the case with my example about the thief from part III: when I mistakenly have the belief that "there is thief in my apartment" although there isn't one, then my concept is perfectly clear (which means that the content has no logical or transcendental self-contradiction), but there is no object in the universe that corresponds to my concept. In this context, we can see clearly the huge difference between the type of the emptiness of the concept of "the thief in my apartment" and the type of the emptiness of the concept of "social construction". When I use the concept of "the thief in my apartment", I perfectly understand what I mean, but mistakenly intend to refer to a corresponding object. There is no *transcendental or*

logical error here, but only an *empirical* one. The problem with the concept of "social construction" is not that the employers of the terminology are empirically *mistaken* about its referent and that they use it in an *empirically* wrong way. As the very *inventors* of an artificial concept, neither they, not their readers really *understand* what the mean by "social construction" because the concept is transcendentally self-refuting. Its self-refuting characteristic prevents it from functioning in a consistent way and picking out a definite set of social phenomena through a *distinctive* reference capacity. Thus, it lacks the capacity of referring to something in a meaningful way. For gaining such a reference capacity, the concept of "construction" needs something which is its "other"; something which is prior to construction, namely, *a transcendentally limiting condition*, so that it can be a *de-finite* concept with a *de-finable* content with semantic borders. This is the only way in which it can refer to something, no matter whether its referent actually would exist or not. As I have tried to show throughout this paper, "social construction" as a main concept fails to meet this minimum transcendental requirement in its absolute use in the basic texts of social constructionism.

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