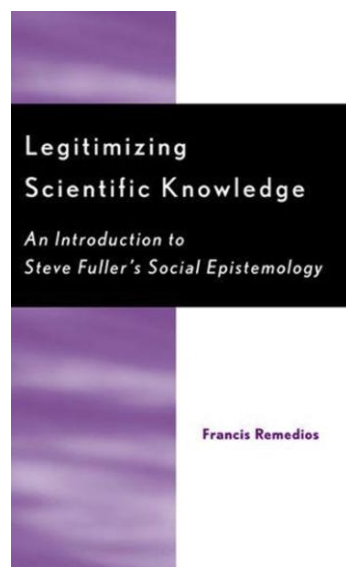


DISCUSSION

In Focus:

Francis Remedios, *Legitimizing Scientific Knowledge: An Introduction to Steve Fuller's Social Epistemology*, Lexington Books, 2003, 143 pp. ISBN 9780739106679



SOCIAL PRIMACY, EPISTEMIC PRIMACY AND THE COGNITIVE AUTHORITY OF SCIENCE

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Since when does one need to question the cognitive authority of science? Is it not enough that science feeds our social hope for a better future? Wait a minute, this is a political (and, to a certain extent, demagogical) aspect. Is it not scientific knowledge the revering kingdom of objectivity and certainty? However, why should the cognitive authority of science be related to the idea of legitimation? Isn't science and scientific activity beyond any legitimating approach? For a modern epistemologist these are ridiculous and false problems that led the investigator astray from the pursuit of the truth. Well, things are far more nuanced in contemporary epistemology, mainly due to constructivism, postmodern epistemology and feminist epistemology. Francis Remedios approaches this theme

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in the perspective of contemporary epistemology theories, emphasizing the main defining aspects of Steve Fuller's social epistemology against an impressive body of knowledge pertaining to the correlation social primacy – epistemic primacy. For a “doxophobic”, as Steve Fuller terms himself, and in which category we can include Francis Remedios and the postmodern thinker Joseph Rouse whose ideas are commented in contrast to those defended by S. Fuller (as well, as contemporary thinkers who assess the main tendencies in contemporary epistemic thought, such as Wittgenstein-II, Th. Kuhn, Feyerabend, K. Popper, Richard Rorty, P. Hoyningen-Huene, L. Laudan and many others), we believe that the very nomination of a topic as “ridiculous” might be an indication that it covers topics, themes and aspects, which not only need investigation, but also (which) are very likely to create a “movement” or a “paradigmatic change” in epistemological thought.

The book of Francis Remedios investigates the legitimation of scientific knowledge – a very important topic of contemporary epistemology that addresses the political and social dimensions of epistemology. This theme of reflection has as a main “interlocutor” Steve Fuller, who sustains the political legitimation of scientific knowledge and rationality (termed briefly “legitimation_p”) and engages theoretical perspectives proposed as well by other thinkers with various perspectives on the sociality of scientific activity. This type of (socio-political) legitimation of scientific knowledge has an alternative in the (“narrow”) epistemological legitimation of scientific knowledge and rationality, indicated as “legitimation_E” and advocated, for instance, by Joseph Rouse. And before we move forward to more detailed aspects, we should state clearly that a political legitimation of the scientific knowledge does not exclude altogether the epistemological legitimation (although, it excludes the “Whiggish” epistemological legitimation, see, for instance, the works of P. Hoyningen-Huene), considering more interesting to evaluate the epistemological “event” as reality, led in society, under specific circumstances and not within a socio-political vacuum. In our discussion of a few pages for this valuable epistemic investigation conducted by Francis Remedios we are not going to offer either a complete image or a critical commentary pertaining to every aspect approached by this author highlighting the area of social epistemology, rather emphasizing a sum of crucial and intriguing notions and directions of research, from our standpoint: “the legitimation project” and what do imply key notions such as “social epistemology,” “social primacy,” “cognitive authority,” “politically oriented social epistemology” and the “embodied knowledge”.

Steve Fuller considers this approach of the theme of social epistemology through the idea of legitimation crisis of scientific knowledge valid and assesses the insightfulness of Francis Remedios' approach. The investigation studies social epistemology as naturalistic epistemology at Fuller, thus discussing „the legitimation project” (or, “the legitimation of the standards of the scientific

rationality” – p. 11), via a conception of naturalism, rejecting foundationalism and the epistemic circle, within an exploration concerning the minimal and maximal social epistemology, the embodiment of knowledge, the role of normativity in epistemology, in the interest-oriented social epistemology and the difference between the latter and political epistemology.

Scientific enterprise is empirically (and theoretically) oriented toward a goal assumed under specific conditions of activity and “production”, under certain organizational realities and regulations which are political in their nature.

The legitimation of scientific knowledge and rationality brings to the fore an interpretation of the cognitive authority of science. “Politically oriented social epistemology” is at Fuller a phrase indicating that “scientific knowledge can be accounted for by politics” and that “political factors such as knowledge policy and a constitution play a primary role in the legitimation of scientific knowledge” (as S. Fuller shows in the Introduction).

Francis Remedios defends the idea of the legitimation project, and presents Fuller’s maximal (normatively constituted group) theory as an answer to the demands of this project, extremely important in ascertaining cognitive authority: normatively constituted groups make social epistemology “social”. Other thinkers such as Kitcher argue that the epistemic community makes his social epistemology “social,” from the perspective of a minimal (individualist) theory. (p. 10)

Fuller’s answer to social epistemology’s fundamental question is to organize knowledge production processes, and “to ascertain how best to cognitively divide labour to attain certain goals”. Fuller formulates the central question of social epistemology as a question concerning how we hypothetically ought to organize cognitive pursuits. (p. 20-21)

Does Steve Fuller identify knowledge with the products of scientific practice? Not really, although he emphasizes the idea that we should realize that larger normative rather than individual (heroic) knowers (also, knowers which are not to be held as representative for all and any member of their scientific community) are important in the activity (“affair”) of knowledge (accounted for, eventually, by the products of scientific practice).

Francis Remedios emphasizes in this respect that S. Fuller is preoccupied with the organization of the “pursuit of knowledge be organized, given that under normal circumstances knowledge is pursued by many human beings, each working on a more or less well-defined body of knowledge and each equipped with roughly the same imperfect cognitive capacities, albeit with varying degrees of access to one another’s activities?” (p. 20). The Legitimation Project is thus, sustained by a normative project. Within this project, the final goal of social epistemology is to “map out the structure of cognitive authority among the disciplines as a means of providing for their research” endeavour that involves “knowledge policy studies” (“feasibility studies”) and, more importantly, a social naturalistic theory of science to design a rational knowledge policy leading to knowledge production. The

rational knowledge policy should imply the self-conscious reorganization and administration of scientific disciplines for democratically chosen goals (which goals are socio-political, aren't they?). These goals might be governed by convenience and hedonism, but are to be met through rationally regulated scientific means. In our view, but in relation to S. Fuller's perspective, at worse, science may be part of a normative project that regulates the scientific achievement of a democratically chosen (at worse) conjectural or even petty goal and, at best, it is going to meet the (relevant) goal and improve science in the process. Science should investigate specific "inference schemas" ("logics of justification that have persuasive force in the public exchange of information") to use in a superior rational organization of the pursuit of knowledge. "Whether these schemas and scripts constitute the structure of belief formation in all rational individuals is immaterial to their social import, which rests solely on members of the relevant cognitive community recognizing that such rationally displayed information commands their consideration. Consequently, philosophers can frequently slip into committing the fallacy of division by assuming that a feature of the knowledge enterprise that appears primarily at the level of social interaction is, ipso facto, reproduced (by some means or other) as a feature of the minds of the individuals engaged in that interaction. For Fuller, it is an exaggeration to consider the individual "a microcosm of the entire social order" (this would be the ultimate, totalitarian socialization), since there can be no perfect "uniformity in the way individuals are socialized" and "the impact of interactions with other people" should be better assessed. Francis Remedios shows that aside the defining view on knowledge as justified true belief, Fuller holds knowledge to be materially embodied within society. In a naturalist view, he states that the outcomes of causal interactions between the knowers and the (confusing) social world, are products (first, epistemic judgments, then embodied knowledge) induced by this uneasy relation, many of them, products in a material form. Fuller's view is that embodied knowledge is a product, a commodity that costs time, effort, and money to produce. Rouse notes that for Fuller knowledge is multiply embodied: "in specific texts, utterances, performances, and artifacts; in the cognitive capacities of persons; in their institutions and their norms, structures, and pathways of communication; in distributions of power, resources, and effective access to the settings in which knowledge is made and made authoritative; and in the apparatus and other materials comprising experimental or observational systems". (p. 16)

The "normal circumstances" for the pursuit of knowledge are ultimately idealized at Fuller, since the "normal" is actually "social", with all its complexities. And Fuller is not the only naturalistic philosopher considering the scientific methods means for achieving social goals; David Bloor, Barry Barnes, Steve Shapin, and David Edge – Fr. Remedios shows – indicate social factors, for example, interests and aims, specific to the social realm that fulfil a "primary causal role" in the formation and explanation of the scientific judgment (belief), sustaining a

descriptive naturalistic metascience (successor to “traditional philosophy of science”, or “Heir to the Subject That Used to Be Called Philosophy,” in D. Bloor’s last chapter of his book on Wittgenstein), where “scientific rationality is found in the social context of scientists”. Opposing this Strong-view Social Project are the rationalist philosophers of science, Larry Laudan and Ernan McMullin, who consider the rational explanation the only path toward scientific success and the social explanation the path toward scientific failure. (p. 29) Explaining to McMullin the reasons why the epistemic factors are social factors, Remedios indicates that Bloor interrogates the social role of the “patterns of training, conventions of use, and the precise historical circumstances of their employment” in the structure of the epistemic factors, thus cancelling the validity of the dichotomy between the epistemic and nonepistemic factors in his theory. (p. 33) As a consequence naturalistic philosophers do not accept “epistemic primacy” either (for dichotomies such as truth and falsity, rationality and irrationality, cognitive and noncognitive, etc. or of “the rationalist’s divisions in the content of belief”). For Bloor, “our inductive propensities” are functioning through their social nature, and even more, *the rational and the social are overlapping and that one cannot be understood without the other*. (p. 33) Thus, in his book titled *Wittgenstein: A Social Theory of Knowledge* (1983), Bloor interprets Wittgenstein as a social epistemologist, provided his view of objectivity and rationality, and rule, “as forms of external compulsion” and which are formed socially by socialization, with epistemic functions.

As an interesting aspect, Fuller understands by the (thin) notion of “scientist” a trained technical or epistemic professional reflexive on her practices (and not a rational utility maximize), which is extremely close (in our view) to the notion of Thomas Kuhn.

In Remedios’ view, Kuhn’s theory in SSR indicates cultural and social considerations intrinsic to scientific practice (Barry Barnes), and becoming a scientist is a particular (historical) socialization process. The lifespan of the cultural and knowledge forms (theories) are dependent on “mechanisms of socialization and knowledge transmission, procedures for displaying the range of accepted meanings and representations, methods of ratifying acceptable innovations and giving them the stamp of legitimacy. When there is a continuing form of culture there must be sources of cognitive authority and control. Kuhn was initially almost alone among historians in giving serious attention to these features of science”. (p. 39) For Barnes, Remedios shows, the “fundamental norms of scientific behaviour prove to be culturally and historically contingent”. Culture and history-sensitive socialization of standards and precedents becomes central in scientific behaviour (and we would say, in scientific activity). “Scientific standards themselves are part of a specific form of culture; authority and control are essential to maintain a sense of the reasonableness of the specific form. Thus, if Kuhn is correct, science should be amenable to sociological study in fundamentally the same way as any other

form of knowledge or culture". (B. Barnes, 1982, 9, apud Remedios, p. 39) Then, Remedios follows: "Kuhn establishes that a Whiggish approach to the history of science does not fit the facts." (p. 39)

On the one hand, Fuller is a sociological realist identifying the gap between the "principles governing a society" and the understanding of these principles by the social agents, a social epistemologist being the agent who can close the gap. (p. 45) Is philosophy losing superiority and distinctiveness in relation to the special sciences? In Fuller's perspective, "philosophy is nothing but protoscience" and as well as in the theories defended by Churchland and Rorty, the role of the naturalistic epistemology is to provide instead of the *philosophical* theories of knowledge, other theories: but, for Churchland and Rorty these theories should be *scientifically based and psychophysical*, while for Fuller these should be *political and ethical*, hence philosophy continuing to legitimate science as political ethics.

In this view, knowledge policy is called not to legislate knowledge, but to organize the search for suitable means corresponding to the assisted maturing of the ends in society, designing better norms in the process. "Fuller differs from Quine and Giere in that he holds onto the reflexive justification of science, or metascience, which neither Quine nor Giere holds. Metascience uses the standards of science to study science and to make self-conscious the standards that the scientists have been following unconsciously and imperfectly. Fuller holds that the metascientist does not have a more reliable method of gathering knowledge; rather it is the metascientist who applies scientific methods to aspects of science normally taken for granted, because it is practical. The analyst of knowledge policy uses democratic means to develop the ends of knowledge within a community. But what does the democratization of the development of the ends of knowledge have to do with a naturalistic theory of science? Democratic ends can justify a naturalistic approach, if the naturalistic theory of science is an axiological naturalism that extends to values.⁴ Fuller holds to an a posteriori notion of the fact/value distinction. The suitability of hypothetical imperatives is evaluated empirically in terms of its instrumental utility in promoting social ends. Social ends and norms are "grounded in facts about ourselves (e.g., our contingent desires what it is for us to desire something, etc.), our environment, and about how our actions affect our ability to realize our desires" (p. 59)

In a synthesis, the more precise identification of the domain of knowledge is possible at Fuller through non-epistemic criteria, the roles of some individuals as scientists are socially sanctioned and the cognitive authority of science and the legitimation project depend at Fuller on a political understanding of the scientific pursuit, on the rejection of the epistemic primacy of knowledge and on the understanding of the roles played by knowledge policy and by constitution in the legitimation of scientific knowledge. Political philosophy and ethics create a proper *hexis* (our term here, after Aristotle and Pierre Bourdieu in some discussions of the sociality of language) for the legitimation of normative meta-scientific knowledge.

According to Remedios, Fuller agrees with Laudan, in his disappointment with the fact that there is no epistemic privileged manner to grant epistemic privilege, but he also disagrees, because particular forms of knowledge are socially embodied. “Skilful people and crafted goods” are the ultimate social embodiment of knowledge and they are also “hidden sources of power over the world”. In this sense, there is a non-epistemic, social privileged way to assign epistemic status. The legitimation project is not based on epistemic realism, but on the legitimating power of the political norms. Through the democratization of knowledge, at a meta- level of inquiry, which provides sets of prescriptive (regulative) norms and then, for efficiency, at a second level of inquiry the evaluative (constitutive) norms are identified (on the object level of inquiry). Whenever these types of norms are found in conflict, Fuller recommends that the first type of (prescriptive) norms, the ones indebted to the democratization of knowledge should prevail. Remedios emphasizes that for Fuller the most important is the normative vision of science and not science as representation. While Fuller consents to the constructivism of the scientific practices, he does not consent to the constructivist limited view of understanding of these practices. Also, on the one hand, Remedios identifies in Fuller’s vision a post-epistemic conception science, which is not as well postmodern, on the other hand, by maintaining *a transcontextual category of science* and thus his post- or non- epistemic concept of science is neither deconstructionist nor hermeneutical. Although science is socially constructed and despite the fact that it can be constructed otherwise, we want to underline, that at Fuller, *constructivism is socially possible and socially limited*, which makes possible to delimit science and it grant it epistemic authority (as Fuller shows, and Remedios highlights). In comparison to Rouse, the notion of epistemic privilege (and, actually, of the rather poetical, we’d say, changing boundaries between science and non-science), becomes a key nuancing factor, further differentiating Fuller’s and Rouse’s views. Rouse’ theory of social practices does not consider a hierarchy of practices where some are better and others are worse and its normativity is (epistemic and) constitutive, while at Fuller normativity can indicate better or worse practices, it is social and it is an advantage. Rouse is cautious in front of a well-established political authority governing sciences, which, in his view, is most likely to end in a form of oppression.

Is there a domain of knowledge to be demarcated? Fr. Remedios interestingly connects Rouse’s perspective with Laudan’s and with Fuller’s. Rouse’s answer is negative. „Though Fuller shares Laudan’s disenchantment with traditional approaches to demarcation, Fuller has a different solution. Fuller maintains that as a matter of social practice, we should have a sorting mechanism to evaluate competing knowledge claims. Hence, ‘although philosophers may be right that there is no epistemically privileged way of conferring epistemic privilege, it does not follow that there is no nonepistemically privileged way of conferring privilege’” (p. 59)

With the question of normativity of epistemology there is the opportunity to address science policy (a social normative epistemology). For Quine, „*normative epistemology is a branch of engineering* (our emphasis). It is *the technology of truth seeking* (our emphasis), or, in a more cautiously epistemological term, prediction. There is no question here of ultimate value, as in morals; it is a matter of efficacy for an ulterior end, truth or prediction. The normative view here, as elsewhere in engineering, becomes descriptive when the terminal parameter is expressed.” (p. 65) For Fuller, science can be improved in terms of a better adequacy of means and ends, in our view, especially because „science and society interpenetrate each other” (p. 65). On the one hand „many features of science are simply features of the larger society” and, on the other hand „social forces can penetrate the processes of science more deeply, even transforming the content of knowledge” as it happened with the concept of „gene,” which acquired popularly meanings that got in the way of the scientific use of the concept. Also, for Fuller, „science as an institution is itself a polity” in a similar manner as Michael Polanyi (1962) described „a republic of science”, or as Thomas Kuhn and Karl Popper discussed science in terms of a “closed” or “open” society. Closer to „Popper’s Big Democracy notion of science”, Fuller considers science an institution ruled by the elite of scientists. (p. 65)

Two categories of epistemologists, the scientific realists and the convergent realists, rely on „an invisible hand explanation of the success of science in which scientists as a by-product of their pursuit of professional self-interests produce objective knowledge”(Hull, apud Remedios p. 93). Ylikoski claims fallacy in considering truth the result of the intentions of the scientists. (*Ibidem*) Giere, Goldman and Shaked, as well as Kitcher, have assumed precisely this sort of intentionality in their account of scientific success. Remedios notices that according to Hull “The pursuit of credit and recognition by individual scientists and research groups is the driving force in science. Two factors—the need to use each other’s work and the possibility of empirical checking—frame this striving. The most important way credit can be conferred is that one scientist uses another scientist’s work with an explicit citation. To ignore another scientist’s work is the worst thing that a scientist can do to another” (*Ibidem*). With the notion of the workings of an *invisible hand mechanism to explain the success of science* seems, for Fuller, to lead the epistemologists to a confinement in a descriptive account of science, or, in fact, there is plenty of room for both normative considerations and improvement of cognitive practices, which are not mutually exclusive. If things work fine by themselves, as the invisible hand mechanism implies, how and why should one conceive the improvement of science? In Remedios’ precise and insightful view, against scientific realism explanations for scientific success, “Fuller agrees with invisible hand theorists on the following: there is no scientific method; there are cognitive limitations; there are noncognitive factors; a ‘Mertonian norms’ account does not work; and truth does not play a role. But

Fuller's conclusion is to impose a regulatory account, which is opposed to an invisible hand account. Fuller's view is that an invisible hand mechanism is possible, but he disagrees with invisible hand theorists, arguing that if it is working, then it cannot be improved." (p. 95) Thus, provided that science's goals are social goals, for Fuller, science needs social normativity, which relates to the accountability of science. "The notion of success does not play a key role in Fuller's social epistemology, because science can have any one of a number of goals. It is only once the goals are specified that criteria for success can be proposed and measured". So, the idea that science is already successful is debatable and, eventually, refutable.

We especially relate to Remedios interpretation of Thomas Kuhn's SSR, against Fuller, who, in his book entitled *Thomas Kuhn: A Philosophical History of Our Times* (2000), "contextualizes SSR as a Cold War document, argues that it is a noble lie, and attempts to show the ill effects of SSR on the social sciences, sociology of science, and philosophy of science" (a "Cold War document", because it does not and it could not address the idea of normativity nor the notion of ideal normativity of science in society). At the same time, while applying social epistemology to Kuhn, he "deconstructs" Kuhn's notion of scientific change, in our view, actually misconstruing it and arriving at a less meaningful replacement of the concept of "paradigm" by the concept of "movement". We are sustaining that this replacement is at best confusing: for while the word "movement" sends to "social movement" (which we can grasp as meaningful from a social epistemology perspective), it also sends to the idea of "change" and "instability", or, Kuhn's concept of "paradigm" is associated to "normal science" and to a period of stability and unchanging scientific practices. Indeed, as Remedios argues, if SSR is "a noble lie," then how could Fuller sustain that, at the same time, it had a largely negative influence? Analysing fairly and in detail Fuller's arguments, Remedios rightfully criticises them. Among other critics, Remedios shows that Roth indicates three important problematic aspects, as following: "1. A Rawlsian problem: Fuller must lift the 'veil of ignorance' behind which 'normative decisions are to be certified as appropriate normative demands' (Roth 2001, 95). Roth asks what Fuller's legitimation of his endorsement of democratic means is, other than his *ex cathedra* pronouncements. 2. A Laudanian problem: Fuller denies what Popper asserts, which is, 'there are objective criteria for verisimilitude, progress, etc.'. Roth asks what Fuller's master narrative of scientific progress might be¹. 3. A Platonic problem: Fuller makes his own position invisible by wearing what Roth allegorically calls a 'hermeneutic Ring of Gyges'. Fuller's response to Roth's charge of Rawlsian and Platonic problems is that his position is not invisible, and it

¹ In our understanding, this narrative of progress is at Fuller a by-product of the political normativity of science (and accountability).

is his claim that science should be governed democratically because it purports to be a universal form of knowledge. If that claim of knowledge is true, it applies to all. Fuller believes that the burden of proof is on those who hold that there is such knowledge, but that it is ‘accessible only to an elite’” (p. 115).

Fuller’s alternative to the epistemic legitimation of science is important. Criticism such as that sustained by Stephen Downes (2000) is in our view superfluous. He sees Fuller’s view of a “scientist” as oversocialized, determined, “boring,” and psychologically impoverished. How could that be, precisely within a social conception of epistemology? Normativeness does not entail oversocialization, by itself, if it is not a case of, let’s say, totalitarian normative thumb (unless we choose to interpret it thusly). But why would we? In a current interpretation and especially within a civic republicanism socio-political framework, the democratization of knowledge accompanied by normativization creates an environment where limitations grant clear spaces of scientific freedom suitable for the expression of personality and for social epistemic activity, too. Elster and Geertz use the concept of an agent for explanatory purposes. The former sees in agency a predominant psychological dimension, while the latter, interprets agency as intentionality with a rational utility maximizing dimension. As Remedios points out, “Fuller ascribes to the public multiple interests and motivations, and a psychological richness; hence, he employs a thick notion of agency. Downes argues that Fuller has been selective in his application of the thin notion of agency to scientists”. (p. 116)

Politically oriented epistemology differs from the interest-oriented epistemology. The pursuit of knowledge should not be considered automatically the same with the pursuit of good and it should not be approached as value-neutral. For instance, investigating Japanese science (in *Science*, 1997) Fuller indicates the Japanese case “the power of the institution of science” correlated with “its use for nationbuilding goals”, emphasizing that “the more easily science can be made autonomous from society, the more easily it can be turned into an instrument”. He also criticizes the postmodernist notions of science that resulted into the “postmodern condition,” namely a tendency through which science loses “its role as the source of authoritative knowledge and political power, similarly to the way religion was secularized in the eighteenth century”. (p. 118) Science as a critical activity should be a dominant in a society of democratized knowledge, brought from the higher theoretical “heavens” (Maffie) into the social realm in a “movement” of thought similar to that realized by the pragmatic philosophers, for instance.

Discussing the 2003 Remedios’ investigation, we agree with Remedios’ idea that we should appreciate the legitimation of science in our times in terms of crisis and to investigate all the aspects, emphasizing the roles of cognitive authority and the derived implications. At the same time, part of this crisis is generated by the centrality of the administrative-engineering dimension of the science policymaker, who would need a political philosophy, ethical and philosophy of science horizon to give a more meaningful shape to the scientific institutions and regulations.

Philosophy and more specifically, philosophy of science is both “protoscience” and postscience.

In a previous work, we have addressed the distinction “science as activity vs. science as result”.² Briefly put, the investigation of this distinction also indicates that science is a social activity, and it also nuances the extent in which politics, normativity and ethics, come into play. In regulating science *as activity* political influence is, although important as measure, providing solely a regulated general framework for the epistemic/scientific activity (and this framework indeed may be more liberal, more authoritarian or more republican, as Fuller recommends, while science and knowledge *as result* are regulated more, that is, in more detail by political regulations in terms of varied aspects and consequences (democratic, commercial, legislative consequences, in terms of copy rights in ethical terms, for plagiarism, in terms of consequences for public health, for environment etc.), for science as result should be socially relevant and beneficial, in a way, “translated into” socio-political language, socio-political, improvement, socio-political measures that should be implemented etc., provided that the epistemic activity, by itself, offers no guarantees in this respect.

We agree with Fuller’s recommendation for civic republicanism as the most suitable framework for scientific endeavours considering also (with the communist experience, which implied an accelerated modernizing development, but a censored, thus limited and fragmented pursuit of knowledge) that this is the only framework aiming to balance liberties and duties, with the aim of maximal socio-political relevance and of the goals to the epistemic means. We may talk about a socio-political *hexis* for science, more adequate and more efficient within civic republicanism.

All in all, Francis Remedios’ work and the investigation of social epistemology in relation to the legitimacy of scientific knowledge, an epistemic achievement in its own right, correlating and interpreting the interesting contemporary epistemological perspectives and theories, as well as clarifying a number of things on the way, is thought inspiring, too: If facts are seen, philosophically, in opposition to theories and values how could ever philosophical (political ethics)

² Henrieta Anișoara Șerban, “O analiză a distincției dintre știință ca activitate și știință ca rezultat” [“An analysis of the distinction science as activity and science as result”], in *Studii de epistemologie și teoria valorilor* [Studies in Epistemology and Value Theory], coord. Al. Surdu, M.A. Drăghici, G. Nagâț, Bucharest, Ed. Academiei, 2017, pp. 100-117. Henrieta Anișoara Șerban, “Știința ca activitate și ca rezultat” [“Science as activity and as result”], CRIFST-DLMFS [Romanian Committee for the History and Philosophy of Science and Technology – Division for the Logic, Methodology and Philosophy of Science of the Romanian Academy] Symposium, *In honorem Mircea Malița – 90: Provocările științei și civilizația actuală* [In honorem Mircea Malița – 90: The challenges of science and contemporary civilisation], Bucharest, February 23, 2017.

values orient the social universe of facts? However, if a fact is seen as a *sui generis* entity, engaging objects that present properties while involving in relations, then, the very definition gives way to a conceptualization based on a certain theory, on a particular epistemic view, thus, giving way to a connection between facts and theories, which means it opens the path for constructivism and interpretation and the latter to a value-meaningful interpretation of some sort. Or, is it only the social universe of actions and desires that political and ethical values orient? How should we capture and assess in an epistemic manner the link between value and (epistemic) knowledge? Do values and hierarchies of values endure similarly to socio-political phenomena? Do they remain socially relevant for a relevant timespan? Shouldn't we recognize in political epistemology and especially in images such as "the knowledge engineer" and "the science policymaker" the image of the philosopher-king? Why should epistemology part-ways with deconstructivism and hermeneutics, as Fuller does, since interpretation (central both for the former and for the latter two) is paramount in mundane and epistemic explanation (and understanding) of the world (as sum of contingent facts)? How should we understand contemporary secrecy of knowledge against the democratization of knowledge? But about these, we shall hopefully discuss another time.