

**Comments on Steve Fuller's Presentation in Moscow<sup>1</sup>**  
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**Abstract**

*Steve Fuller raises the problem of the relation between science and society differently than many contemporary philosophers and sociologists. Unlike many philosophers, Fuller does not look for the sociality of scientific knowledge in the peculiarities of experimentation in quantum physics—the basis for a significant trend in science studies by researchers in social philosophy. At the same time, Fuller does not try to understand the social character of the birth of knowledge from the social communication of scientists in the frame of the scientific community, or from life in a scientific laboratory. Rather, Fuller aims to show science's unique presence in society as a commodity and the absence of scientists in the birth of a new scientific knowledge. This view is particularly important to understand in connection with reforms of science that politicians pursue in reference to changes taking place in society.*

Steve Fuller's primary focus on the processes taking place in society, and not solely among scientists, allows us to take a new look at a number of concepts used in analyzing science. I will consider some of them in the broader context of his paper and his presentation in Moscow.

**Empirical reality**, on Fuller's interpretation, differs from that of classical science—where nature exists independently of us and our activity. In studying human beings—their thinking, social structures and activities—we can consider them as if they are independent objects in nature. For scientists, it is significant to find a common basis for the objects being studied. Individual features are unimportant and often ignored. However, in societies focused on commodity production, individuality plays an important role. Fuller writes: “We live in a time when taking science seriously means taking it personally” (Fuller 1). It is important, then, that people are different and deal with science in their own way. An empirical reality for a scientist is a set of social relations among people who are not scientists but, in one way or another, are in contact with scientific results. Their individual attitudes toward scientific products are important and cannot be ignored.

As a result, the **boundary** between science and society is becoming indistinct—it does not so much separate as connect kinds of human activity. Still, Fuller aims to draw a distinction between a *customer* and a *consumer* of science. “The customer is”, writes Fuller, “strictly speaking, the client, someone who purchases a good or service. The consumer actually uses it. While customers and consumers are very often one and the

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<sup>1</sup> I shall refer to the written version of the presentation made by Steve Fuller in Moscow “Customised Science as a Reflection of Protsience” at the International conference “Social Philosophy of Science. Russian Prospects”, Moscow, November 18-20, 2014. Fuller's paper will be published in *Epistemology & Philosophy of Science*, 2015, no. 2.

same, it is possible to be one without being the other” (Fuller 2). For Fuller, the customer can be compared to a retailer who purchases goods to sell to someone else without consuming that good their self. It is important to know how many goods and services the customer/retailer will be able to resell.

The conclusions consumers draw will be their own. To draw proper conclusions, consumers need to know how the product was produced. “Taking science personally ultimately means turning oneself into a living laboratory” (Fuller 2). The ability of an individual outside of science, to evaluate the results of scientific activity, combines with the process of their production in the laboratory. In this way, sociality is introduced in scientific knowledge. The responsibility for the consequences of the use of scientific findings in society does not rest only on the shoulders of scientists. Consumers—who include their opinions in the process of obtaining scientific products and, so, scientific knowledge itself—are also responsible for their application in society.

Let us return to the interpretation of empirical reality where *everything is present*. Fuller believes that if one studies science in societies of commodity production on the basis of the relationships between consumers and scientific products that does not deny the availability of others types of social relations to science. It means that “... the public has come to think of itself less as spectators than consumers of science” (Fuller 1). In the empirical reality we face, with both kinds of attitudes of non scientists to science, ***each position can be a foundation for the explanation of the whole empirical social world around us***. Science consumers, then

... assume responsibility for their science-based decisions. They are not ignorant consumers, as demonstrated by their explicit yet circumscribed deviation from the scientific norm ... the process of abstracting goods from their normal contexts of use that characterizes exchange relations—that is, the conversion of value to price—facilitates the comparison of the previously incommensurable. Thus, when offered a cow in trade, I need not evaluate it purely in terms of my personal use (e.g. do I like beef or milk?) but consider it as something that may be traded for something I really could use (Fuller 6).

Both types of communication (customer and consumer) have a basis in empirical reality. Each explains this reality from a certain point of view. Does this outcome mean that each type of communication has an equal opportunity to exist in a definite historical time and in a society with a definite type of production? In societies of commodity production, both types of communication take place (as Fuller shows), and both are necessary for its normal functioning. ***But it is the second type of communication of “non scientists” with research results that influences the specificity of modern society***. Only this type of relation between society and science makes this connection possible by embedding sociality in the structure of a new type of scientific activity and scientific results.

Social ties and scientific research are equally responsible for the creation of new needs in society for their satisfaction and, consequently, for the development of society. The relation of the social structure to the science customer is necessary for the development of

science. However, it is necessary as an element of the context of the production of new results both in science and in society. ***It remains outside of science as non science, but not as non religion, non philosophy, non politics, non art and so on.*** The opposition of the science customer to the science consumer helps create a context for the birth of new knowledge in science.

At first glance, everything around an act of the creating a new scientific result in laboratory can be considered as an element of context. If you want, any part of context can be associated with any part of the world, the relationship between things and events are infinite. A mosquito that sits on the arm of an experimenter and prevents her from making an exact measurement, may be associated with a cup in the kitchen at home in a small French town, or with any other element of the world.

A customer deals with goods outside of their normal contexts of use. He has to deal with a ready product of scientific activity—with the result of this activity. He needs to know how the thing he bought performs its functions, how the technical device works, and how food affects his body. For this he must have some knowledge; still, that knowledge is circumscribed by science. In this case, “the scientific method would provide a common currency for the transaction of otherwise incommensurable knowledge claims” (Fuller 7). This “... requires that the method be neutral with respect to the knowledge claims that it assesses” (7). A customer (a non scientist) deals with scientific results as if they were created in an “ivory tower” and as functioning in society as “black boxes”. “In the modern West, scientists have mostly tried to protect the autonomy of their research. Claims to autonomy have extended to the topics they worked on, the methods they used, as well as whatever conclusions they might reach” (Fuller 8-9). A consumer as a non scientist deals with scientific products bearing in mind, above all, his individual needs and the specific conditions of use. Here, we can consider here two types of the relations between science and society, classical and non classical (in Russian terminology). In a classical relation, the basis is something common, neutral—what can be used in the same way by many people. In a non classical relation, the basis changes readily—it is formed by individual needs when specific conditions of the use of research results are taken into account.

I see the novelty of Fuller’s paper in conceptualizing the activity of people who are not scientists but who are involved, at the same time and in various ways, in obtaining scientific results. Fuller demonstrates that scientific knowledge is born both of commodity relations not among scientists, and of the professional relationships among scientists. The research process itself contains both social, and intellectual and logical components. When something unexpected arises in science a change occurs not only in science itself, but also in a society from which the research problems originated. The boundary is blurring between both basic and applied science, and between science and society. Reformers, then, should take into account the current understanding of science by humanists. An indifferent attitude to science—the neglect of science—leads inevitably to the slower development of society.

In connection to the problem of the relationship between science and non scientists, there are numerous topics in Fuller’s paper that are interesting and important. For instance, the

character of science journalism has changed. “The field has raised its public profile, while acquiring a perspective more independent of the scientific community” (Fuller 1). It is important that the change in attitudes toward science “... is arguably comparable to the shift that took place during the Protestant Reformation, the moment when Christianity ceased being a unified doctrine...” (Fuller 1).

A comparison with Protestantism can help in the understanding of the processes occurring today in science. However, in my opinion, it is better to draw a parallel with the statements of contemporary Protestant theologians—their thinking has evolved in parallel with scientific thinking. The Protestant Reformation did not lead to the peaceful coexistence of the two churches. Each believed only in the truth of their own doctrine. By contrast, scientific thinking of the 20<sup>th</sup> century does not consider Newton's mechanics false. Theories differ from each other because of different initial data, but each is true in its historical and cultural context. Protestant theologians of the late 20<sup>th</sup>- and early 21<sup>st</sup>-century recognize as equally admissible different translations and, accordingly, a different understanding of scripture *within the same religion*. There are different interpretations of nature in science and different interpretations of scripture in religion.

The turn in thinking, which began in the 20<sup>th</sup>-century and is continuing today, requires that we reconsider many of the characteristics of the human attitude toward the world. In the Modern era, the content and logic of scientific knowledge was determined by the material world as an object of study. Now, this knowledge is justified by humans and their activities. In the first case, we study the role of experience, sensory perception, abstraction, generalization, the role of experiment, the concept of objectivity, of truth, and so on. Now, we study the incorporation of social experience into knowledge, the role of personal traits of scientists, features of the distribution of scientific knowledge in society, changing the boundary of society and science (which does not so much divide as unite). The type of thinking is quite different than it was in the Modern era.

Fuller has done a great deal to explore this turn in thinking. His paper is another step in the study of current changes.

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