THE MASK OF THE REAL – DISCUSSION OF JOST

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Jost's article has the courage to suggest complex and important problems about knowledge and it is done under a simple proposal: "amateurs should be more likely to be ontological realists about theoretical entities than should professional scientists". This proposal could be approached from an epistemological perspective to an almost empirical perspective, just like the one adopted by the author. Moreover, within this range of alternative approaches some topics or traditional debates should arise such as the critical realistic position of scientific knowledge opposed to idealism or opposed to constructionism, the relationship between commonsense knowledge and scientific knowledge, or rather, such latest ones as the ontological status of the notion of a social representation. Nevertheless, in Jost's discussion, some aspects are skillfully avoided and some others contribute to and provoke discussion.

In this discussion I would like to deal with those avoided and/or problematic aspects: 1) Examine some aspects of the relationship between science and commonsense and the position of social representations; and 2) deal with the notion of social representation related to various positions and options regarding scientific knowledge, especially in social sciences.

BETWEEN SCIENCE AND COMMON SENSE

There exist different schools of thought and there are different discourses: religious, daily, scientific ... Each one has its characteristics, its implications and its systems of protection. For example, Deconchy (1980) has masterfully demonstrated that to protect a knowledge system based on orthodoxy – like religious knowledge – from its contradiction with scientific knowledge, social regulation and intergroup control are used. Likewise, in scientific knowledge the search for differentiation from commonsense seems to be endogenous to its production. The relationship between these knowledge systems and commonsense is much more problematic; among other things, because even if we place ourselves on a religious, scientific or any other level of discourse, daily knowledge is inescapable: We all used to write with a pen and more recently we all use computers. This point specially refers to human and social sciences and to the dilemma of subject and object.

From this gap between science and commonsense also arises the interest in analyzing its influences and connections. First there are two perspectives: how the unavoidable daily and practical knowledge has an influence on the production of scientific knowledge, and vice–versa, how scientific knowledge has an influence on and becomes commonsense. I do think it is interesting here to briefly characterize both perspectives so that we can see the position of social representations.

The first perspective was originally studied in social sciences by Schutz (1962, 1966) as a problem in the sociology of knowledge, but his initiative has not had many followers. Also

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Foucault's works (1975, 1976) on the constitution of systems of thought and social institutions can be analysed in the same vein to finally arrive at what is suggested by Laudan (1977) and others, Jost among them. But apart from these contributions works are scarce, although its necessity even in social psychology (Michael, 1989) has often been defended just as Jost does. We will not include here the works of sociology of science (Merton, 1973; Zuckerman, 1988) since their objective is to study social conditions, processes and the consequences of the production of scientific knowledge. Neither will we include epistemological topics of a sociological or psychosocial kind as formulated by Kuhn (1970) or Feyerabend (1975) for example, since their objective is the analysis of the status of scientific knowledge and its production, although they take into account implied sociological aspects or they adopt extreme constructivist attitudes (Latour, 1987; Knorr-Cetina, 1981).

Traditionally the second perspective has been more continuously and fruitfully studied, at least with regard to the quantity of works. On the one hand, sociology of science has been interested in the effects of science in society; on the other hand, one of the areas of application of the theory of social representations is the analysis of the spreading and transformation of knowledge into commonsense, among them scientific knowledge (Jodelet, 1984, 1989). It is in this area of application that the notion and first theorization of social representations arises (Moscovici, 1961/76) and it is also where Jost's work lies.

Moscovici & Hewstone's most recent works (1983, 1984) on this topic have tried to systemize the processes implied in the transformation and recycling of scientific knowledge into daily knowlege: personification, figuration and ontologization. Although the contents of Jost's work only refer to the last of these processes, generalized as objectification, personification is also worth commenting on.

In some works dealing with the theory of social representations, especially in the most critical ones, it is not unusual to find expressions such as ..."Moscovici's theory of social representations...". I think that we have to recognise Moscovici's great contribution as the forerunner and the most innovative instigator of this theory as well as of other important fields of social psychology (social influence, group decisions, etc...), and also his great defence of the theorization of social psychology. I think, however, this association between theory and person contributes little to the evolution of the theory and does not recognise the scientific importance of Moscovici's work. From my point of view, the best written recognition that can be given to him as a person, is to defend the development of the theory by avoiding an unnecessary personification, unless we want to resort to a kind of psychology of scientific knowledge and internal attributions.

Let us return to the contents. The use of the theory of social representations (TSR) to analyse the transformation of scientific knowledge into commonsense is considered to be part of the application of this theory. It is argued that the process of objectification changes concepts into images and theories into representations which become social reality (Moscovici & Hewstone, 1983, 1984). These representations are what we finally see, what we hear and what we speak about. In the same way as love, peace or childhood are the social construction of a shared knowledge, social matter and brain become "things" which exist and that we talk about. Thus, it is possible to identify the processes of construction of representations of objects – whose origin is found in the production of scientific knowledge – with the representation of objects whose origin is placed within the social dynamics. I think this identification is problematic due to two very different reasons: the existence of an objective reference and technological mediation.

1) If we study the social representation of an object we do not have at our disposal any initial objective reference, which allows us to establish a starting point of the representation. The origin of the social representation can be localized in the practical problems which initiate the social dynamics vis-à-vis certain objects. The interest is not in establishing some kind of correspondence between the represented social object and a possible objective reference. For example, love "is" the mixture of meanings and images that we have assigned to this word. In our everyday life we "see" love in a couple or between parents and children, and the analysis of the social representation of love is the analysis of how it is made up, what it implies and for whom this thing, which in our culture we consider to be love, is. Thus, what love represents is what is socially represented as love. No objective reference exists that allows us to establish any comparison with love. When we are concerned with material objects, the problem remains the same because even having a reference point, this reference point is not objective.

We can not say the same of social representations of objects stemming from the production of scientific knowledge. The social representation of relativity, for example, "is" relativity, presuming that there is a representation of relativity. However, escaping from the comparison with the physical theory of relativity is extremely difficult. In the transformation of scientific knowledge into the knowledge of commonsense it is difficult to avoid the comparison between the original, the scientific object and its social product, the representation. This comparison, which in other fields of social representations is absurd, leads to sometimes considering these representations as distorted reproductions of the original object. It is true that Moscovici and Hewstone (1983, 1984) warn us of this danger but the main point is: Is it possible to avoid it?, and if so, how?

If we look at this point in terms of scientific object versus social object, I believe that at the moment we do not have methods to avoid this comparison. Although we do not think that the object in the scientific plane should be compared to the object represented afterwards, and although our concern is to know how the representation of a specific scientific object is generated and what it is made of independently of how scientific knowledge describes it, we find ourselves at the point at which we began. This comparison would not be important if it did not affect the possibilities of remaining in the conceptual field of the theory. But we can hardly maintain it in the field of the theory.

In effect, if we maintain that representations are both constructive and reconstructive of the objects, then – in social terms – physics is not what is said about physics by the physicists' knowldge itself, but the social representation of physics. Moreover, this representation can not be compared to the object of scientific knowledge that defines physics itself. Its arrangements of production and performance are radically different and therefore incomparable. The fact that the scientific object precedes the represented object and therefore is its "reason to be" does not justify their comparability. Could we in the same way assert that the reference object of the current representation of love should be the romantic love of the 19th century? On the other hand, by comparing the social object with the scientific object, and not vice-versa, we introduce criteria of value and truth that destroys a typical focus of the TSR.

Thus, it does not make sense from a TSR perspective to compare the propositions used by physicists and amateurs about physics, although empirically it would seem possible. We are not concerned here with the same propositions – although methodologically we can design a

device that could picture them both –, nor the same conditions of production, nor the same system of knowledge. How then will we know what we are comparing?

I do not intend to maintain that the study of the transformation of scientific knowledge into commonsense can be undertaken only from the field of TSR. I believe that it is necessary to modify an approach which considers the scientific object as reference point of comparison. Comparing two products constructed in different systems of knowledge is not simply the comparison of the products. It is the comparison between systems of thought, and this falls beyond the application of TRS. Analysing the spreading, the transformation and the generation of these representations of objects that can first be found in science is really the field of TSR. But then the scientific object is not the objective of our analysis, but an accident produced outside of our sphere of influence.

2) Technological Mediation. "Is it scientific knowledge which spreads and socially transforms into commonsense?" I have the impression that it is technology rather than scientific knowledge what invades society. If it weren't for technological application, the social value of science and the strangeness and the curiosity provoked by it would be far less. As Wittgenstein has said for poetry, we could say that socially a scientific speech without technology would be a language on holiday.

"Who would be interested in scientific knowledge if it had no application?" It would seem that newspapers, magazines, television, etc. spread scientific knowledge. In reality, most of this divulgation is technology. In our society science tells us the truth without saying what is truthful. Technology assumes this and this is why science attains social value.

If our interest is in the social transformation of scientific knowledge the objective of analysis should lean more towards the technology than towards scientific knowledge itself. The work of Grize et al. (1987) is a good empirical example of this interest. On the other hand, the works of Schiele (1983,) and Schiele & Jacobi (1988), points towards the analysis of transformation–spreading of scientific knowledge, which study how science is presented and made known in museums, to give an example. That is to say, how they are socially transformed, which to me seems exceedingly suggestive, and which is a very interesting alternative to solve the problem of how to dispense with the scientific object and to study the social processes of its transformation.

THE REALITIES AND THEIR MASKS

According to Jost, Greenwood's definition (1989) of ontological realism is "almost synonymous" with the process of objectification described by Moscovici (1961/76, 1981, 1984). Hence, if the TSR is correct, amateurs should be more ontological realists than scientists in their own right. I believe that this hypothesis and its derivations imply two problems: 1) What do we consider to be ontological realism and 2) the practical proof. The first problem refers to hypothesis I, II, III & IV suggested by Jost. The second one to hypothesis V.

Greenwood (1992) has recently suggested that epistemological alternatives in psychology would be: empiricism, realism and social constructionism. This classification would seem to be appropriate, although in the characterization of each alternative different elements should be considered. Empiricism, which we should call instrumentalism, is a practical disposition with regard to the theories and its difference to realism or to social constructionism is basically epistemological. As a practical disposition it is a very homogeneous stance. In

psychology probably most research is carried out from an instrumentalist stance in which empirical data are what is important and which represent the only truth. Radical constructionism (Gergen, 1985, Ibañez, 1991) can also be considered as a relatively homogeneous position. The same cannot be said for realism, which, as an epistemological position, is far more heterogeneous. Bhaskar's critical realism (1978, 1989) for example, differs considerably from Popperian realism (Newton–Smith, 1981), or from naïve realism (Chalmers, 1976; Maze, 1991).

Here we will take the realist position closest to social psychology (Bhaskar, 1989; Greenwood, 1992; Harré, 1986; Manicas & Secord, 1983). As Shotter (1992) suggests, these authors would subscribe the proposal that knowledge is socially and historically constructed. A realist perspective is not opposed to this proposal and the proposal does not force us to accept a constructionist position. The differences between realism and constructionism are less epistomological than ontological, and above all, they confront each other in the possibility of truth and the theories' independence of reality. In effect, it is the relation of theory to reality where both alternatives can be differentiated. It is not argued that social reality is a socially constructed reality, the disagreement is in the possibility of defining true theories which explain this reality. TSR is not acceptable for constructionists because it aspires to exactly this, being a scientific theory about the construction of commonsense knowledge.

An epistemologically realist position does not oppose TSR. Jost suggests, however, that if we accept TSR then – scientifically – we can not adopt a realist position. The main problem is probably found neither in epistemological realism nor in ontological realism but in Jost's use of physicalism as if it was ontological realism.

In effect, Jost's hypothesis is based more on physicalism than on an epistemological realist attitude. There is no need for a realist position to assume "the physical reality of theoretical constructs" (Hypothesis I and as derivation hypothesis II & III). This is more physicalism than ontological realism. Realism assumes the existence of objects that are independent of the theoretical concepts which are used to describe them. However, these objects do not necessarily have to be physical, they can also be psychological or social (Greenwood, 1992). Bearing this in mind, I do not believe it is possible to identify the process of objectification with that of ontological realism. The process of objectification refers to the transformation, selection and configuration of daily knowledge into negotiated social reality. In short, the concept of objectification deals with the establishment of a description that relates a series of phenomena to such entities relative to which we can, or cannot maintain an epistemologically realist position. The same can probably be done by the physicists with matter or with the tunnel effect.

The second important point that Jost's hypothesis suggests to me is that hypothesis V may well be correct but for different reasons than the ones put forward. It is very probable that scientists are more sceptical about their theories than the amateurs are sceptical about scientific knowledge. Likewise, it is very probable that the latter perceive a greater consensus, certainty, and progress than that admitted by scientists. It is doubtful, however, that this follows from an identification of realism and objectification.

In my opinion the scepticism of scientists is a consequence of putting in practice an instrumentalist attitude, ignored by the scientists themselves. Most scientists who work in their laboratories and offices are not at all concerned with epistemological matters. The hyperspecialization of science has led scientific work to become a task of fine detail in which

"philosophical" digressions have no place. For its part, the social distribution of science, regardless of the epistemological stance we adopt, fits the slogan "the more you publish, the more you are valued". It is probably these two phenomena that lead the scientific community to maintaining an instrumentalist position. However, it does not follow from adopting a position regarding scientific knowledge, but from a specific form of scientific work.

Scientists, nevertheless, are not "relativists" by conviction as instrumentalists by condition. Moreover, it would be this instrumentalist condition, regardless of epistemological aspects, that would lead to relativism. In fact, certain tests carried out by university students in the final years of their studies have suggested that their epistemological positions could be characterized as pre-Gallilean. If this were the case for university students of science, how could we name the epistemology of commonsense?

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