

# Popper's World 3 and the Role of Semiotic mediation in Epistemology and Psychology

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## Abstract

The Theory of Worlds is one of the best known parts of Popper's philosophical heritage. According to it we can methodologically (not necessarily ontologically, though) split reality in three domains: World 1 – the realm of the physical and biological beings as such; World 2 – the realm of consciousness, thoughts and all other subjective states; World 3 – the realm of the objectified products of the thought: symbols, theories, values, etc. Popper, and most of his commentators, when discussing the relationship between the “three worlds” usually stress on the mediational role played by World 2 (consciousness) as a medium through Worlds 1 and 3 can communicate with each other (e.g., the mediation of a determined mind, or minds, is needed to some ideas — as vehicles projects — become material objects — as cars). In this paper we will stress in other kind of relation and mediational processes between the popperian worlds: the mediational role played by Worlds 1 and 3 in the communication established by two minds (two distinct Worlds 2). Although this idea has never been highlighted explicitly by himself, his claims about the intersubjective nature of scientific objectivity and his ideas about the regulatory action that some shared values (moral, or epistemic) can exert over the human psyche will be used as hints pointing to the plausibility of this interpretation. The results presented here intent to point to a clarification of the psychological roots of Popper epistemological thought, and shed some light over the understanding of actual scientific knowledge production activity in Popperian grounds, helping to, at least, blur the so propagated opinion that his theoretical constructs are just able to deal with idealized normative prescriptions or standards of scientific inquiry.

## THE THREE WORLDS THEORY

Besides the fallibilist orientation in Epistemology, the Three Worlds theory can be considered the most important and better known contribution left by Popper. As Popper himself described it, the Three World Theory must be understood as a hypothetical and tentative methodological model of reality, without any metaphysical ambition. Popper says his Three World Theory is a kind of “methodological pluralism” that should not to be confused with an “ontological pluralism”.

In brief the Three Worlds Theory says that we can split reality in three large and inter-communicative domains: World 1 – the realm of the physical and biological beings as such; World 2 – the realm of consciousness, thoughts and all other subjective states; World 3 – the realm of the objectified products of the thought: symbols, theories, values, etc.

In the following sections these concepts will be further developed and clarified. Special attention will be given to the communication between these domains or Worlds. As we will see semiotic mediation and regulation plays a major role in this process.

### **Realism: a Common-sense ontology**

The concept of real is absolutely intuitive in Popper’s oeuvre. He admittedly borrows it of from Common-Sense (Popper, 1972). According to him Common-Sense understands something as a real object if it has two distinctive features:

1. It is possible to be distinguished from an illusory one, or from just an appearance; so we can free ourselves from the solipsist ghost of phenomenist approaches: there are appearances, but below the surface there is something else. And probably there is always a lower layer — what make us able to talk about levels of reality;
2. It is causally efficient, i.e., something that is able to act upon other real object creating an effect on it; once one can understand either physical objects (World 1 objects), mental states (as volitions – i.e., World 2 objects), and abstract entities (as ideologies – i.e., World 3 objects), as “cause” of phenomena we observe in everyday life, Popper see in this the perfect breach in the Common-Sense ontology through which he introduces his methodological pluralism.

### **Pluralism: a derivation of the Common-sense ontology**

Based upon this realistic Common-sense theory Popper argues we are authorized to talk about different domains of reality, and therefore three kinds of “real objects”: the three worlds and theirs “inhabitants”. Although there is no great reluctance in accepting physical objects as real, there are strong criticisms against the idea of transforming thoughts and abstract entities in “things”. I will not deal with these criticisms in depth; just a brief presentation of few of them and a short reply to each one will be presented.

Probably the mostly criticized (curiously it is most acclaimed also) point of Popper pluralism is the affirmation of the existence of such thing as a World 3 and its objects. The majority of the criticisms can be summarized in the sentence: “World 3 is just a re-edition

of Plato's Worlds of Ideas". In fact, Popper agrees there is a Platonic inspiration in his own formulation of World 3, nevertheless there are significant differences between them. The most important difference is that while the Platonic World of Ideas is eternal and immutable, World 3 is an historical and always changing product of human creation — the ideas don't precede the thinkers (although some properties of the ideas can pass unnoticed by the thinkers who firstly thought them).

Similar controversy involves the assumption of thought and other subjective states as "real objects", I will not advance in this point here, I just want to highlight that Popper's point of view is professedly non-reductionist (as will be discussed below). And that most of the contemporary scientific literature in neurosciences which tries to convince us about the epiphenomenality of mental processes, these just being byproducts of physiological brain processes, fail in understand the nature of statistical correlation testing used in this studies (for a longer discussion, see Doria and Mocaiber, in press).

A last thing to be said in favor of Popper point of view is: as far as our best science knows there is no reason to consider Matter as a substance in an absolute sense. As far as physical theories can reach Matter is much closer to be called a "process" than a "substance", the constant shifting of matter in energy and vice-versa show us that even the most taken for granted of our "real objects" are not "as real as" we could suppose, so the very idea of substance is much more alike a psychological a priori than a property of physical objects: what does not deny (in the Popperian theoretical building) the reality of the idea of substance as and subjective state, or the concept of substance as an World 3 object.

### **Methodological aspect of the Three Worlds Theory**

Although the Three Worlds Theory is based in a Common-Sense Ontology it is not exactly an Ontology in itself, at least Popper does not profess the credo in the Three Worlds dogmatically. According to him the Three Worlds Theory (as every theory) is just a conjecture that can be shown to be false. Nevertheless he believes his theory is a good approximation of truth as far as we know the reality, and besides that it has methodological advantages over its reductionist (materialists, idealists, or ?-ists, for this last position see Strawson, 1999) concurrent.

So, for example, in spite the fact Popper himself had the belief in the reduction of psychological phenomena to neurophysiological ones, he had clear in his mind that this *hope* for a *future* reduction could not lead to a *immediate abandon* of Psychology. The reason is the simplest: his belief can be wrong. Illustrating this case he conjectures the catastrophic effects that could have provoked such reductionist hope if the first chemists had abandoned his field waiting for the "certain" reduction of Chemistry to Physics: according to him we would never have reached the present atomic models if we haven't had the parallel efforts of chemist and physicists, and then combined them when they were able to talk a similar language.

Summing up, the Three Worlds Theory must be understood as a tentative theory, open to revision that can lead even to a narrower view of reality suppressing one of the Worlds if it seems unfit in the light of our best knowledge at a given time; even to a broader view of reality if at any time our best knowledge show us that just three worlds are few to describe the complexity of reality.

## COMMUNICATION BETWEEN WORLDS, MEDIATED PATHS

Described the basics of the Three Worlds Theory I can turn the main objective of this paper: discuss the role played by semiotic mediation in the communication between the three reality domains postulated by Popper.

In the following sections I will discuss two ways in which the communication between Worlds occurs. The names given here to them are my suggestions and are not found in Popper's writings. In fact just the first mode of communication (bio-psychological) is advanced by Popper, the later (material-semiotic) was never directly addressed by him, although one could find clues about it in the discussion of the role of criticism in the growth of knowledge.

### Bio-Psychological mediation

In the previous section has been said that Popper considers real any object able to be said as being cause of some phenomenon, it can be easily understood when we talk about cause-effect relations in the physical world (World 1) – when one billiard ball touches the other and communicate movement, for instance. Not so easily is to understand how an idea can affect a billiard ball...

Let's keep the billiard example; it is a too much simplistic example, but it probably will make things easier to understand.

If we are going to follow Popper we can easily show that our intention of playing billiards is the cause to take the cue and hit the balls in a certain way, therefore we can see how a mental state, or a World 2 object (our intention to play billiards) affects the physical world (World 1). But the analogy goes further, we can advance and see in a simple billiards match how a World 3 object can affect a World 1 object. Certainly in Popper's view it is an indirect influence.

Playing billiards is not just a matter of hitting the balls with the cue. We have to hit the right balls in a certain way that drives the proper balls to find their way to the pockets in the appropriate sequence. One can do it purely intuitively, other person taking advantage of long term practice, and even other one, who never had played billiards before and doesn't trust his own intuition, can decide to use a physical theory about linear momentum (a World 3 entity) to strike correctly the balls (World 1).



FIGURE 1 REPRESENT THIS MEDIATE RELATION BETWEEN WORLDS 1 AND 3, AND THE DIRECT RELATION BETWEEN WORDS 1 AND 2, AND WORLDS 2 AND 3.

So in this example we can see how a World 3 entity, a theory about how objects behave after shocking against other objects can through a conscious decision and choose (World 2 objects) affect a World 1 object (the cue and the balls). From Popper's point of view every interaction between a World 3 object and a World 1 object will happen in this fashion, i.e.,

mediated by the World 2 – a conscious state. Just to give one more instance, that is the way a car is build: a project become a blueprint and them a “real” car.

**Material-Semiotic mediation**

The model presented in figure 1 is easy to read, but things gain complexity when we look to Popper’s model and discover that there are as many Worlds 2 as there are conscious beings. If we assume as Popper asks us that World 2 is the world of conscious states and subjective knowledge we have to assume the existence of a different World 2 to each conscious being, for we don’t share conscious states or subjective knowledge with other conscious beings. In a certain sense we can say that while a World 2 make boundaries with Worlds 1 and 3 it has no point of contact with another World 2! It is at just one step to solipsism!

How could a so vigorous defender of democratic and open societies, of the joint intellectual work, of the critical and free debate of ideas, as Popper certainly was, be acquainted with a solipsist view? There is not a given answer to it in Popper works, but there are a few clues and suggestions that I want to develop here in a tentative, conjectural, *a la* Popper, way.

My premise is simple: as the communication between World 1 and 3 is made possible via bio-psychologically mediation through World 2, the communication between two different Worlds 2 (i.e., two human beings A e B, for instance) is only possible via material-semiotic mediation of Worlds 1 and/or 3. Figure 2 illustrates the point that will be further developed bellow.

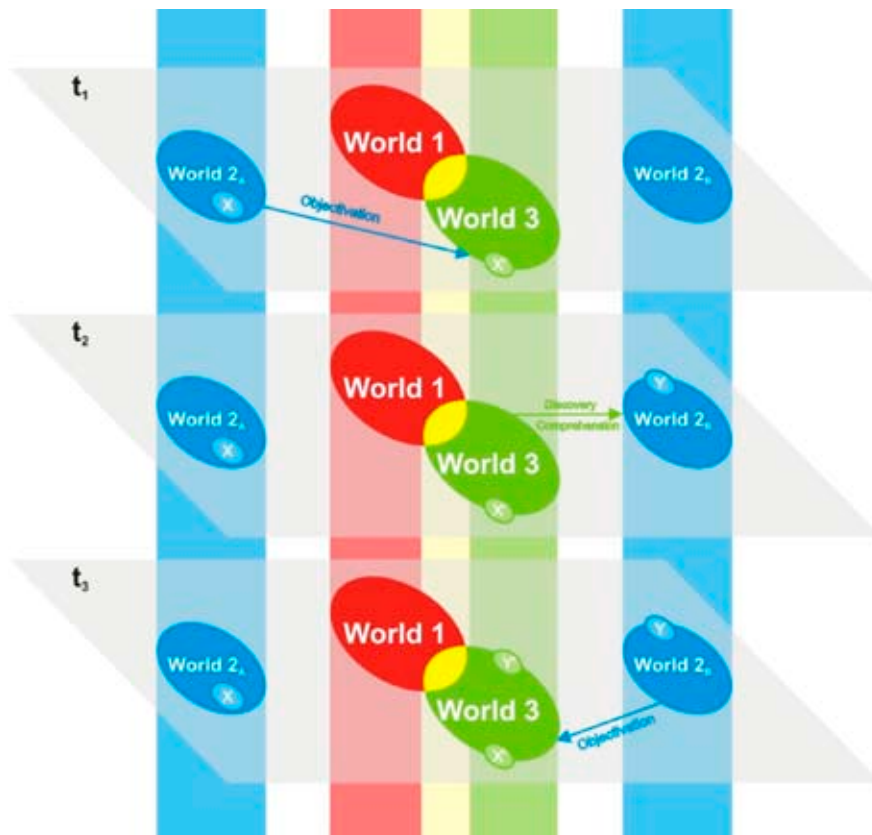


FIGURE 2

In figure 2 we can see the “dynamics” of the model I am proposing. According to Popper’s view we humans, once we have a developed language able to describe reality in terms of true or false sentences, are able to objectify our mental states (in some extent) and make them publicly available to other human beings. This interchange of information through material objectivation of our ideas (the intersection between worlds 1 and 3, in yellow) is the base of communication between people according to Popper theory, curiously it is the same echelon that lies under his Logic of Discovery.

While psychologically it is just needed to have a language able to describe states of affairs in order to objectify mental states and therefore communicate, one thing else is asked for the growth of scientific knowledge, argumentation. By its turn argumentation is only possible by this objectivation of a “subjective knowledge”, when it arises in a form of a linguist formulated and criticizable theory at World 3 it can gain the status of “objective knowledge” (i.e., shared criticizable knowledge).

Once scientific objectivity lies on the possibility of intersubjective agreement/disagreement (Popper, 1978/2009; Doria 2009) according to Popper, we can say it lies equally on the possibility of sharing of subjective (or mental) states, what brings Popperian Epistemology close to a Psychological/Communicational model (Berkson and Wettersten, 1984; Hacohe, 2000).

### A SPECIAL CASE AND LIMIT

To end this paper I want to present a problem in my proposed model. This problem is a special case present in a few Popper reflections about the theme (Popper and Eccles, 1977): the hypostatization of the “I”, or in other words the “I” as an World 3 object. To Popper this is basis of self-consciousness. According to him we just can reach selfconsciousness if we can create a theory about the “I” and reflect on it. He says clearly that we have to learn to be an “I” based on the available theories we encounter while growing up.

It opens lots of intriguing questions: would Popper be open to assume something alike a socio-cultural approach in Psychology? Or even a historical one? These questions deserve to be closely and deeply studied. However it creates also some great problems to the Popperian model of communication, for not everyone can have access to the hypostatized “I” in the same way. The I who hypostatizes him/herself certainly have a privileged access to his/her own objectified version, what creates an asymmetry hardly consonant with the idea of publicity of World 3 entities present in Popper’s model.

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