The Principle of Galilean Objectivity and Consciousness

by *Astro Calisi*

One of the greatest problems posed by conscious experience - at least as commonly affirmed - consists in the fact that it is irremediably subjective, while science deals, by methodological status, only with objective phenomena, which can be detected with rigorous methods by several observers. The prescription of objectivity, a basic requirement to which science owes much of its incredible success, was introduced, as is known, by Galileo in order to distinguish between the properties belonging to the phenomena, which exist independently of the observer (spatial extension, shape, weight, quantity...), from the characteristics that depend on the observer, being the result of the action that bodies exert on his senses (colours, sounds, tastes, smells...). Galileo thought that scientific investigation should deal exclusively with the first type of property, as it is susceptible to accurate measurements, unlike the second, which allows only qualitative attributions.

This is a methodological choice of fundamental importance for the progress of the nascent Renaissance science, aimed – as we well know – to shake off the dogmas of the Aristotelian worldview. especially in the consideration that Galileo, in some aspects, aimes to go beyond what immediately appears. In this, he is a more advanced position than the Baconian inductive method, based on the conviction that it is sufficient to observe nature, provided that certain rules are followed, to derive, as a sort of essential synthesis, the laws of its behavior. Galileo understands that the laws of nature are not immediately evident on observation, since they are never "pure", but usually occur associated with each other. For example, the laws of uniform motion cannot be deduced from the observation of the bodies motion on Earth, since bodies are inevitably subject to different stresses (force of gravity, friction...). We must therefore ask nature the right questions (to undergo targeted experiments) so that it gradually reveals its secrets to us.

However, we cannot forget that Galileo's cognitive interests were directed towards the phenomena of natural world, and specifically to the motion of bodies near the Earth's surface. His distinction was well legitimate with regard to the type of events he investigated. When, in the other hand, we turn to the field of mind, and especially to conscious experience, the prescription of objectivity present itself as a true nonsense. How can we study a phenomenon that manifests itself exclusively in the subjective dimension of individuals by objective and impersonal methods? Subjective experiences are in fact the only data by which consciousness reveals itself to us.

Therefore, if we want to study consciousness, we cannot help but take into consideration conscious states and contents. Any other cognitive approach that aims to exclude or to overshadow conscious data is legitimate, but certainly it is not addressed to consciousness.

The requirement of objectivity, in any case, cannot be invoked as a discriminating factor to exclude consciousness from the list of objects and phenomena that can be scientifically investigated. This is an argument used for a long time by reductionists to distance themselves from a phenomenon that seems intractable with traditional scientific categories, in order to safeguard a certain image of science which is considered applicable, without substantial changes in methodology, to every area of reality. This strategy is only justifiable if we systematically ignore the most significant aspects of conscious experience as it presents itself to each of us. Since it is true that every state or content of consciousness inevitably remains confined to the horizon of a given subjectivity, but it is also true that even perceptual data, assumed as objective data, valid for science, cannot under any circumstances ignore consciousness. In fact, every observational data is constituted as such in the domain of facts on which we are can reflect and perform elaborations, or to confront ourselves with other human beings, only on condition that it is consciously detected: there in no observation of facts that in any way can contribute to our explicit knowledge of the world, and therefore to the development of science, except in the form of conscious perception.

There are obviously also forms of implicit knowledge, which we have acquired in the past, through largely unconscious learning. Most of this knowledge is operational, developed through close sensory-motor interaction. Much of our skills related to moving through space and, even more, manipulating objects, especially when they require the use of tools, are of this type. This knowledge, which we are unable to explain fully, by means of language, can never become science. Science is based on well-defined formulations, elaborated to explain the phenomena we observe consciously. What is not perceived at a conscious level, does not raise questions, cannot become the object of reflection, cannot feed theoretical elaboration, and is therefore destined to remain outside science. In short, every fact, in order to acquire the status of observational data, must first of all become conscious, that is, be mediated by consciousness, presenting itself to a specific subject through the form of conscious experience.

From these brief considerations it can be understood that individual subjectivity, so despised by scientists, constitutes in actually one of the indispensable foundations of the entire scientific enterprise. What is ordinarily defined as the *empirical basis* of phenomena is in fact the result of more conscious experiences which, through a comparison among several individuals, is conventionally taken as an objective fact. This means that the objectivity of science is nothing more than a form of *intersubjectivity*, the result of an agreement established among individuals who share similar (conscious) perceptual systems and the same methodological standard.

But, if this is the case, the traditional contrast between the objectivity of ordinary physical phenomena and the subjectivity of conscious experience - the cornerstone of almost all reductionist theories of mind, also loses much of its relevance and indeed risks appearing entirely pretentious. Objectivity is what is constructed by men from the contents of their subjective experience, placing the latter as an original, primitive datum from which one cannot prescind. The "phenomenon", on the other hand, takes shape following the repetition of similar experiences, through a process of generalization which tends to extract the common characters and group them into categories. When the experiences and the relative conceptualizations of the single individuals arrive to confront each

other by language, objectivity developes little by little, that is, the tacit understanding that allows to built up a system of shared knowledge: what we call science.

We must never forget, however, that the objectivity thus constituted cannot be considered as independent from individuals, i. e. as something that exists in itself. It is precisely this way of considering objectivity, and in particular scientific objectivity, that leads to seemingly insurmountable contrasts between contents captured at the conscious level (the so-called *first-person phenomena*) and perceptual data referring to the external world (*third-person* data). In fact, there is no such conflict, as we can easily verify by comparing the experiences of individuals. I cannot doubt the existence of an object that I call "table", here, in front of me, according to what my visual and tactile experience suggests, because I can compare my experience with yours, using language, and verify that they are very similar; in a strictly analogous way, I cannot feel on my skin what you feel when you take a cold shower, but I can, in turn, take a cold shower and then compare my experience with the verbal description you make of your experience: by the substantial agreement that I will obtain from it, I may conclude that what you experience in the world or about yourself is very similar to what I experience in the same situations. I have no reason to doubt the fundamental unity of the experience lived by human beings, both with respect to their inner states and to their perceptions of the external world. But, then, the prescription of objectivity, in the name of which one would deny the existence of conscious phenomena or exclude them from scientific investigation, reveals itself to be a inconsistent discriminating factor.

[Astro Calisi, *Oltre gli orizzonti del conosciuto...*, pagg. 250-253 - English translation by the author]