

GIUSEPPE LO DICO*

THE RELATIONSHIP BETWEEN INTROSPECTION AND FOLK PSYCHOLOGY: AN OVERVIEW

The epistemic status of introspection remains a controversial topic. Due to its subjective character, introspection is not an easy fit with natural sciences or a physicalistic picture of the mind. In literature, introspection is conceived as dealing only with macro-cognition and not with micro-cognition, the supposed object of study of scientific psychology. This essay discusses the epistemic status of introspection in light of its relationship with folk psychology and spells it out through an analysis of the positions of Wilkes, Alston, Schwitzgebel, and Churchland. Specifically, the essay makes a distinction between folk and scientific psychology and addresses the issue of the incorrigibility/infallibility of introspective judgments. The essay endorses a view according to which introspection should be conceived as a cognitive process the contents of which are provided by folk knowledge. It shows how this view can be appreciated as scientific, provided that a physicalistic image of the mind is rejected.

Keywords: Introspection, Folk Psychology, Scientific Psychology, Natural Sciences, Human Sciences

1. Introduction

Perhaps it is trivial to argue that the role of introspection in psychology is a controversial topic. In fact, in all the forms in which introspection has appeared throughout the history of psychology, its defining features¹ have been difficult

* Università Cattolica del Sacro Cuore, Milano. Email: giuseppe.lodico@unicatt.it
Received: 31.08.2020; Approved: 03.02.2021.

¹ E. SCHWITZGEBEL, *Introspection*, in E.N. ZALTA (ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition): <https://plato.stanford.edu/archives/win2019/entries/introspection/>. Few contemporary philosophers of the mind would call a process *introspective* if it does not meet the following three conditions:

- (1) The mentality condition: introspection can generate knowledge only about the mind and not the external world;
- (2) The first-person or subjective condition: introspection can generate knowledge about one's own mind only and no one else's. This means that it is strictly entrenched in subjectivity;
- (3) The temporal proximity condition: introspection can generate knowledge that regards only a certain narrow temporal window.

to be understood scientifically, at least according to a view of psychology as a natural science. Thus, although the appeal to introspection as a cognitive process and a method of inquiry has never disappeared from psychology² and we can find some recent ingenious application of it³, researchers have always regarded it with suspicion. As Hurlburt and Akhter argue,

if it seems strange to have to remind ourselves that inner experience is important, it is because the science of psychology has banned inner experience from scientific discourse so thoroughly that for the last half-century the term 'introspection' doesn't even appear in textbooks of psychological method⁴.

Methodologically, one of the crucial problems with introspection is whether the assessment of the validity of the introspective evidence can be based on the same criteria through which the validity of the behavioral evidence is assessed. Although it is clear that the introspective data of research are not introspective experiences *per se* but rather public reports of these experiences, it is less clear whether the veridicality of these reports can be validated inter-subjectively as behavior or any other observational evidence⁵. These reports are «the only form of evidence that directly bears on consciousness and subjective states»⁶. It is doubtful that the same criteria of validity apply to both introspection and the observation of behavior, unless the aim is to reduce or eliminate the subjective nature of introspection itself. Accepting introspection as a source of evidence implies accepting the irreducibility of the subjective point of view. This essay focuses on one of the main features of introspection, its subjective character. Goldman, who extensively deals with this topic in various essays, argues that researchers' attempts «to show that the measure of subjective awareness is correlated with other non-subjective measures, measures concerning behavioral effects» seem «to be a search for the sort of independent validation»⁷ of introspection and its data. By «independent validation» Goldman means that, according to some authors, introspection and the data emerging from it require external support in order to be validated. Their subjective character renders them

² A. COSTALL, 'Introspectionism' and the Mythical Origins of Scientific Psychology, «Consciousness and Cognition», 15 (2006), 5, pp. 634-654.

³ R.T. HURLBURT - S.A. AKHTER, *The Descriptive Experience Sampling Method*, «Phenomenology and the Cognitive Sciences», 5 (2006), pp. 271-301.

⁴ *Ibi*, p. 272.

⁵ U. FEEST, *Phenomenal Experiences, First-Person Methods, and the Artificiality of Experimental Data*, «Philosophy of Science», 81 (2014), 5, pp. 927-939. See also W.P. ALSTON, *Can Psychology do without Private Data?*, in J.M. NICHOLAS (ed.), *Images, Perception, and Knowledge. Papers Deriving from and Related to the Philosophy of Science Workshop at Ontario, Canada, May 1974*, D. Reidel Publishing Company, Boston 1977, pp. 251-289.

⁶ A.I. JACK - A. ROEPSTORFF, *Introspection and Cognitive Brain Mapping: From Stimulus-Response to Script-Report*, «Trends in Cognitive Sciences», 6 (2002), 8, pp. 333-339.

⁷ A.I. GOLDMAN, *Can Science Know When You're Conscious? Epistemological Foundations of Consciousness Research*, in Id. (ed.), *Pathways to Knowledge. Private and Public*, Oxford University Press, Oxford 2002, pp. 114-135.

non-reliable *per se*; they can be easily subjected to biases and distortions. They must be compared with other, more objective methods and data, and in order to be validated they must be less prone to biases and distortions. Goldman disagrees with such a position, as it would be too demanding and restrictive to seek independent validation for introspection⁸. He argues that, like other cognitive processes, such as memory, introspection must be conceived as a basic cognitive process. Because of its basic character, it is practically impossible to assess its reliability without appealing to premises or conditions that themselves rely on introspection. Goldman argues that, in order to validate introspection as a method of inquiry, we must accept some degree of circularity because of the basic nature of introspection as a cognitive process. Because this circularity is not peculiar to introspection and is something that concerns all methods of research to some extent, introspection cannot be renounced as a method of inquiry.

Goldman proposes two ways to control introspection: self-consistency («it should not deliver inconsistent judgments about conscious states [...] on pain of proving itself to be highly unreliable») and coherence («introspection should cohere [...] with other belief-forming methods»)⁹. These ways of control are different from those required for objective measures such as the observation of behavior because they are internalistic (they do not appeal or refer to the outside world)¹⁰.

Despite his defense of the autonomy of introspection as a method of inquiry, Goldman often warns that its use in cognitive science must be limited. This is because introspection can be applied only to the study of *the macroscopic conscious states* or *personal-level descriptions*, not to most of cognition (postulated as working at an unconscious, that is, computational or neurological level). Goldman here refers to a common distinction in psychological and philosophical literature, that between personal and sub-personal level¹¹. Far from defined, such a distinction is the subject of a wide debate. For the aims of this essay, this is nothing but a reflection of the distinction between macro- and micro-phenomena in modern natural science¹². As for the other natural sciences, in psychology unobservable (unconscious, inaccessible to subjectivity) mental phenomena are assumed as the main determinants of behavior, whereas observable (conscious,

⁸ *Ibi*, p. 131.

⁹ *Ibi*, p. 132.

¹⁰ P. KOSSO, *Reading the Book of Nature: An Introduction to the Philosophy of Science*, Cambridge University Press, Cambridge 1992, p. 32

¹¹ On this point, see J.L. BERMÚDEZ, *Personal and Sub-Personal; A Difference without a Distinction*, «Philosophical Explorations», 3 (2007), 1, pp. 63-82; C. GABBANI, *Dalla Persona al Subpersonale e Ritorno*, «Thaumazein. Rivista di Filosofia», 4-5 (2016-2017), pp. 153-184: <http://rivista.thaumazein.it/index.php?journal=thaum&page=article&op=view&path%5B%5D=83>. For a critical discussion regarding two important psychological models of mind, see G. LO DICO - N. GAI, *In Defense of the Central Role of Consciousness versus the Prevalence of the Unconscious in Bargh's and Kahneman's Models of Mind*, «Rivista di Filosofia Neo-Scolastica», CX (2018), 1-2, pp. 41-52.

¹² KOSSO, *Reading the Book of Nature*, pp. 105-122. See also E. FESER, *Philosophy of Mind. A Beginner's Guide*, Oneworld Publications, Oxford 2005, pp. 50-54.

accessible to subjectivity) have a very limited role¹³. This distinction is connected to another highly controversial topic, that between folk and scientific psychology.

2. Which Psychology for Introspection?

Goldman bases his distinction between macro- and microscopic cognition on the wider distinction between folk and scientific psychology – one of the most fundamental and controversial topics in psychological and philosophical literature: fundamental because, in our daily interactions, each of us appeals to some sort of psychological knowledge for understanding ourselves and others; controversial because, in our daily interactions, each of us appeals to some sort of psychological knowledge for understanding ourselves and others but does not usually think like a scientist. In literature, the distinction between folk and scientific psychology has been characterized in many different and sometimes contrasting ways¹⁴. This essay does not aim to provide an account of the debate about the relationship between folk and scientific psychology; it limits its scope to describing and offering an opinion on the distinction.

A good starting point is the definition of *scientific psychology* that the APA dictionary of psychology offers, specifically the entry *cognitive psychology*, the main current scientific trend in psychology:

The branch of psychology that explores the operation of mental processes related to perceiving, attending, thinking, language, and memory, mainly through inferences from behavior. The cognitive approach [... is peculiar in] (a) emphasizing unseen knowledge processes instead of directly observable behaviors and (b) arguing that the relationship between stimulus and response is complex and mediated rather than simple and direct¹⁵.

It is important to note that, at the end, the entry refers to two other entries, *information processing* and *information theory*¹⁶, as being strictly related. This indicates that the «unseen knowledge processes» mediating between the stimuli and the responses can be treated according to the operations postulated by the information theory and thus in terms of algorithms and computations. Mental is here conceived as a hierarchically structured device able to perform a limited number of operations

¹³ See R.E. NISBETT - T.D. WILSON, *Telling More than We Can Know: Verbal Reports on Mental Processes*, «Psychological Review», 84 (1977), 3, pp. 231-259; J.F. KIHLSSTROM, *The Cognitive Unconscious*, «Science», 237 (1987), 4821, pp. 1445-1452; T. WILSON, *Strangers to Ourselves. Discovering the Adaptive Unconscious*, Belknap Press, Cambridge (MA) 2002; M. ELTON, *Consciousness: Only at the Personal Level*, «Philosophical Explorations», 3 (2000), 1, pp. 25-42.

¹⁴ See R.J. BOGDAN (ed.), *Mind and Common Sense. Philosophical Essays on Commonsense Psychology*, Cambridge University Press, Cambridge 1991.

¹⁵ G.R. VANDENBOS (ed.), *APA Dictionary of Psychology. Second Edition*, American Psychological Association, Washington 2015, p. 206.

¹⁶ *Ibi*, p. 539.

on symbols¹⁷. Thus, having some operations and algorithms at their disposal, psychologists can provide formalized models of how the mind works (of the elaboration processes transforming a certain stimulus in input in a response in output).

It is almost compulsory now to consider the entry *folk psychology*: «the everyday, commonsense, implicit knowledge that enables the prediction or explanation of the behavior of others (and of oneself) by reference to the mental states involved»¹⁸. Perhaps the vagueness and platitude of this definition is a sign that the realm of folk psychology is wider and less circumscribed than that of scientific psychology. Thus, it would be good to try to substantiate it. Folk psychology refers to all those ordinary psychological notions regarding various internal mental states (occurring and/or dispositional)¹⁹. These notions provide the basis for laymen to understand and sometimes predict their behavior and that of others in daily interactions. Here, folk psychology refers to that repertoire of mental concepts like intentional concepts such as beliefs, desires, decisions, motivations, etc.²⁰. Because such concepts are connected in a highly complex network representing our folk knowledge about ourselves, others, and the world outside ourselves, folk psychology depends on the culture or the context in which we live²¹: it is the place in which our actions and intentions occur. Folk psychology recognizes the existence of the world outside of ourselves, a world that can modify and influence our intentional states in many and sometimes unexpected ways²².

Because folk psychology is so entrenched in our culture and everyday contexts, some authors²³ argue that it can be better conceived as a set of practices rather than a theory. Although this essay agrees that folk psychology is rooted in our ordinary practices and that «a protolinguistic grasp of folk psychology is well in place as a feature of praxis before the child is able to express or comprehend the same matters by language»²⁴, folk psychology is not only a set of practices but it is also (perhaps foremost) a theory about mind and behavior. Folk psychology assumes that people are rational agents whose actions are the systematic products of their propositional attitudes or intentional states. Actions can be explained in

¹⁷ H.A. SIMON, *The Human Mind: The Symbolic Level*, «Proceedings of the American Philosophical Society», 137 (1993), 4, pp. 638-647.

¹⁸ VANDENBOS, *APA Dictionary of Psychology*, p. 429.

¹⁹ W.E. LYONS, *The Disappearance of Introspection*, MIT Press, Boston 1986, p. 126; B. VON ECKARDT, *Folk psychology (I)*, in S. GUTTENPLAN (ed.), *A Companion to the Philosophy of Mind*, Blackwell, Oxford 1994, pp. 300-307.

²⁰ L.R. BAKER, *What is this Thing Called 'Commonsense Psychology'?*, «Philosophical Explorations», 2 (1999), 1, pp. 3-19.

²¹ J.S. BRUNER, *Acts of Meaning. The Jerusalem-Harvard Lectures*, Harvard University Press, Cambridge 1990, pp. 12-15.

²² *Ibi*, p. 52.

²³ See, for example, K.V. WILKES, *The Long Past and the Short History*, in BOGDAN, *Mind and Common Sense*, pp. 144-160.

²⁴ BRUNER, *Acts of Meaning*, p. 74.

these terms so it is plausible to derive a set of principles (a theory) able to understand and sometimes predict them²⁵.

Another difference must be stressed: folk psychology is not specialized knowledge that requires specific training to be learned; although it can reach a high degree of sophistication as exemplified in the writings of the earliest Greek authors²⁶. It is «something which we inevitably learn as we learn a language, come to understand others, and as we mature within a human society or culture»²⁷. On the contrary, scientific psychology is a specialized knowledge that requires demanding and expensive training: «it is not common to all human cultures or societies, though many of the facts it discovers are true of the members of these societies»²⁸.

At the basis of this contrast there are important differences in the philosophical foundations of the two psychologies. Scientific psychology endorses physicalism as its philosophical counterpart, so that psychology must be considered as part of the natural sciences. The mind is postulated as a natural object that can be studied with the methods of the natural sciences. A nomological or mechanistic explanation can be applied to the mind, whereby mind and behavior can be explained in terms of causes. Conceiving the mental in terms of information processing allows psychologists to equate the mind as an objectively and intersubjectively defined computational device – the subjective dimension (and thus all the propositional attitudes) is at best «an epiphenomenon that the computational system outputted under certain conditions, in which case it could not be a cause of anything»²⁹. By contrast, the subjective dimension is central in folk psychology. Folk psychology conceives actions as products of an agent's reasons, not of an agent's computational or neurophysiological states or of sociological or psychological laws. This is a subjective, first-person perspective, not one of an external person observing the behavior of another person, able to provide an objective, third-person perspective on the behavior. Subjectivity and first-person perspective, so entrenched in folk psychology, entail the possibility of agents having chosen to do other than they did. This radically differs from what happens in the natural sciences, in which these notions are absent or reduced as much as possible: «explanations in natural science point to physical connections that are necessary precisely because they do not include the idea of objects being able to choose to do other than they do»³⁰. Folk psychology cannot endorse any version of physicalism, at least at the

²⁵ T. HORGAN - J. WOODWARD, *Folk Psychology is Here to Stay*, «Philosophical Review», 94 (1985), 2, pp. 197-226.

²⁶ K.V. WILKES, *The Relationship between Scientific Psychology and Common-Sense Psychology*, «Synthese», 89 (1991), 1, pp. 15-39.

²⁷ T. CRANE, *Elements of Mind. An Introduction to the Philosophy of Mind*, Oxford University Press, Oxford 2001, p. 1.

²⁸ *Ibidem*.

²⁹ BRUNER, *Acts of Meaning*, p. 9.

³⁰ M. BEVIR, *Historical Explanation, Folk Psychology, and Narrative*, «Philosophical Explorations», 3 (2000) 2, pp. 152-168.

explanatory/epistemological level³¹. This is because an agent's reasons seem to be irreducible to physical causes and do not appear to fit the causal network proposed by physical sciences³². Thus, psychology must be considered as part of the human sciences in which there is room for reason discourse and not for causal discourse³³.

Although introspection and folk psychology share subjectivity as a common ground, literature does not adequately spell out the relationship between the two. Even Bruner's *Acts of Meaning*, perhaps the strongest defense of folk psychology, makes only a quick mention of introspection³⁴.

The lack of emphasis on the connection between introspection, folk psychology, and subjectivity in literature is curious because propositional attitudes are entrenched in folk psychological assumptions and appear to be the main subject of introspective capacity. Because introspection implies a subjective perspective, it can access only those mental states identified under the categories of folk psychology and not those defined at the neurological or computational level³⁵. Perhaps a reason for this is that it appears trivial that a propositional attitude is open to introspection. For example, one's belief that *Tales of Ordinary Madness* is the best Bukowski book is directly accessible to one's introspection: it is something immediate that does not require any appeal to inference. Even on reflection, a person is not able to cite any other fact he claims in support of such a claim³⁶. If the person were asked how he knows about his belief about Bukowski's book, he could immediately reply something such as, «I just know it», or even say something about how he acquired his belief. In spite of its immediacy, the belief about the book is connected to a complex network of contents that, starting from one's belief about *Tales of Ordinary Madness*, can potentially comprehend all the person's general knowledge of the world and himself. Such a network can be defined as unconscious in a certain sense; it persists through time without contributing to the person's phenomenology³⁷. For example, the belief persists whether or not the person is consciously considering this topic. This definition of unconscious is different from the one commonly used in scientific psychology. In fact, the unconscious network of

³¹ On the distinction between the ontological and explanatory/epistemological levels, see CRANE, *Elements of Mind*, pp. 54-55.

³² FESER, *Philosophy of Mind. A Beginner's Guide*, p. 146. See also T. CRANE, *The Mechanical Mind. A Philosophical Introduction to Minds, Machines and Mental Representation. Second Edition*, Routledge, London 2003, pp. 211-232; K. LENNON, *Reasons and Causes*, in GUTTENPLAN, *A Companion to the Philosophy of Mind*, pp. 531-535.

³³ On this point, see also G.H. VON WRIGHT, *Explanation and Understanding*, Cornell University Press, Ithaca 1971.

³⁴ BRUNER, *Acts of Meaning*, p. 99.

³⁵ R. MORAN, *Authority and Estrangement. An Essay on Self-Knowledge*, Princeton University Press, Princeton 2001, p. 7.

³⁶ W.P. ALSTON, *Varieties of Privileged Access*, «American Philosophical Quarterly», 8 (1971), pp. 223-241; MORAN, *Authority and Estrangement*, pp. 10-12.

³⁷ D. SMITHIES, *A Simple Theory of Introspection*, in ID. - D. STOLJAR (eds.), *Introspection and Consciousness*, Oxford University Press, Oxford 2012, pp. 259-293.

our knowledge and beliefs has nothing in common with matters on the computational level (the above-mentioned unseen knowledge processes) that are the object of study of scientific psychology. This is because *micro-cognition* is *a priori* postulated as inaccessible to introspection and working regardless of the contents it has to process. In this sense, the unconscious of macro-cognition is phenomenally individuated, that is, «individuated wholly by its dispositions to cause phenomenally conscious states of judgment»³⁸. This means that this unconscious can become conscious (of course, sometimes easily, sometimes uneasily) every time the person wants and need and thus available to introspection. If we conceive macro-cognition in this manner, we must accept the two following implications:

- (1) Most of the contents of introspectively accessed macro-cognition come from our folk knowledge of the world, ourselves, and others, and they determine our thoughts and behaviors.
- (2) Because of the fundamental role of introspection in accessing the contents of macro-cognition, subjectivity assumes a crucial position in folk knowledge.

Both implications are problematic. Apart from Goldman's proposal and other similar ones, according to which what occurs in macro-cognition can determine only a minimal part of our thoughts and behaviors, another problem with both implications has to do with the fact that introspection is considered as an inadequate source of reliable judgments. In Schwitzgebel's words,

there are two kinds of unreliability. Something might be unreliable because it often goes wrong or yields the wrong result, or it might be unreliable because it fails to do anything or yield any result at all. [...] Introspection is unreliable in both ways³⁹.

Introspection as a source of errors is parallel to folk psychology as an unreliable theory about the mental. Two main questions are addressed: whether to consider only scientific psychology as scientific or whether this consideration can be valid also for folk psychology; and whether introspection's supposed incorrigibility renders it unreliable as a method of inquiry. In order to answer the first question, the essay focuses on Wilkes' seminal 1991 essays on the relationships between scientific and folk psychology⁴⁰; to answer the second question, the essay considers Alston and Schwitzgebel's arguments about introspection's incorrigibility and infallibility. Finally, the essay provides a discussion of Churchland's position regarding folk psychology and introspection, as it addresses both questions.

³⁸ *Ibi*, p. 277.

³⁹ E. SCHWITZGEBEL, *The Unreliability of Naive Introspection*, «Philosophical Review», 117 (2008), 2, pp. 245-273.

⁴⁰ WILKES, *The Long Past and the Short History*, pp. 144-160; EAD., *The Relationship between Scientific Psychology and Common-Sense Psychology*, pp. 15-39.

3. Wilkes' Distinction between Folk Psychology and Scientific Psychology

The relationship between scientific and folk psychology is tricky and harkens back to an old philosophical debate that this essay does not consider in its entirety⁴¹. The essay explains the relationship in the following way: both folk psychology (as it will be shown, an adequately treated version of it) and the so-called scientific psychology can be considered scientific in a certain sense and thus are potentially competing and sometimes juxtaposed, but they express two different views of science and have different standards and criteria. Folk psychology refers to an image of science typical of the human sciences in which subjectivity plays a central role; scientific psychology to an image typical of the natural sciences in which subjectivity must be reduced as much as possible. Folk psychological theories are founded on the subjective point of view, scientific psychological ones on the objective/ intersubjective point of view. This difference prevents folk psychology and its theories to be scientific: as Wilkes explicitly argues, «since common-sense psychology explanations are typically of specific agents at specific times, they all belong to an equally specific and individual context»⁴². For Wilkes, the consequence is that, while both folk and scientific psychology aim to explain and predict behavior, unlike scientific psychology, folk psychology does not do it systematically, that is, it does not describe behavior and mental states in terms of natural kinds. Folk psychology does not and cannot appeal in any way to the laws of nature and thus cannot be a scientific endeavor⁴³. Thus, she points out that the two psychologies cannot be in competition; each works adequately within its own context of application⁴⁴.

Wilkes' 1991 essay provides a useful account of the differences between folk and scientific psychology. It correctly remarks that folk psychology explanations cannot be laws of nature, because it has subjectivity as a fundamental and non-eliminable aspect. Wilkes bases her arguments on the idea that science must be necessarily and solely identified with natural science. She declares herself as a physicalist⁴⁵ (she assumes physicalism *a priori* but never defends it) and points out that, while folk psychology is by definition independent from physiology and neuroscience, scientific psychology is not. Scientific psychologies such as «psychoanalysis and developmental psychology, although at present they pursue their research independently of the neurosciences, are nonetheless tied to them in the long run»⁴⁶. This argument, which physicalists commonly propose in order to support their positions, is questionable because it is based on

⁴¹ See BOGDAN, *Mind and Common Sense*.

⁴² WILKES, *The Relationship Between Scientific Psychology and Common-Sense Psychology*, p. 23. See also EAD., *The Long Past and the Short History*, p. 146.

⁴³ EAD., *The Relationship Between Scientific Psychology and Common-Sense Psychology*, p. 19.

⁴⁴ *Ibi*, p. 15.

⁴⁵ *Ibi*, p. 26.

⁴⁶ *Ibidem*. See also EAD., *The Long Past and the Short History*, p. 146.

a prediction on how the shape of psychology will be in the future – a prediction that is at best a hypothesis as plausible as its opposite, that is, that in the future the contribution of physiology and neuroscience to psychology will be null or at best marginal. This is linked to the most interesting and controversial feature of Wilkes' essay: the postulation of an insurmountable division between folk and scientific psychology. Although the differences in terms of vocabularies, applications, and methods between the two psychologies are indisputable, only the acceptance of a physicalistic framework can lead Wilkes to assume that «common-sense psychology and scientific psychology are both concerned to explain and predict the behavior of humans and other animals. But after that anodyne point, the similarities end»⁴⁷ and that «common-sense psychology has and needs nothing deserving the name “methodology”»⁴⁸. By *methodology* Wilkes means that folk psychology provides the tools for explaining and predicting behavior but not in a systematic way as in scientific theorizing⁴⁹. This statement appears to be at best exaggerated. In our everyday lives we do not explicitly spell out the principles of our folk psychology, nor do we spend much time providing a systematic framework from them. This does not mean that being systematic cannot be a feature of folk psychology: because folk psychology assumes that humans are agents with some degree of rationality and that there are a certain number of regularities in the connection between mental states and behaviors⁵⁰, it is not implausible to argue that these regularities can be addressed systematically and explicitly spelled out. After all, this occurs in areas of psychology such as developmental or social psychology: «more formal theory in the social sciences involves ascribing to individual actors states which are recognizably descended from the folk psychology notions of beliefs and desires»⁵¹. Even a superficial look at the explanations of certain branches of psychology reveals the large use of terms referring to the categories of folk psychology without impugning it in any way. Consider the following formulation of Kahneman and Tversky's Prospect Theory: «[Prospect Theory is a] theory of risk, in which the carriers of utility are gains and losses-changes of wealth rather than states of wealth». The theory is based upon two main ideas: (1) «preferences are reference-dependent», and (2) «if the individual detects that one option dominates the other, the dominant option will be chosen without consulting their separate evaluations»⁵². The meaning of the terms Kahneman uses is the same we use

⁴⁷ EAD., *The Relationship between Scientific Psychology and Common-Sense Psychology*, p. 19.

⁴⁸ *Ibi*, p. 24.

⁴⁹ *Ibi*, p. 25.

⁵⁰ CRANE, *The Mechanical Mind*, pp. 65-66.

⁵¹ HORGAN - WOODWARD, *Folk Psychology is Here to Stay*, pp. 213-213, fn. 12; BAKER, *What is this Thing Called 'Commonsense Psychology'?*, pp. 16-18.

⁵² D. KAHNEMAN, *Maps of Bounded Rationality: A Perspective on Intuitive Judgment and Choice*, in T. FRÄNGSMYR (éd.), *Les Prix Nobel: The Nobel Prizes 2002*, The Nobel Foundation, Stockholm

every day. They are refined and accurately defined in order to make their work in the theory but, contrarily to what Wilkes argues⁵³, they remain truly folk, neither necessarily referring to natural kinds nor necessarily tied to neuroscientific notions, and nevertheless able to provide a reliable basis for a systematic study.

4. *Infallibility and Incorrigibility*

The discussion of 1991 Wilkes' essays illustrates how subjectivity is entrenched in folk psychology. This is a feature shared with introspection but it still looks quite tenuous. In order to flesh out the connection between folk psychology and introspection, this essay considers a common argument against introspection: the claim that it is unreliable and prone to errors. In psychological research this claim is commonplace and even primitive. Most psychological researchers stress that people tend «to place heavy weight on introspection when seeking self-understanding»⁵⁴. This overconfidence in introspection leads to errors that are avoided by referring to objective sources of evidence. In philosophy this issue is connected to two of the most discussed topics about introspection: its supposed infallibility and its supposed incorrigibility. According to Wilkes⁵⁵, this is a view related to Descartes' metaphysics of mind that proposes «an ontology of incorrigibly knowable, consciously immediate "ideas" for which introspection was the single access route». When a person introspects, he makes highly authoritative judgments that can never be modified. This is a consequence of the immediate and non-inferential character of introspection: in the moment a person believes to be in a certain mental state, then he is actually in that mental state and cannot be in another one⁵⁶. The issue here is whether such a subjective authority actually leads to the incorrigibility of the introspective reports and judgments. In his analysis of introspection, Alston points out that, because of their subjective character, our introspective reports are in fact infallible (rarely mistaken), omniscient (a person can never be ignorant of his mental states), indubitable (no one has grounds for doubting such reports), incorrigible (no one can succeed in showing that such reports are mistaken), self-warranted (always warranted in normal conditions), and truth-sufficient (true reports are always warranted)⁵⁷. It follows that

2003, pp. 449-489.

⁵³ WILKES, *The Relationship between Scientific Psychology and Common-Sense Psychology*, p. 21; EAD., *The Long Past and the Short History*, p. 150.

⁵⁴ E. PRONIN, *The Introspection Illusion*, in M.P. ZANNA (ed.), *Advances in Experimental Social Psychology. Volume 41*, Academic Press, Burlington 2009, pp. 1-67. See also LYONS, *The Disappearance of Introspection*, pp. 130-133.

⁵⁵ WILKES, *The Long Past and the Short History*, p. 156.

⁵⁶ SMITHIES, *A Simple Theory of Introspection*, p. 262.

⁵⁷ ALSTON, *Varieties of Privileged Access*, pp. 239-240.

It seems to be as undeniable as anything could be that persons normally do know what mental states they are in at a given moment, and that no argument designed to show that this is false or meaningless can be sound⁵⁸.

An introspective report satisfies the following conditions:

- (1) Through this utterance, the subject attributes a mental state to himself.
- (2) It is immediate and not based on other beliefs of the person.
- (3) It is generally assumed as immediately warranted.
- (4) Only the subject himself is in the position to satisfy (1), (2), and (3)⁵⁹.

It follows that introspective beliefs cannot be corrected in any way and are infallible.

A similar position can be found in Schwitzgebel's critical analysis of introspection⁶⁰. Unlike Alston, Schwitzgebel does not provide an articulated conceptual analysis of introspection, but makes a simple argument:

Why [...] do people tend to be so confident in introspective judgments [...]? [...] because no one ever scolds us for getting it wrong about our experience and we never see decisive evidence of error, we become cavalier. This lack of corrective feedback encourages a hypertrophy of confidence⁶¹.

In order to defend this argument, Schwitzgebel reports examples from everyday life in which introspection reveals its unreliability, from the emotional⁶² to the visual⁶³, and other sensorial experiences⁶⁴.

Both Alston and Schwitzgebel's arguments appear to focus on the same issue: because of its immediacy and its entrenchment in subjectivity, introspection lacks the possibility of a direct and immediate correction. This is uncontroversial, if not trivial: introspection lacks the possibility of immediate corrective feedback. It is a process that produces knowledge or beliefs about a person's ongoing (or at best immediately past or present) mental life, within a limited temporal window⁶⁵. Because of this temporal narrowness, in the precise moment a person introspects and a certain content comes to her mind, there is no way to modify it. However, this feature of introspection does not necessarily imply that we become overconfident in our introspective judgments and believe ourselves to be infallible. For example, one can immediately introspect being sad and feel

⁵⁸ *Ibi*, p. 224.

⁵⁹ *Id.*, *Can psychology do without private data?*, p. 254. See also *Id.*, *Varieties of Privileged Access*, p. 238.

⁶⁰ SCHWITZGEBEL, *The Unreliability of Naive Introspection*.

⁶¹ *Ibi*, p. 260.

⁶² *Ibi*, pp. 250-252.

⁶³ *Ibi*, pp. 252-254.

⁶⁴ *Ibi*, pp. 254-259.

⁶⁵ *Id.*, *Introspection*.

confident about the truth of introspection but being wrong about it. In fact, he can actually experience fear or rather a mixed feeling difficult to define at the moment he felt⁶⁶. Everyday experience tells us that, at last, these introspective judgments are neither so difficult to interpret nor leading us to infallibility about them. On the contrary, it tells us that these judgments can be retrospectively revised and corrected, in general immediately soon after we had introspected them⁶⁷. That is to say, the temporal window for the introspective judgements is certainly narrow but not so narrow to not permit to recognize our errors and quickly adjust them. Thus, once revised, a person's introspections (or retrospections) can be at his disposal for his subsequent introspections: this is clear in psychological experiments in which the subjects have to learn the structure of a task and become increasingly able to verbally report about it⁶⁸. In this sense, Alston and Schwitzgebel's arguments overestimate the risk of overconfidence in our introspective judgments and their incorrigibility. Both Alston and Schwitzgebel's views conflate incorrigibility and infallibility. The fact that a single act of introspection is always incorrigible (in Alston's terms no one can succeed in showing that such an introspective report is mistaken) does not imply that its contents are always infallible; rather, because such contents pertain to the realm of folk psychology, they can be fallible and thus open to change and revision, often in a very short amount of time. Such contents are not infallible; they are incorrigible in the immediacy of the introspective act but can be retrospectively revised soon after. In brief, «introspection is difficult and fallible; and that the difficulty is simply that of all observation of whatever kind. [...] The only safeguard is in the final consensus of our farther knowledge about the thing in question, later views correcting earlier ones, until at last the harmony of a consistent system is reached»⁶⁹.

5. Paul Churchland on the Relationship between Introspection and Folk Psychology

The puzzle pieces slowly come together. The critical assessment of Wilkes, Alston, and Schwitzgebel's positions leads to the following argument: although subjectivity and immediacy can be classified as basic features of introspection, they do not render incorrigibility problematic. As with other cognitive process-

⁶⁶ On this point, see W. JAMES, *The Principles of Psychology* (1890), Dover Publications, New York 1950, p. 191. For a critical view on James on introspection see LYONS, *The Disappearance of Introspection*, pp. 7-16.

⁶⁷ JAMES, *The Principles of Psychology*, p. 190.

⁶⁸ See for example B.R. NEWELL - D.R. SHANKS, *Unconscious Influences on Decision Making: A Critical Review*, «Behavioral and Brain Sciences», 37 (2014), 1, pp. 1-19.

⁶⁹ JAMES, *The Principles of Psychology*, pp. 192-193.

es and research methods of the natural sciences, introspection can be considered as fallible as and no more and no less error-prone than them. These errors do not depend on introspection directly, but on the accuracy of the network of folk knowledge upon which introspection is based. Such a network provides the contents introspection can access and is open to continuous revisions and modifications through inferences and cognitive processes different from introspection. The fallibility of introspection parallels the fallibility of folk knowledge. This implies that introspection is strongly affected by folk theories. As with introspection, these theories are deeply grounded in subjectivity and reflect an image of science that does not fit with the natural sciences or physicalism.

Churchland discusses these issues throughout his work, dealing directly with the distinction between folk and scientific psychology and indirectly with the error-proneness of introspective judgments. Churchland's most celebrated contributions to philosophy are his attacks on folk psychology and his defense of eliminative materialism. His positions on introspection are not widely discussed in the literature. This is curious because these positions are strictly related to his positions against folk psychology. Perhaps this is because Churchland never provides a detailed account of introspection, leaving it to the reader's intuition. He views introspection similarly to the layman: a folk cognitive process through which one can access the mind. For Churchland introspection is a non-inferential and immediate process for accessing the mind⁷⁰ as well as a form of inner perception not dissimilar to outer perception, except for the direction⁷¹. Absent any reason to think that Churchland rejects the three basic conditions of introspection listed in note 1, it is surprising that he deems the subjective character of introspection unproblematic. Accepting the similarity between observational and introspective judgments implies that the latter cannot have special epistemic credentials in respect to the former⁷². Introspective judgments cannot be assumed *a priori* as incorrigible, indubitable, and infallible. Unlike Alston and Schwitzgebel, Churchland does not rule out the possibility of correcting these judgments: «We are often mistaken in our apprehension of our own desires, emotions, and so forth. [...] It is plain that infallibility⁷³ characterizes a relative small part of one's self-knowledge»⁷⁴. But for Churchland such a difficulty does not depend on the immediacy, subjectivity, or other features of introspection as a folk cognitive process, as Alston and Schwitzgebel suggest. Rather, the incorrigibility and error-proneness of introspective judgments depend on the fact that

⁷⁰ P.M. CHURCHLAND, *Scientific Realism and the Plasticity of Mind*, Cambridge University Press, Cambridge 1979, p. 95.

⁷¹ ID., *Matter and Consciousness*, MIT Press, Cambridge (MA) 1984, p. 7.

⁷² ID., *Scientific Realism and the Plasticity of Mind*, p. 96.

⁷³ Churchland uses *infallibility* and *incorrigibility* interchangeably.

⁷⁴ ID., *Scientific Realism and the Plasticity of Mind*, p. 97.

folk psychology is a radically mistaken empirical theory that will be replaced with a mature cognitive neuroscientific theory in the future. Eliminating folk psychology will radically revise the role of introspection and the formulation of our introspective judgments⁷⁵. Because introspection directly refers to folk psychology as a background conceptual scheme from which we derive our judgments⁷⁶, it is a source of error: the conceptual scheme to which it refers produces mistaken knowledge. Introspection that referred to a more correct framework would result in more correct judgments.

Two important points anchor Churchland's characterization of the relationship between introspection and folk psychology: introspective judgments are depicted as acquired habits of conceptual responses to a person's internal states⁷⁷; thus, substituting folk psychology with a different conceptual framework would allow more sophisticated introspective discriminations:

The introspective discriminations we make are for the most part learned; they are acquired with practice and experience [...]. [These discriminations are] embodied in the psychological vocabulary of the language we learn. The conceptual framework for psychological states that is embedded in ordinary language is [...] a modestly sophisticated theoretical achievement in its own right, and it shapes our matured introspection profoundly⁷⁸.

To better explain this point, Churchland likens people who aim to become good introspectors to people who aim to become good wine-tasters, able to discriminate all the properties of a wine better than most people do⁷⁹. Such wine-tasters appeal to a deeper knowledge of the wine than others do. Throughout his work, Churchland describes the proposed substitute for folk psychology in detail⁸⁰. He envisions a complex cognitive neuroscientific framework that benefits from contributions from neurobiology, cognitive psychology, and artificial intelligence. The highest ambition of such a framework is its promise to offer «a unified account for understanding mental phenomena»⁸¹.

The framework is assumed to be able to overcome folk psychology's failures. There are mainly three failures and they are empirical, not theoretical or conceptual:

⁷⁵ ID., *Eliminative Naturalism and the Propositional Attitudes*, «The Journal of Philosophy», 78 (1981), 2, pp. 67-90.

⁷⁶ *Ibi*, p. 70; ID., *Folk Psychology (2)*, in GUTTENPLAN, *A Companion to the Philosophy of Mind*, pp. 308-317.

⁷⁷ ID., *Eliminative Naturalism and the Propositional Attitudes*, p. 70.

⁷⁸ ID., *Matter and Consciousness*, p. 179.

⁷⁹ *Ibi*, p. 178.

⁸⁰ *Ibi*, pp. 99-180.

⁸¹ ID., *Folk psychology (2)*, p. 315.

- (1) Folk psychology fails to explain many psychological phenomena, including mental illness, sleep, memory, and various types of learning.
- (2) Folk psychology has not made significant progress in at least 2,500 years. There are no substantial differences between today's folk psychology and that of the Ancient Greeks.
- (3) Folk psychology cannot be integrated «with the emerging synthesis of the several physical, chemical, biological, physiological, and neurocomputational science»⁸².

Although Churchland puts the debate at the empirical level, these three failures cannot be classified as completely empirical⁸³. This essay examines whether Churchland's proposed neuroscientific framework can overcome these supposed three failures. Promising empirical ground for this inquiry is the status of empirical research more than 30 years after the first formulations of Churchland's proposal. The first problem is that it is highly doubtful that the synthesis Churchland puts forth has emerged. Cognitive neuroscience is in crisis and fragmented today, with few attempts to unify the various disciplines that it considers. Some methodological issues are at the root of this. Most of the evidence is based on correlations between behavioral and neurophysiological indexes. Because other, *third factors* could jointly contribute to determine the correlation between A and B, correlation coefficients⁸⁴ can measure only the degree of a relationship between variables A and B but not whether one has a direct effect on the other or vice versa⁸⁵. Because many variables occur in a cognitive neuroscientific experiment, it is difficult to control or eliminate third factors, even in the best-designed experiments⁸⁶; it is easy to mistakenly interpret a correlational index as indicating a direct relationship where none exists⁸⁷. The second problem is that some recent

⁸² *Ibi*, pp. 310-311.

⁸³ See also HORGAN - WOODWARD, *Folk Psychology is Here to Stay*, pp. 199-200; CRANE, *The Mechanical Mind*, pp. 70-76.

⁸⁴ See W.R. UTTAL, *Psychomythics. Sources of Artifacts and Misconceptions in Scientific Psychology*, Erlbaum, Mahwah 2003, pp. 124-126; E. VUL - C. HARRIS - P. WINKIELMAN - H. PASHLER, *Puzzling High Correlations in fMRI Studies of Emotion, Personality and Social Cognition*, «Perspectives on Psychological Science», 4 (2009), 3, pp. 139-153; G. LO DICO, *Neuroeconomics, Identity Theory, and the Issue of Correlation*, «Theory & Psychology», 23 (2013), 5, pp. 576-590.

⁸⁵ J. ALDRICH, *Correlations Genuine and Spurious in Pearson and Yule*, «Statistical Science», 10 (1995), pp. 364-376.

⁸⁶ UTTAL, *Psychomythics*, pp. 125-126; VUL - HARRIS - WINKIELMAN - PASHLER, *Puzzling High Correlations in fMRI Studies of Emotion, Personality and Social Cognition*, p. 281.

⁸⁷ K.S. BUTTON - J.P.A. IOANNIDIS - C. MOKRYSZ - B.A. NOSEK - J. FLINT - E.S. ROBINSON - M.R. MUNAFÒ, *Power Failure: Why Small Sample Size Undermines the Reliability of Neuroscience*, «Nature Reviews Neuroscience», 14 (2013), 5, pp. 365-376; A. EKLUND - T.E. NICHOLS - H. KNUTSSON, *Cluster Failure: Why fMRI Inferences for Spatial Extent Have Inflated False-Positive Rates*, «Proceedings of the National Academy of Science of the United States of America», 113 (2016), 28, pp. 7900-7905.

meta-analytic reviews show that a great number of cognitive neuroscientific studies are biased and produce many false positives (that is, Type I Errors) because of their small sample size. As Button and colleagues state, «it is possible that false positives heavily contaminate the neuroscientific literature»⁸⁸. These considerations demonstrate that folk psychology's first two supposed empirical failures also apply to Churchland's neuroscientific framework. This framework cannot explain a great variety of mental phenomena and any progress it has made is at best slow and controversial. Folk psychology's third supposed empirical failure is best considered theoretical and conceptual rather than empirical – a point quite similar to what Wilkes proposes⁸⁹, that science must be identified with the natural sciences. Unlike Wilkes, such a physicalistic claim leads Churchland (he assumes it *a priori* but never defends it) to consider folk psychology as a wrong scientific theory rather than as a non-scientific theory. A reason not to accept this point is the above-mentioned fact that a large part of psychological research is based on folk psychology and shows progress⁹⁰.

These considerations bolster the argument that, at least in the near future, folk psychology will not be replaced by a framework such as Churchland's. At the moment, folk psychology is the best candidate of our daily introspections. However, let's hypothesize that one day Churchland's synthesis emerges. Would this mean that our daily introspections will no longer be based on folk psychology? In order to discuss this point, the essay considers a suggestion from Newton⁹¹. Reconsider the parallel between the expert wine-taster and the expert introspector. The former learns to make finer discriminations on the qualities of wine and to associate chemical and other technical names to certain tastes with which he is already familiar. It is a matter of learning to make more refined and detailed discriminations about the original object of sense perception. Things are quite different for the latter, who must shift from phenomenal to neural properties. It is not a matter of refining and or correcting existing knowledge, as with the expert wine-taster; it is a matter of substituting a theoretical framework with an alternative one. Perhaps one day a mature neuroscience can influence folk conceptions regarding mind and behavior. This would not be anything strange: it can even be said that something is going to happen, although rudimentarily, for example with topics such as the lateralization of brain functions or the so-called social brain. At the historical level, psychoanalysis is the clearest example of a scientific discipline influencing folk concepts and language. However, arguing that in the future

⁸⁸ BUTTON - IOANNIDIS - MOKRYSZ - NOSEK - FLINT - ROBINSON - MUNAFÒ, *Power Failure*, p. 365.

⁸⁹ WILKES, *The Relationship between Scientific Psychology and Common-Sense Psychology*; EAD., *The Long Past and the Short History*.

⁹⁰ See also HORGAN - WOODWARD, *Folk Psychology is Here to Stay*, p. 200; CRANE, *The Mechanical Mind*, p. 76.

⁹¹ N. NEWTON, *Churchland on Direct Introspection of Brain States*, «Analysis», 46 (1986), 2, pp. 97-102.

our *phenomenal experiences* (introspections of our mental states) will appear to be *neural experiences* (introspections of the state of our nervous system) implies that the former are nothing but the latter and, as a consequence, that it is just a matter of time before neuroscientific research shows that to be the case. As seen above, this assumes *a priori* that physicalism is true and correct.

6. Concluding Remarks

This essay defends a view according to which introspection and folk psychology are strictly interconnected and folk knowledge provides the contents with which we immediately and directly deal. Introspection is conceived as a cognitive process with peculiar features. It cannot be immediately corrected (in a strict sense, a single introspective act is actually incorrigible) but it is fallible and can benefit from corrections made in folk knowledge. A strong connection between introspection and folk psychology is based on two main ideas: first, introspection is a basic cognitive process that must be conceived as having proper peculiar epistemic credentials – it cannot be treated according to the methods and standards of the natural sciences; second, folk psychology cannot be conceived as a stagnant and wrong theory, rather, its claims and notions should be considered as basic for a scientific psychology. Here, *science* is understood as a *human* and not *natural science*. Because of subjectivity's supposed central role, neither introspection nor folk psychology fit in a physicalistic framework, at least at the explanatory/epistemological level.

These issues emerge in a 2014 essay by Newell and Shanks, the conclusion of which can be briefly summarized thus: «we do in fact have introspective access to our conscious mental states, and the verbal reporting of these states conveys privileged information about the causes of our behavior»⁹². They spell out four criteria (reliability, relevance, immediacy, sensitivity) that provide a basis for assessing the validity of introspective and subjective measures and data⁹³, and they apply them to studies demonstrating the supposed predominance of the (non-Freudian) unconscious (micro-cognition or sub-personal level) over the consciousness (macro-cognition or personal level) in determining behavior. They conclude that the «evidence for the existence of robust unconscious influence [...] is weak, and many of the key research findings either demonstrate directly that behavior is under conscious control or can be plausibly explained without recourse to unconscious influences»⁹⁴. Newell and Shanks invite researchers to *take seriously* data emerging from introspec-

⁹² NEWELL - SHANKS, *Unconscious Influences on Decision Making*, p. 5.

⁹³ *Ibi*, pp. 3-4.

⁹⁴ *Ibi*, p. 19.

tive (macro-cognitive, personal, subjective) measures. This methodological point has fundamental implications in discussing the distinction between folk and scientific psychology. In a brief open commentary of Newell and Shanks' essay, Dijksterhuis and colleagues argue that Newell and Shanks' considerations stand «on scientific quicksand» because, according to the results of cognitive science (scientific psychology), consciousness is deeply rooted in the unconscious: «stating “it's all starting in consciousness” may have been satisfactory to Descartes but it doesn't work in the twenty-first century»⁹⁵. In another commentary on the essay, Evans echoes the concerns of Dijksterhuis and his colleagues. He argues that Newell and Shanks' perspective, which presumes that the mind is accessible to consciousness, is «shakily founded on folk psychology»⁹⁶ and thus cannot be scientific in any way. He stresses this point by arguing that «it borders in the mystical (or at least Cartesian dualism) to think of consciousness as some kind of “mind stuff” that has powers of causation»⁹⁷. These commentaries represent typical physicalistic stances, according to which, in order to be scientific, psychology must adopt the methods of the natural sciences and deal with micro-cognition because our capacity to make verbal reports about our mental states is limited, our verbal reports themselves are unreliable, and our self-knowledge is poor. Consciousness (macro-cognition) cannot be postulated as having a primacy or even being at the same level of the unconscious (micro-cognition). It is clear that this appeal to an unconscious that is inaccessible to consciousness and introspection (and thus to subjectivity) allows psychologists to construe models of the mind similar to those of the natural sciences, that is, objectively (or, at least intersubjectively) assessable and generalizable to all human beings. However, if Newell and Shanks' methodological and empirical analysis is correct, there are no compelling reasons to always refer to such an unconscious mind in psychological explanations. This means that the attempts of authors like Dijksterhuis and colleagues and Evans to eliminate or at least bypass consciousness by appealing to an unconscious mind do not appear to successfully work. As a consequence, it can be argued that the physicalistic framework assumed by Dijksterhuis and colleagues, Evans and most authors discussed in this paper cannot provide a reliable account of the mental because it excludes consciousness and its subjective character. Consciousness appears to be one of the main features of the human mind: it can be accessed through introspection and understood on the basis of the categories of a folk framework alternative and contrastive to that of the natural sciences.

⁹⁵ A. DIJKSTERHUIS - A. VAN KNIPPENBERG - R.W. HOLLAND - H. VELING, *Newell and Shanks' Approach to Psychology is a Dead End*, «Behavioral and Brain Sciences», 37 (2014), 1, pp. 25-26.

⁹⁶ J.St.B.T. EVANS, *The Presumption of Consciousness*, «Behavioral and Brain Sciences», 37 (2014), 1, pp. 26-27.

⁹⁷ *Ibi*, p. 26.

In summary, Newell and Shanks' 2014 work is an example of the topics that this essay puts forth. If we assume both that introspection can permit to reach certain determinants of behavior and these determinants can be macro-cognitive rather than micro-cognitive, we must rebut the distinction between micro- and macro-cognition and thus also the wider distinction between (supposed) scientific psychology and folk psychology in which this distinction is rooted⁹⁸. Such a distinction is an artifact of the physicalistic framework and its idea that the methods of the natural sciences are the only admissible for studying the mental. If we do not accept this physicalistic framework, we must appeal also to folk knowledge in order to explain mind and behavior. And the conclusive question is, Why not?

⁹⁸ For a different account of the distinction between micro- and macro-cognition (or the personal and the sub-personal level), see GABBANI, *Dalla Persona al Subpersonale e Ritorno*.