

THE HARD PROBLEM REQUIRES A PARADIGM SHIFT

What we now call the Hard Problem is the current version of a very old philosophical question. In all its variations, that older question concerns the relationship between the objective and the subjective. Objective entities make up physical reality while subjective entities are personal mental experiences. For the moment at least, they seem to be two distinct types of entities. Brains are objective physical entities whose behavior is strictly governed by scientific principles, and the physical behavior of individual brains is now presumed to “give rise to” the mental experiences occurring there. Present scientific principles seem to provide an explanation of the behavior of elementary physical entities but are silent as to how subjective mental experiences might arise from them. The Hard Problem, the present iteration of the older philosophical discussion, is how to break that silence: how might the scientific understanding of physical brains be modified to include the subjective experiences occurring there so that, ultimately, the humanities will be understood as a branch of science. Given the fantastic success of science in the last few generations, the idea of a scientific theory of everything (objective and subjective) might not seem overoptimistic. For many, the Hard Problem is just another scientific puzzle that will yield to scientific persistence like so many others. I don't think so.

Assume that my definition of the Hard Problem in the previous paragraph is fair. How then to resolve it? One approach for scientists is to ignore philosophical issues and to march straight ahead with the scientific exploration of brains -- to solve puzzles of brain physiology one after the other until, at some point, the clarity and precision of the scientific understanding will point to a philosophical solution as well; perhaps something obvious that was always hiding in plain sight. To those scientific explorers, I wish good luck. Whatever they discover about brain physiology will be valuable in itself, but I wouldn't expect it to solve the Hard Problem. Another approach is to analyze the definition of the Hard Problem, e.g., what does it mean to identify one entity as objective and another as subjective. A brief analysis of the definition of the Hard Problem discloses that the definition itself contains a perspective, a point of view, an approach with underlying initial assumptions – what Thomas Kuhn would have called a prevailing paradigm. Call it the “objective” or “scientific” paradigm or perspective. The components of the objective paradigm are rarely questioned or discussed by scientists. Those components logically precede science. They are the basis of science; therefore, they are not explored by science and cannot be validated or verified by it. For most circumstances in life, there is good reason to avoid examining those components, but, uniquely, the Hard Problem requires an open-minded re-examination of basic intellectual foundations. Here are three basic components of the objective paradigm that I suggest need to be examined. (1) There is an objective reality consisting of physical entities. In the expression “objective reality”, the term “objective” means that reality retains its character whether or not humans observe or perceive it. (2) Part of objective physical reality consists of physical bodies (including the brains) of live human beings. (3) The organization of the physical elements of those live bodies gives rise to private but similar types of subjective mental experiences that occur within each of the bodies. In contrast to objective physical entities whose character is said to persist in the absence of human mind, a subjective experience requires a conscious physical human to be the subject who experiences it, and so it would not make much sense to say that a mental experience retains its character in the absence of a mind. However, the objective paradigm assumes that experiences arise in consequence of particular brain activity which does have an objective character, and that, in turn, implies that the mental experiences arising in consequence must also persist in association with the particular brain activity even though subjective experiences themselves have no features that are observable by someone other than the subject. Consequently, if (1) mental experiences exist at the same time and place as certain physical activity, and (2) the physical activity has an objective existence, then mental experiences have

something like an objective existence. This ambiguity may be purely a matter of definition. But the way objective reality is defined is not as important as the way it is identified. Objective reality is identified by “objective observation”, which is itself a term of art. More on this below.

Scientists are comfortably confident that the laws of physics identify elementary physical entities and their properties, and thus provide a basic understanding of the fundamental character of physical reality. Scientists readily acknowledge that present scientific principles are incomplete and probably wrong in some respects but they are nevertheless confident that the bare-bones architecture is true. Within the objective paradigm, mental experiences are considered an area where the scientific understanding is incomplete and where confidence is lowest, but the objective paradigm presumes that mental experiences also derive their character ultimately from the properties of the same elementary entities that compose the brains/bodies where the experiences occur. To understand the nature of that derivation is the Hard Problem. Mental experiences also involve an additional type of uncertainty: so many of them seem defective or wrong. “Everybody knows” that sensory experiences and ideas are often mistaken. The previous two sentences are not logically rigorous, but scientists are also human and have had experiences that they later consider to have been mistaken, and this adds additional uncertainty and vagueness to a scientist’s understanding of mental experiences, at least in comparison to his confidence in his general understanding of physical reality which seems less capricious.

I’ve described the Hard Problem as containing tacit underlying initial assumptions which fit Thomas Kuhn’s description of a prevailing paradigm, and I’ve just outlined those assumptions which I suggest need examination. Those assumptions do not stand in mid-air – they too have their own conceptual substructure. Examination of those assumptions begins with the identification of their substructure.

What is the substructure of the objective paradigm? Consider the idea that there is an objective physical reality. What supports that idea? Why would anyone think that there is a physical reality in the first place, and how might he know anything about it, and how might that idea be verified? Those are rhetorical questions and here is the answer: The concept of objective physical reality, like all concepts, is itself a subjective mental experience within the general category of ideas. The idea of physical reality is a creative interpretation of sensory experiences which are another type of subjective experience. I’ve just introduced two types of subjective experiences. There are numbers of different types of subjective experiences and this is not the occasion to describe them all, but it is essential to recognize these two types. Sensory experiences are one type of subjective mental experience and are (sometimes) interpreted as indicators of objective reality. Those interpretations are ideas (synonymous with concepts, what I call “intellectual experiences”), and ideas are a second type of subjective experience. Each person experiences his own subjective mental experiences, and each person has his own ideas about the significance of his own sensory experiences. The objective paradigm initially assumes the existence of physical reality, and that assumption (the concept of physical reality) is a mental experience derived from sensory experiences (other mental experiences). The substructure of the objective paradigm consists of these two types of mental experiences. Thus, on the one hand, the objective paradigm itself includes the assumption that mental experiences occur in association with particular physical activity of brains that are part of physical reality, but on the other hand, the substructure of the objective paradigm also consists of mental experiences. These are two sets of mental experiences about which I make two points: First, it might seem contradictory (or at least suspiciously circular) that the idea of physical reality, of which science is most confident, stands on a substructure about which science is least confident. Low confidence does not sound like a good foundation for high confidence. Second, there is an important difference between these two sets of mental experiences -- that is, between (1) the subjective experiences assumed by the objective paradigm to occur within the physical bodies of live

people and (2) the subjective experiences that are the substructure of the whole objective paradigm. What is the difference between those two sets of subjective experiences? One difference is that the mental experiences included in the first set consist of all types of mental experiences, whereas the second set consists of only two types, only sensory experiences and ideas. But for the Hard Problem, the important difference concerns the subjects who experience those two sets of experiences.

Within the objective paradigm, there are about eight billion live human beings and some indeterminate number of sentient animals (say, two billion), and so there are ten billion experiencers (subjects) of subjective experiences and a corresponding number of separate sets of subjective experiences. The number of animals who have experiences is indeterminate, not just because they haven't been accurately counted, but also because scientists can't agree which species to include. That describes the number of subjects implied by the objective paradigm. It is crucial to distinguish between, on the one hand, the objective paradigm and its implications, and on the other hand, the substructure of assumptions that logically precedes the objective paradigm. Within the substructure that precedes the objective paradigm, the demography of experiencers (the population of subjects who experience subjective experiences) is completely different – it's not ten billion or even just the eight billion humans.

Before describing the demography of experiencers within the substructure, I want to describe some of the features of subjective experiences that are recognized within the objective paradigm, but are nevertheless disregarded or depreciated within it; by contrast, within the subjective paradigm which I will describe below, those same features are important in the highest degree.

Even within the objective paradigm, one only experiences one's own experiences. One doesn't experience anything but experiences, and one doesn't experience anyone else's experiences. I've just introduced the pronoun "one" which, in normal usage, means anyone but no one in particular. I intend a more specialized usage which I'll describe below but, for the interim, please regard the pronoun "one" as referring to anyone, including, dear reader, yourself. I've already made reference to two types of subjective experiences with which any competent adult is intimately familiar: sensory experiences and ideas. Sensory experiences are one's only information about objective physical reality. One develops one's idea of objective physical reality to make sense of one's sensory experiences. But "everybody knows" that sensory information and ideas might be wrong. How then might one verify which are true, i.e., which correspond with objective reality? Answer: there is no means of verification. Any procedure for verification would involve more sensory experiences and more ideas which would themselves be equally suspect. One might ask a wise philosopher or search Wikipedia to find what is "true", but the idea of other people and of Wikipedia are themselves just more suspect experiences, just part of the idea of objective physical reality which is the very idea sought to be verified and, therefore, cannot serve to verify the whole. Instead of verification of one's idea of objective physical reality, one accepts logical coherence (what scientists might call "elegance" or "beauty") as a basis for one's confidence. But however useful and practical coherence and confidence certainly are, they are not the philosophical equivalent of verification. For practical concerns, coherence and confidence serve well as verification, but not so for philosophical concerns. Philosophically, one must acknowledge that one's sensory experiences and ideas of objective reality could be fundamentally wrong and, consequently, that one's concept of reality is inescapably and profoundly doubtful; i.e., there might be an objective reality corresponding precisely to the scientific description, or there might be a completely different one, or none. One cannot know. Nevertheless, within the objective paradigm, coherence and confidence are accepted as verification of objective reality, and the profound doubt is depreciated to the level of theoretical trivia, never mentioned or seriously examined except to be summarily dismissed. This is a fundamental philosophical flaw in the objective paradigm. Notwithstanding elegance, or coherence, or

confidence, or efficacy, or importance, the concept of objective physical reality is subject to inescapable and profound logical doubt. It is essential to recognize both (1) the elegance, coherence, confidence etc. of the concept of objective reality, and (2) the profound doubt. They are strange bedfellows but do not contradict each other, and for the Hard Problem, it is the doubt that is the more important.

While the concept of physical reality is subject to profound doubt, the concept that some parts of physical reality (live brains) experience private mental experiences stands on an additional profound doubt of its own. At least physical reality is based on sensory experiences which might be true, but one has no sensory experiences at all that might directly reflect another person's (or any other physical thing's) mental experiences. One profound doubt is compounded upon another, and yet there is great confidence that people understand one another's personal experiences. And properly so despite the logical doubt.

Confidence in the concept of objective reality depreciates logical doubt. For normal purposes, that confidence is essential, not an error that needs correcting. But confidence has to be recognized for what it is: confidence is a mental experience of another type (emotions), not a direct message from objective reality. Confidence (despite doubt) is not an error, but neither should it be allowed to corrupt rigorous reasoning and depreciate logical doubt. And it would be worse still if logical doubt were to mitigate confidence in objective reality for normal life. Thomas Kuhn described science as a social effort and he described a scientific paradigm as a consensus between members of the scientific elite within an area of science. Most of the objective paradigm that I've described, certainly the confidence in physical reality and in the mental experiences of other individuals, is much more than an elite consensus in Kuhn's sense; rather, it is the paradigm adopted by all competent individuals, elite and humble alike, applicable in all matters that might be called normal life including science. That is an enormous domain and in part explains the confidence. But the magnitude of the domain and the level of confidence do not displace or mitigate the logical doubt that underlies the concept of objective reality. Contemplating the Hard Problem is not normal life precisely because it is part of the small domain in which the flaws in the initial assumptions underlying the objective paradigm lead to bifurcation and incoherence.

I now return to the two different demographics introduced several paragraphs above: Within the objective paradigm, there are ten billion separate sets of experiences occurring within the corresponding number of live brains of experiencers. That's one set of experiences and one demography. Then there is the different second set of sensory experiences and ideas which are the substructure of the objective paradigm. Who experiences this second set of experiences? If the conception of physical reality (including the ten billion individuals with their own experiences) itself derives from some sensory experiences and ideas, that second set of experiences must logically precede the concept and, therefore, must exclude any reference to the eight billion individual humans or their experiences. Whose sensory experiences might they be if not those of a human? Answer: They are one's own experiences. The second demography, the population of subjects who experience the substructure of the objective paradigm, consists only of oneself. When I introduced the pronoun "one" I said I intended a specialized usage which I describe in the following paragraph.

Within the objective paradigm, the pronoun "one" means any one of eight billion humans of which one is only one with same features and status as the others. But logically preceding a concept of objective reality that includes all individuals each with his own experiences and preceding the concept of one's own body, when one is experiencing the sensory experiences from which the concept of objective reality will be created, what could "one" mean? In that context, "one" or "oneself" cannot be referring to any aspect of objective reality which has yet to be conceived, cannot be referring to a physical body

and associated experiences. Logically preceding the concept of physical reality, one can have no features or status shared with other persons. Furthermore, logically preceding the concept of objective reality, there is nothing from which “oneself” might be differentiated. This is a fundamental feature of subjective reality and doesn’t change with the development of a concept of objective reality which stands on the underlying subjective substructure. What one calls “oneself” is correctly described in the literature of psychology as the “self concept” which is itself just another (complex) idea, just another mental experience. This implies is that there is no subject “oneself”, no separate type of entity that experiences one’s experiences; rather, what one identifies as oneself is itself an experience – the self concept, an idea, just another experience. All consists of one’s own experiences. To repeat this seemingly strange implication: one’s own subjective experiences do not have a separate subject, a self, that experiences them; on the contrary, what one identifies as oneself is itself composed of subjective experiences. Subjective experiences without a subject. One’s own experiences have no separate subject, and what one calls “experiences of other people” must also be recognized as part of one’s own concept of objective reality. For practical life, it is essential to recognize other individuals as equal to oneself in character, each with his own subjective reality, but philosophical rigor leads to a universe consisting only of one’s own subjective experiences without a subject.

The impossibility to verify the objective truth of one’s ideas implies that one can know nothing about any particular objective item apart from one’s experiences. Whatever one identifies as an objective item might or might not exist apart from one’s experiences – but, by contrast, the experiences that constitute the identification do exist as subjective entities. Could the existence of one’s own mental experiences be doubtful by the same type of reasoning that renders objective reality profoundly doubtful? Objective reality is subject to profound doubt because it consists of sensory experiences and ideas which cannot be verified against an objective standard. By contrast, mental experiences do not require verification. As they occur, mental experiences are undeniable. Were one to try to deny an experience, the trying and the denial would themselves be experiences. Were proof of the reality of an experience necessary, the experience of the experience proves the reality of the experience. Experiences constitute the undeniable reality from which everything within the subjective universe is composed. The undeniability of mental experiences does not depend on the truth of any ideas – no underlying initial assumptions. Subjectively, undeniability serves as the philosophical equivalent to verification of the reality of subjective experiences. Undeniability applies only to one’s own experiences; the ten billion sets of experiences of other individuals exist only as the content one’s own ideas the truth of which are profoundly and inescapably doubtful.

Within the objective paradigm, reality consists entirely of physical elements (say, individual particles or strings) which are organized into relatively simple composites involving only a few elements, and those composites themselves are organized into more complex composites, on and on. This is a hierarchical, topological organization of compositivity and complexity in which the properties of the composites (no matter how complex) derive entirely and ultimately from the properties of the simplest elements from which they are composed. Some of those physical composites are bodies of live humans and mental experiences are understandably presumed to occur in some part of those bodies. It is entirely understandable that scientists would assume that the hierarchical organization of physical phenomena would also apply to mental experiences and that the properties of mental experiences would also derive from the physical elements of which bodies are composed. I propose a subjective paradigm with a different hierarchy, a hierarchy which is an inversion of the objective hierarchy: subjective reality consists entirely of mental experiences one type of which is ideas; some part of those ideas constitute one’s self concept and that concept organizes all experiences as “one’s own”; part of those are one’s concept of objective reality, and some part of that concept of objective reality is other individuals with

their own experiences. The perspective from which everything is analyzed into one's constituent experiences is what I call the "subjective paradigm". The objective paradigm is itself contained within the subjective -- a play within a play. Literature uses the term "framing" to describe nested stories within stories, within stories, and so on. The objective paradigm assumes physical reality to be the all encompassing play within which ten billion or so lesser included subjective plays occur; however, I have just outlined why I think the subjective paradigm is the greater and includes the objective. For practical life, it is more efficacious to concentrate on the inner objective play and ignore that it is all a fictive creation (perhaps true) within the larger subjective play which, in some respects, it may seem to contradict.

This essay began by identifying the Hard Problem as the current iteration of a long standing philosophical question: how, with coherence and elegance, to describe the relation between the objective and the subjective. The answer I offer to this long standing question is the all-inclusive subjective paradigm in which the elemental entities are one's own experiences (where "one" is understood not as a subject which is separate from the experiences it experiences, but rather as a composite of elemental experiences itself) and in which the objective paradigm is framed. Within the subjective paradigm, the bifurcation between the sciences and the humanities disappears -- all consists of one's experiences. And this also provides resolution of the Hard Problem, i.e., it provides reasons why scientific exploration of brains cannot explain mental experiences as included phenomena. We are bound by our logics, and for the Hard Problem, the confining logic is the logic of hierarchies. A larger volume cannot be understood as enclosed in a smaller; a chain of reasoning cannot prove its initial postulates; a composite can be understood as deriving its character from its constituent elements, but no element can be understood as derived from composites -- these are examples of the logic of hierarchies. As between the subjective and the objective, subjective entities are the elements of which objective entities are composites; ergo, subjective entities cannot be understood as deriving from physical entities. The character of mental experiences is an initial postulate underlying the objective paradigm; ergo, objective science cannot explain mental experiences (at least not without begging the question). There might be a physical world that corresponds exactly to the scientific description, and in that world, mental experiences might derive from physical entities exactly as the objective paradigm initially presumes. Even if so, any individual (including any scientist) can only conceive that world from his subjective perspective. Individuals don't experience the objective world. Individuals only experience their own mental experiences out of which each individual constructs what he identifies as objective reality. If there were a species that did not construct ideas from other mental experiences, members of that species might be able to understand mental experiences as complex phenomena resulting from physical elements. But for each of us (and that implies all of us), mental experiences are the elements from which what we call "physical reality" is constructed, and that hierarchical construction prevents us from coherently understanding subjective experiences as deriving from physical elements. I said "we" but of course that means "one" -- an organization of experiences.

There is a cheap answer to the Hard Problem as posed in the opening paragraph. It is this: Science concerns the domain of entities amenable to investigation by "scientific method" which itself requires "observable, empirical, reproducible, measurable evidence" (Wikipedia) -- call that "scientific evidence". Scientific evidence is said to be "objective" and science is said to involve "objectivity". Scientific evidence enters science in the form of "objective observation". How is scientific evidence transformed into objective observation? Scientific evidence becomes a scientific observation when it is observed by a scientist by means of the scientist's own subjective sensory experiences. By what criteria may a scientist's subjective experiences be considered objective observations? Within the objective paradigm, each scientist considers other individuals to be part of physical reality and to experience mental

experiences similar to his own. All scientists will agree on, say, the measurement of the length of a side of an Egyptian pyramid using the official Weights and Measures metre bar in Paris. They will agree that there was some feature of physical reality that was measured and that if any other scientist followed the same procedure he would come to the same measurement even though the observations of that second measurement and the agreement between the scientists will be by means of each scientist's private mental experiences. There is a consensus among scientists (and most other folk) as to what types of private mental experiences can be considered scientifically valid objective observations. (Sights are sometimes OK, smells are usually not OK.) That consensus is, within the objective paradigm, perfectly reasonable and not arbitrary or relativistic like which side of the road we drive on. Two points: (1) objective scientific observations consist of the subjective mental experiences of the observer, but (2) subjective mental experiences are not the entities being observed. The subjective mental experiences of one person do not produce "observable, empirical, reproducible, measurable evidence" accessible by the sensory experiences of another person; therefore, by the requirements of scientific method, mental experiences are outside the domain of investigation by science. Psychology is properly considered a quasi science where something resembling scientific method is applied to investigate entities with a subjective component that science cannot properly investigate. Objective scientific observation consists of the private mental experiences of the scientist/observers, but mental experiences are not themselves capable of objective scientific observation according to the strict scientific method. Science will not explain mental experiences because strict scientific procedure will not permit it, and that is an answer to the Hard Problem as it's posed in the opening paragraph. Although that answer could have followed the first paragraph immediately without any interim, it's not a philosophically satisfying answer because it derives from scientific procedure and consensus instead of from the substantive features of the Hard Problem. And procedure is supposed to serve substance, not govern it. There might be another procedure that is as rigorous as traditional science that we don't know about.

No one can objectively observe the mental experiences of another person and so strict scientific method can't apply. But a person experiences his own experiences. It might be far-fetched but not philosophically impossible within the objective paradigm for one person to "scientifically investigate" his own experiences although that would not be the type of social effort that Thomas Kuhn describes as science. Of course, even if scientific self-examination were possible, the logic of hierarchies would still be inescapable.

Brain science is proceeding apace, as it should, and probably the discoveries will be as fantastic and unexpected in this area as in so many others. If scientists can't explain how mental experiences arise from physical brains, as I contend, then what can scientists learn about mental experiences? At most, they will identify "neural correlates" of mental experiences, e.g., neural correlates of visual experiences. But they can only find those correlates to the extent that they know before they begin the search that there are such things as visual experiences. Science did not discover visual experiences. Knowledge of visual experiences precedes science and that knowledge is subjective, the humanities. If that humanistic knowledge is wrong, brain science will not correct it. Again, the subjective logically precedes the objective.

In Thomas Kuhn's description, science is a social effort and a scientific revolution consists of a paradigm shift. That paradigm shift typically coincides with a generational shift. An individual scientist does not typically shift his own paradigm; instead, a succeeding generation adopts a new paradigm. Typically in science, the new paradigm is better than the old at explaining new classes of phenomena. What drives the shift is the ambition of the succeeding generation to conquer new territory. I propose a paradigm shift in foundational philosophy, but philosophy is not science though both rely on rigorous reason.

What new philosophical territory is opened by the subjective paradigm that I propose? Maybe none. It reorganizes well trodden territory, and the reorganization unites the sciences and the humanities, eliminating an unnatural bifurcation. Other well trodden territory is fundamental psychology – philosophy of mind. At the foundation level, psychology and philosophy merge, and psychology is not amenable to rigorous scientific investigation. Science has its limitations, but rigorous reason is the universal sovereign. It's all we've got.

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