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Avant : pismo awangardy filozoficzno-naukowej 4/2, 59-80

2013

AVANT, Vol. IV, No. 2/2013
ISSN: 2082-6710 avant.edu.pl/en
DOI: 10.12849/40202013.0709.0004

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Received 10 April 2013; accepted 6 September 2013; published Autumn 2013.

Abstract

This paper discusses a number of basic strategies for modeling the mind in historical perspective. The best-known strategies are expansionism and eliminativism, which are both problematic: eliminativism compromises our self-understanding, while expansionism is unable to cope with fringe minds. Using Julian Jaynes's theory of the bicameral mind as an example, an alternative strategy is outlined to meet the challenges posed by the history of the mind.

Keywords: Folk psychology; Theory of Mind; Consciousness; Julian Jaynes; Bicameral Mind.

1. Two Strategies

Reason may have a penchant for continuity, but it is debatable whether this should assert itself in the philosophy of mind. In the same quotidian sense in which it is obvious that we, the present people, have minds, it is also obvious that many other creatures do *not* have minds. For some philosophers this has been reason to argue that the quotidian conception of the mind ('folk psychology') must be mistaken: if folk psychology does not apply to creatures that are biologically continuous with us, then it does not apply to us either. One of the best-known defenders of this view is Paul Churchland, who has argued that literally nothing has a mind in the ordinary sense of the word (1989: 6ff; 1979: 127ff). Others typically hold on to the quotidian conception and try to push the threshold of mind as far back as possible. The first course is one of elimination, the second one of expansion.

Elimination is the less popular strategy because it compromises our intuitive self-understanding as thinking creatures, which is more than most are prepared to accept (Baker 1987). Eliminativism effectively proposes to give up on

psychology and do something else instead, most typically biology or neuroscience. By contrast, the vastly more popular expansive strategy takes our self-understanding as mindful beings as its starting-point. While the elimination strategy is flawed from the start, the expansion strategy can postpone its troubles indefinitely, pushing the fringes of mind down in deep history and remote phylogeny.

In this paper I assume that elimination is indeed unacceptable. I shall argue that the prevailing alternative, expansion, is not a viable strategy either, in particular when considering the mind in historical perspective. Because expansionism shares with eliminationism a penchant for continuity, its methodology tends to focus on finding as many large-scale similarities as possible between modern minds and developmentally earlier minds. Simply put, it typically presumes that earlier minds are like modern minds until proven otherwise. An inherent danger for this strategy is that it may project onto earlier minds what are in fact traits of the modern mind. I argue that the risk incurred by expansionism is both serious and real, and that it can be avoided only by giving up the presumption of continuity.

To avoid the pitfalls of elimination and expansion I introduce an alternative research strategy for studying the history of the mind, which I illustrate by discussing the theory of bicameral minds proposed by Julian Jaynes.

2. The Fringe Mind Problem

Mainstream analytical philosophy of mind has never been particularly keen on questions about history and development, at least not until recently. Its primary concern from Ryle to Fodor has been with modeling the standard sort of mind that we know from ordinary folk psychology, roughly the mind of normally functioning, adult members of modern society (cf. Ryle 1949; Fodor 2000). It exhibits a familiar economy of beliefs and desires, a regular command of language in its syntactic and semantic complexity, a rich and fine-grained conceptual organization, a capacity for logic and reasoning, and numerous other characteristics we confidently ascribe to ourselves on a daily basis (see, e.g., Stich 1983: 73ff; Churchland 1979: 125ff; Frankish 2004). Against this background questions about less developed minds (infants), ancient minds (Neanderthals), non-human minds (if there are any), and abnormal minds (autistic persons, coma patients) are typically postponed as special cases to be dealt with later.

The focus on ‘standard’ minds is in itself not unreasonable. There is no better place to start than the sort of mind most familiar to us. Also, it is common scientific practice to start from a core model to account for a set of central phenomena and to deal with anomalies later, typically by adding auxiliary hypotheses (Lakatos 1970). In psychology and philosophy of mind there are in-

deed a number of straightforward suggestions for dealing with anomalies. Apparently abnormal minds of persons suffering from developmental disorders or brain damage can be accounted for by identifying the specific elements or competencies that are impaired or lacking (as compared to normally developed minds), and subtracting these factors when modeling the abnormal mind; alternatively, therapists can try to restore the missing abilities. Developmental psychology can account for the child's immaturity (as compared to the standard adult mind) by reconstructing how the child's basic competencies gradually develop into full-blown minds. Animal psychology can account for the anomalies in non-human cognitive performance (as compared to normal human minds) either in terms of missing factors (as in the case of developmental disorders), in terms of undeveloped competencies (as in the case of human children), or a combination of both.

Particularly interesting is the study of ancient minds in the order of 200,000 to 10,000 years ago, which over the past twenty years has steadily been gaining ground (see, e.g., Donald 1991, 2001; Barkow et al. 1992; Mithen 1996; Deacon 1997; Corbey & Roebroeks 1997; Gärdenfors 2003). With the rise of new disciplines such as evolutionary psychology and cognitive archaeology, it has become increasingly urgent to ask how the standard conception of the mind, rooted in current folk psychology, may bear on the fringes of mental development. Our distant ancestors were presumably quite like us in many biological respects, but it is unclear how to assess their mental organization. Writing about the emergence of thought, Donald Davidson put the problem as follows. In the development of the human species as well as in that of the individual, Davidson observed, "there is a stage at which there is no thought followed after a lapse of time by a subsequent stage at which there is thought" (1999: 11). According to Davidson, "What we lack is a satisfactory vocabulary for describing the intermediate steps," the "half-formed minds" in between full-blown mind and mindless nature.

Davidson's remark is well-taken, yet I think it gets only one half of the problem. The problem is not only how to devise a new vocabulary for dealing with "half-formed minds", but also how to decide when we should stop trying to apply the standard vocabulary. As we are moving further away from the standard minds to which our folk psychology applies in a fairly straightforward way, considering creatures that are increasingly distant from us in terms of their history, development, and cognitive performance, at what point do we reach the outermost fringes where standard folk psychology ceases to make sense, and where a switch of vocabulary is indeed called for? This is what I call the Fringe Mind Problem:

> *Fringe Mind Problem*: what are the limiting conditions under which the standard conception of mind ceases to apply as literally to other minds as it does to our own?

It is assumed here that the standard conception of the mind as expressed in ordinary folk psychology can indeed be taken to apply literally to our present peers, pace eliminativist and instrumentalist construals of folk psychology. I think this is a reasonable assumption. Our own minds are the only minds of which we have first-hand experience. Without this starting-point, as Dennett once put it, "we'll just be fooling ourselves, talking rubbish without knowing it" (1996: 4). Now, if folk psychology is accepted as a description of mind in its present form, the question poses itself how far we can go with applying it to historically and developmentally earlier minds; that is the fringe mind problem.

A particularly straightforward way to tackle the fringe mind problem is the expansion strategy: cast the standard conception of mind as widely as possible, and bring as many creatures as possible within the compass of folk psychology. The expansionist presumes that all deserving creatures can be credited with minds essentially like our own, unless proven otherwise. This apriori presumption typically inclines expansionism to focus on far-out minds in deep history, on newborn children, non-human primates, and even more distant branches of human phylogeny. Although few writers today reach out as far as Donald Campbell (1974, 1975) in his classical work on evolutionary epistemology (man as "cousin to the amoeba"), the emphasis is distinctly on *distant* fringe minds.

A clear example of expansionism in developmental psychology is the approach taken by Alison Gopnik (following Jean Piaget, among others). Children's minds, according to Gopnik, can be captured in the same terms used for describing adult mentality (1999, 2009). Children are literally "little scientists" and "little philosophers". From the moment they are born (if not already in utero) children engage in forming, testing and refining hypotheses about their natural and social environment, literally building theories and learning by experimental trial and error.

Similarly, much work in animal psychology is based on the principle that familiar psychological concepts such as belief, desire, intention, and understanding apply to animals in much the same sense in which they apply to us humans, unless proven otherwise. A classical example is Premack and Woodruff's work on the chimpanzee's 'theory of mind' (1978; cf. Call & Tomasello 2008). Can chimpanzees be credited with the ability to understand the goals, intentions and beliefs of conspecifics and of human caretakers? Although there is no consensus on the issue, the important point here is that it is in principle accepted that an animal's passing a certain type of behavioural test, for example a 'false belief' test, warrants the attribution of beliefs and understanding, *unless proven otherwise*. The burden of proof is on those who disagree.

The most sophisticated defense of expansionism in recent philosophy is that of José Bermúdez in his work on thinking in nonlinguistic creatures (2003). Bermúdez observes that it is common practice to apply concepts from ordinary folk psychology to nonlinguistic creatures such as infants, early humans, and animals, routinely described as entertaining beliefs and desires, and as going through episodes of thinking and reasoning. It is often added, however, that such attributions should not be taken literally, but metaphorically or in a merely instrumental sense. Bermúdez points out that this instrumentalist stance may be good enough for daily purposes, but will not do in science. Especially in fields such as infant psychology, animal psychology and evolutionary psychology, realistic descriptions in a more adequate vocabulary are needed. To meet the conceptual requirements of these fields, Bermúdez urges a reconsideration of the standard model of the mind, and sets out to develop a conceptual framework that should allow nonlinguistic creatures within certain limits to be treated as "genuine thinkers".

I will not go into the details of Bermúdez's scheme for expanding the scope of folk psychology. My aim here is rather to bring out a number of general problems with expansionist strategies for dealing with fringe minds, to which I now turn.

3. Problems with Expansionism

There are three basic problems with expansionist strategies. I shall argue that these problems can be solved only by abandoning expansionism as well as eliminativism in favour of a radically different approach.

The core idea of expansionism is that we may be able to revise or extend the conceptual apparatus of ordinary folk psychology for purposes of describing fringe minds. Now, each extension of the standard model of the mind faces a dilemma. Either (a) the conceptual modifications introduce a new set of concepts that applies specifically to fringe minds (and not to standard minds), or (b) they are modifications of the old set (that now applies to standard minds and fringe minds alike). If (a), the attempt to introduce a new set of concepts may be charged with changing the subject. The new vocabulary will describe states and activities that are not recognizably *mental* from the point of view of standard folk psychology. Hence the new set will not describe a creature's *psychology* but something else instead, for example its biological capacities for information processing. Moreover, this version of expansionism in effect proposes to take an eliminativist stance with regard to fringe minds. The new vocabulary will describe a sort of creature whose states and dynamics cannot be captured in terms of familiar folk psychology. Hence, the expansionist is

forced to admit that the fringe minds are not 'minds' at all in the familiar sense of the word.[5]

On the other hand, (b) inasmuch as the revision scheme is proposing modifications of the standard vocabulary of folk psychology, a second difficulty presents itself. As the standard vocabulary for understanding mental attributes is warped to accommodate more distant fringe minds, this will also affect our present self-understanding as thinking creatures. For example, if the concept of belief is modified in such a way that Neanderthals, babies, or birds can literally have beliefs, this necessarily reflects upon the beliefs we attribute to ourselves: they will be 'thinner' beliefs than we used to credit ourselves with. Similarly, 'thinking' is an attribute currently understood as a stepwise process of manipulating discrete items such as beliefs in accordance with certain rules; the thinker is credited with conscious access to these items at each step of the process, and is able to use them for the rational control of action. Now, if the concept of thinking is revised in such a way that it allows lower animals to be thinking creatures too (say, spiders), this inevitably requires us to revise our own self-image as thinking creatures. Certain aspects of thinking are bound to be sacrificed for the spider's sake, such as discrete items, access, consciousness, or maybe rational control. The danger lurking here is that the substance of the mind will be spread so thin that eventually nothing recognizably 'mental' remains. Of course conceptual revision is the backbone of scientific progress, and it would be foolish to oppose it in general terms. Yet, caution is called for in the case of psychology. Present self-understanding as expressed in terms of folk psychology is our *only* evidential basis for what the mind entails. Especially with a subject as imponderable as the mind it is ill-advised to tamper with the evidence.

Finally, and most importantly, the expansion strategy is in danger of inadvertently projecting attributes of the present mind onto other types of mind that do not really possess them. Once they stick, the attributes will be very hard to get rid of; if the attributions were unwarranted or mistaken, the mistakes will be very hard to discover. Mistaken attributions will be carried further along with each new stage of the expansion, causing the mistakes to multiply and to become yet harder to discover.

The risk of unwarranted attribution is real and easily incurred. For example, in a recent (and otherwise excellent) chapter on the state of the art in cognitive archaeology, Liane Gabora (2009) raises the question, "What can archae-

[5] Notice that the first horn of the dilemma leads to a position that is problematic for an expansionist, but that is not intrinsically unacceptable. The objections raised against it (change of subject and breach of continuity) count as problematic from an expansionist point of view, because expansionism does not want to change the subject or jettison continuity. Without the presumption of continuity, however, the objections lose their force. The resulting position is in fact very close to the view I will be recommending below.

ology tell us about the mind?" The question that is *not* raised is, 'Did hominids and early humans have minds in anything like the modern sense?' More specifically, the paper's opening question is, "What can relics of the past tell us about the thoughts and beliefs of the people who invented and used them?" It is not doubted *that* they had thoughts and beliefs, presumably in roughly the same sense that we have them.

A more specific example is the interpretation of stone handaxes as intentional products of the prehistoric mind (roughly between 1.5 and 0.2 million years ago), carefully fashioned to achieve a distinct end-form that allows them to be used as tools with specific functions. Archaeologists disagree about whether handaxes had symbolic meaning, whether their production and use required a cultural grammar, mimetic abilities, and communication capacities (cf. Wynn 1995). What is rarely questioned, however, is the underlying assumption that the minds of handaxe makers can in principle be described in terms of intentionality, planning, instrumental reasoning, and purposeful action. Now, we know what these psychological categories mean in the case of modern human beings, and we know how to extend their meaning metaphorically, for instance when taking an 'intentional stance' to computers and other machines, but we have absolutely no idea whether these categories can be taken literally when applied to Stone Age man. Taking such categories on a leap into deep history, we are prone to project entrenched intuitions about their modern meaning onto premodern ancestors. As archaeologist Thomas Wynn put it, "it would be difficult to overemphasize just how strange the handaxe is when compared to the products of modern culture. It does not fit easily into our understanding of what tools are, and its makers do not fit easily into our understanding of what humans are" (1995: 21).

As a final example, consider the interpretation of European cave art from the Late Paleolithic (ca. 30,000 years ago). It is wide believed that cave paintings such as found in Chauvet and Lascaux mark the birth of "essentially modern minds", in the sense that the cave artists must be credited with sophisticated capacities for symbolization and communication to account for their work. This view has been contested by Nicholas Humphrey (1998), who pointed out that there is a striking resemblance between the cave drawings and and artwork produced by a virtually languageless, autistic girl named Nadia, when she was between 3 and 6 years of age in the early 1970s. Nadia is obviously not a paragon of the modern mind with sophisticated capacities for symbolization and communication. Hence, Humphrey argued, the attribution of modern capacities to Paleolithic cave artists' minds may have been jumping to conclusions. Common intuitions about what it takes to produce artwork among normal, modern adults turn out to be quite unreliable when it comes to understanding other sorts of human beings.

Examples such as these show that the risk of projecting modern mental traits onto premodern minds is real and easily incurred. The risk is inherent in expansive strategies because of their combination of current self-understanding and psychological continuity.

As far as I can see there are only two ways to meet the challenge posed by developmentally earlier minds. One may either choose to forsake the standard conception while retaining continuity, or to jettison continuity while retaining the standard conception of the mind. The first option is eliminativism, which insists that we are deeply mistaken about our own minds. I assume here that this option is unacceptable. The second option does not look very attractive either, for it entails that we are mistaken about the minds of many of our fellows, including early humans, young children, and maybe even worse. I think these misgivings are inappropriate, however. The consequence that we are *mistaken* about the minds of our fellows follows only from the point of view of current folk psychology, which is that of contemporary Western adult persons. Yet, this is not necessarily the right point of view to take here. Assuming that *present* folk psychology must be accepted as a description of how *our* minds work, it does not necessarily follow that it is also acceptable as a description of how *other* types of mind work. In particular it does not follow that current folk psychology is acceptable as a description of (developmentally and historically) *earlier* minds. What is more, if present folk psychology is to be accepted as a description of present minds, then there is good reason to presume that substantially different folk psychologies (if there are any) describe substantially different minds whose nature present folk psychology is unable to capture.

This is how I plan to explore the second option. If it can be made plausible that folk psychology went through substantial changes in the course of history, then there is reason to believe that the nature of mind has changed as well. As an example of how this type of change may be established I discuss Julian Jaynes's theory of bicameral minds (1976).

Notice that my choice of example differs from the cases typically discussed by defenders of the expansion strategy. Expansionists tend to concentrate on problems with modeling the minds of *distant* fellows such as early humans and hominids, or primates and other animals. The following example, by contrast, concerns some of our *closest* fellows in cultural history.

4. Ancient Folk Psychology

In his controversial study on *The origin of consciousness in the breakdown of the bicameral mind*, psychologist Julian Jaynes argued that the ancient cultures of Greece, Mesopotamia and Egypt (among others) sported minds quite unlike those captured by present folk psychology. Ancient cultures such as the

Achaeans or Mycenean Greeks described in Homer's *Iliad*, according to Jaynes, had "bicameral minds" instead of the unitary conscious minds of modern humans. Jaynes speculated that modern consciousness arose late in the second millennium BC when the earlier type of mind broke down, partly as a result of the spread of writing and other language-related technologies.

Modern conscious persons experience themselves as equipped with an inner mental space where individual deliberation takes place and where a person's actions are planned and motivated. Jaynes spoke of a "mind-space" and an "analog I": mind-space is the virtual room where mental contents are stored for introspection, while the analog I is the ego that does the introspecting. By contrast, the bicameral mind has neither of these features, literally having no room for storing, introspecting, or otherwise handling such contents. The bicameral person experiences an 'alien' voice, or is seized by a 'blindness' (Greek *atè*), that inspires a person's actions. A typical example is the account of what makes Achilles 'decide' to join the fight against the Trojans (*Iliad,* Book IX, 702f): Achilles will do so "when the *thumos* in his chest tells him to and a god rouses him." The most ancient parts of the *Iliad* are crowded with expressions of this sort, which Jaynes took to indicate that the early Greeks did not act for reasons represented and understood, but on something like blindly obeyed command instead.

Jaynes did not claim that bicameral persons were unconscious in every sense of the word. For example, he explicitly allowed for bicamerals to have perceptual awareness, responsiveness, and speech. Without saying that it captures all aspects of Jaynes's view, I think Ned Block's distinction between P-consciousness and A-consciousness can be useful here. P-consciousness is phenomenal awareness, such that for any P-conscious creature there is something it is like to be that creature (1994, 1995). A-consciousness is characterized in terms of access to mental representations:

> *A state is access-conscious if, in virtue of one's having the state, a representation of its content is (a) inferentially promiscuous, i.e. freely available as a premise in reasoning, and (b) poised for rational control of action and (c) poised for rational control of speech* (Block 1994: 214).

In terms of this distinction, the claim about bicameral minds can be rephrased as saying (roughly) that they had P-consciousness but not A-consciousness, i.e., they had no conscious 'access' to reasons for acting, nor rational 'control' of these items in deliberation and planning.

The evidence gathered by Jaynes strongly suggests that a major change of folk psychology took place that in the case of Greek civilization can be dated around 1200-1000 BC. The sort of textual evidence used by Jaynes is usually glossed over by reinterpreting the original Greek expressions in terms of modern psychology. Jaynes pleaded that this projective habit should be with-

stood, arguing that the original expressions should be taken literally as expressions of mental lives organized in ways substantially different from our own. If we take ourselves to be essentially correct when describing the mental processes driving our own behaviour in terms of deliberations involving beliefs, desires, and other such items from ordinary folk psychology, then why should we take a different stance with regard to the ancient self-descriptions in terms of blindnesses, rages, and divine arousals? Parity of reasoning demands that we take ancient folk psychology just as serious as current folk psychology.

Critics of Jaynes's proposal have typically objected that major psychological discontinuities of the sort envisaged here are inherently implausible on anything short of an evolutionary timescale. Ned Block, for example, argued against Jaynes that both P-consciousness and A-consciousness are "basic biological features of us", and "genetically programmed" (1994: 217). "Could there have been a time", Block asked, "when humans who are biologically the same as us never had the contents of their perceptions and thoughts poised for free use in reasoning or in rational control of action?" According to Block "there is no reason to take such an idea seriously. Very much lower animals are A-conscious" (1995: 238).

Block's insistence on psychological continuity illustrates the expansionist refusal to accept fringe minds too close to home. The presumption that mental features such as A-consciousness *must* be "basic biological features" shared by all humans as well as by "very much lower animals" is based purely on intuition. Its force derives neither from empirical evidence nor from any privileged insight in mental ontology. The *empirical* evidence on early Greek folk psychology (i.e., the testimony recorded in writings such as the *Iliad*) actually suggests that Greek minds were quite different from our own, while the preconceived idea of Greek mental *ontology* derives wholly from projecting current folk psychology onto earlier minds.

In the terminology developed by Imre Lakatos in his methodology of scientific research programmes, Block's refusal to admit psychological discontinuities between us and the ancient Greeks can be described as belonging to the negative heuristics of the prevailing research programme in psychology, while the presumption of continuity can be described as belonging to the programme's hard core. Empirical evidence that conflicts with hard-core assumptions is dealt with by auxiliary hypotheses, which serve as a 'protective belt' to ward off falsification of the hard core. In Block's case the recalcitrant evidence is the Greeks' anomalous folk psychology that threatens the hard-core assumption of continuity. The proper way to deal with the anomalies is to explain them away rather than to take them seriously as indicating a possible breach of continuity. There are many ways to do so. For example, one may say that the Greeks were mistaken in their descriptions of themselves as bicameral

beings, or that their conceptual apparatus was inadequate by modern standards. Similarly, it may be argued that their descriptions of themselves as obeying to the voices of the gods should be taken metaphorically rather than literally (e.g., Block 1981), or that they were products of a now obsolete literary convention (e.g., Johnson 2003: 119).

As long as continuity remains a hard-core assumption it takes precedence over all other considerations, including those concerning the empirical record on ancient folk psychologies. The sheer weight of continuity will always tip the scale in its favour. The balance of arguments is bound to change dramatically, however, once continuity is lifted, which is what the present argument aims to do. Without the weight of continuity the expansionist's case against Jaynes becomes very weak. The bare empirical evidence in favour of the claim that the ancient Greeks had minds substantially *different* from our own is decidedly superior to the evidence that their minds were the *same* as ours. Assuming that folk psychology is our primary key to the mind (as stated earlier), and that ancient folk psychologies were substantially different from current folk psychology (as Jaynes has argued), there is more empirical evidence for a substantial change of mind than for substantial continuity. This fact tends to be toned down by the prevailing presumption of continuity, but may be reinstated once that presumption is lifted.

An analogy may help to illustrate this point. The ancient Egyptians graphically represented themselves as walking awkwardly sideways. Should we take this to be evidence that they *really* moved that way? Similarly, pharaohs and high officials were pictured as being much taller than ordinary men and women. Should we take this to be evidence that they *really* were much taller? In this case it obviously makes more sense to assume that the peculiarities reflect pictorial conventions, rather than to believe that they capture physical characteristics of the ancient Egyptians. The reason is continuity, which we expect to apply on biological grounds. There is reason to believe that the physical characteristics of human bodies could not possibly have undergone any such dramatic changes as would be required for walking sideways or pharaohs being twice as tall as common people. Moreover, this is corroborated by studies of ancient architecture and of the anatomy of mummified bodies and skeletal remains. Pharaohs may actually have been taller than ordinary people due to their better living conditions, for example, but it is unlikely that they were *twice* as tall. Ordinary people may actually have *made* themselves smaller in the presence of pharaohs, but that does not change their body length. In sum, with regard to the physical size of the human body it is more plausible to explain the Egyptians' peculiar representations in terms of pictorial conventions for expressing a person's status.

In the realm of the mind, by contrast, there is no independent physical evidence of what went on in ancient heads. The study of ancient minds is an exercise in "software archaeology", as Dennett put it (1986). In the case of the Mycenean Greeks studied by Jaynes one is relatively fortunate to have textual material to document ancient folk psychology, presumably based on a prior, pristinely oral tradition. This is more or less like having a "printout" of the original software, as Dennett speculated, or maybe rather like having a 'screen dump' witnessing what it was like to have the software running. The software itself has vanished, only some of its traces remain, and the remaining traces are all there is to work with. Apart from the evidence that may be gathered from the remaining traces there is no independent reason for assuming continuity in the case of the mind. That is to say, there is no reason to presume that earlier 'mental software' must have been just like current software, *apart from* the evidence (in the form of folk psychology) conveyed by the traces left by the software.

The human mind is quite unlike the body in this respect. Biology may give us reason to expect long-term continuity with respect to physical characteristics of the body, but psychology has no comparable considerations to offer. Our quotidian self-experience as thinking beings, expressed in terms of present-day folk psychology, is the only available basis from which to study the minds of modern Western humans. This 'privileged access' to our own minds does not stretch to cover ancient minds, however, or at least not beyond what is supported by the empirical evidence on how these ancient minds experienced themselves, i.e., ancient folk psychology. If *current* folk psychology is the empirical basis for current psychology, then it makes sense to use *ancient* folk psychology as the empirical basis for ancient psychology.

But *gods*? Should we believe in them as well, just because they are entailed by Mycenean folk psychology? No, at least not for purposes of understanding ancient psychology, where it suffices to take in that the ancient Greeks *understood themselves* as hearing the voices of the gods, and as obeying to their commands. There is no need to make the further assumption that these gods *really existed* in the ordinary sense of the word. Notice, however, that the considerations offered here for folk psychology may be analogously applied to folk theology. *If* current folk theology is accepted as the starting-point for current theology (which is a big *if*, and one that I would hesitate to accept), then ancient folk theology should be accepted as the starting-point for ancient theology too. Fortunately, theology is not the subject of the present paper.

5. Types of Minds

Is it really permissible to argue from folk psychology to mental organization? It may be objected that the peculiarities of a given language community's conceptual scheme do not necessarily reflect objective features of reality. For example, there was a time when the conceptual repertoire of Western societies did not include the concept of gravity. It would be foolish to conclude from this that there was no gravity in these societies at that time. Similarly, even if it can be shown that a given community's folk psychology did not sport the concept of consciousness, it does not follow that consciousness *itself* did not exist in that community. This is indeed a second line of argument (in addition to the argument from continuity discussed in the previous section) that has been used against Jaynes's theory by Ned Block (1981). Even assuming that all of Jaynes's claims about ancient folk psychology are correct, Block argued, all that would show is that the *concept* of consciousness arrived late in the second millennium BC, not that consciousness *itself* arrived only then. According to Block it is "perfectly obvious" that people were conscious long before they had the concept of consciousness, just like there was gravity long before Newton.

Philosophical discussions of Block's argument (including my own) have tended to focus on the question whether there can be consciousness without the concept of consciousness, and whether consciousness is a social construction. For example, Dennett (1981) has parried that consciousness indeed requires the concept of consciousness, and that consciousness is more like baseball than like gravity in this respect (cf. Sleutels 2006). Although there is justice in considering Jaynes's account as an instance of social constructivism, this view is also liable to misconstrue the issue. I think the issue at hand is less a matter of accepting or rejecting social constructivism, and more one of balancing the available evidence in historical psychology. Let me explain this by taking a closer look at Block's argument. According to Block, consciousness is just as independent of human concepts as gravity: there was gravity before the concept of gravity arrived, and there was consciousness before the concept. At the very least consciousness should be considered "a basic biological feature", which Block apparently considers proof that it is independent of concepts.

First, notice that Block's allegation about gravity is actually a covert implication of continuity. Gravity is the sort of phenomenon that is safely reckoned among the basic furniture of Nature. It is not a human invention, nor otherwise contingent upon human history or the development of culture. Physics tells us that gravity is a natural force that has always been around. If consciousness is indeed like gravity, then it will share the latter's presumption of ontological continuity. The question remains, however, whether there is sufficient reason to believe the antecedent.

Moreover, even assuming with Block that consciousness is a natural kind in the sense that it is "a basic biological feature", it does not necessarily follow that it is independent of human concepts and culture. Consciousness may be like an epidemic in this respect. Diseases such as influenza or the plague, as well as the organisms causing them, surely are "basic biological features", yet their career and genetic identity depend on a complex of cultural factors such as sanitary conditions, international traffic, and medical technology. The same may be true of consciousness.

It may be objected here that the line just taken against Block fails to establish that consciousness is dependent on the concept of consciousness. If the above argument holds, it can establish at best that consciousness is in some highly circuitous way dependent upon *some* concepts, probably not including the concept of consciousness itself. Similarly, influenza is not dependent on the concept 'influenza', but rather on a vast mesh of cultural conditions such as international air travel, which in their turn depend, very obliquely, on *some* concepts, but probably not on the concept of influenza. Now, as the discussion about Jaynes tends to focus on the particular question whether one can have consciousness without the concept of consciousness, it would appear that Jaynes has not been vindicated, nor Block refuted.

It may be the question rather than the answer that is at fault here. If a certain cultural community demonstrably has the concept of consciousness, as in the case of present-day Western society, I take this to be evidence that the members of the community have conscious minds. But on what grounds can it be claimed with some authority that a given community *lacks* the concept of consciousness? Block is quick to grant that the concept may have been absent in the case of the Mycenean Greeks described by Jaynes. Even assuming that the ancient Greeks did not have the concept of consciousness, Block argues, they should still be presumed to be conscious. The argument thus makes it appear as if the ancient Greeks may have lacked one particular concept, 'consciousness', while their conceptual apparatus was for the rest pretty much like ours. The situation would seem to resemble a natural language from which a single expression is deleted, for example 'cat'. The deletion would probably also cause the expression's closest relatives to be dropped, such as 'pussycat' and 'kitten', but otherwise the language would presumably remain intact. Similarly, if the Greeks lacked the concept 'consciousness' this would also affect the concept's closest relatives such as 'conscious' and 'aware', but the rest of their conceptual apparatus would presumably not be affected.

I think this misjudges what it takes *not* to have the concept of consciousness, or rather what sort of evidence is needed to claim that a given culture does not have the concept of consciousness. The evidence will typically involve much more than the fact that certain expressions are lacking from the culture's language. Presumably this will require a complete lack of evidence

about anything in the culture's self-understanding implicating the concept of consciousness as understood in current folk psychology. In addition it will greatly help if we also have positive evidence about something in the culture's self-understanding that makes it reasonable to assume that members of the culture were actually unable to represent themselves as being conscious in the modern sense of the word.

Now, the evidence presented by Jaynes to support the claim that the Mycenean Greeks did not have the concept of consciousness is indeed richer than suggested by Block's deft concession. It involves, among other things, evidence that the Greeks did not have mental contents in anything like the modern sense of the word. Let me explain this by using Block's distinction between A-consciousness and P-consciousness, as outlined earlier. I shall argue that the sort of evidence Jaynes used to establish (1),

> (1) The Mycenean Greeks did not have the concept of consciousness,

is also evidence for (2),

> (2) The Mycenean Greeks did not have A-conscious minds in Block's sense.

Claim (1) requires not only that early Greek language was unable to express the modern conception of the conscious mind, but also that the ancient Greeks were actually unable to think of themselves as conscious beings in anything like the modern sense of the word. Now, an essential feature of consciousness in the modern sense is that a conscious being is able to access its mental contents for use in reasoning and deliberation, for planning, initiating and motivating action, neatly captured by Block's definition of A-consciousness.

The sort of ancient self-descriptions accumulated by Jaynes strongly suggest that the Greeks were consistently unable to understand themselves as endowed with the sorts of mental contents that are central in Block's description of A-consciousness. As the ancient Greeks understood themselves, their mental contents were *anything but* "freely available as a premise in reasoning" or "poised for rational control of action". Their behaviour, including their use of language, may be said to witness the possession of mental contents in a certain sense, but these are not items for the use of which the possessors could meaningfully be held personally or rationally responsible. The sort of descriptions that are typically used for the protagonists in the *Iliad*, for example, suggest that they quite literally did not know *what* they were doing or saying, nor *why* they were doing it, in the sense that they were literally unable to explain, elaborate, question, doubt, or otherwise conduct articulate reasonings about the contents of their minds. They just occurred to them in the form of divine commands, neither requiring nor admitting deliberation or questioning, and they promptly acted on command. Similarly, the 'contents' typically had the

form of a 'rage' or 'blindness' that came over them, or a 'drive' that was raised in their chest. I think it would be stretching the truth to construe 'rages' and 'drives' as items "freely available" or "poised for rational control of action".

This is the sort of evidence used by Jaynes to establish claim (1), that the ancient Greeks did not have the concept of consciousness, and I find the evidence at least tentatively convincing. It is the same evidence, however, that is needed to corroborate claim (2), that the ancient Greeks did not have A-conscious minds. The evidence shows that the Greeks did not experience their mental lives as the presentation of discrete and articulate contents to an 'analog I' in an inner 'mind-space', to use Jaynes's terminology. By the same token, whatever 'mental contents' the Greeks may be said to have had were not experienced as being freely available for use in reasoning and planning of action; they were not experienced as discrete and articulate items one had 'access' to, in Block's sense of the word. Now, if the ancient Greeks did not *experience* the contents of their own minds as something they had access to, we should take this as evidence that they actually did not *have* access. As far as I can tell, the only alternative would be to claim that the Greeks had mental access all right, but failed to make use of it or failed to notice it. I find this alternative too contrived to be taken seriously. Similarly, if the sorts of things that occurred to the Greek mind were not *experienced* as distinct items that are "freely available" and "poised for rational control of action", we should take this as evidence that they actually *were* not freely available. The only alternative would be to claim that the contents were freely available all right, but the Greeks failed to make use of them or failed to notice them. Again, this alternative is too contrived.

Additional support for this interpretation of bicamerality in ancient folk psychology may be found in research on auditory and command hallucinations reported by present-day persons, which are to some extent comparable to the experiences reported by ancient sources. Indeed, Jaynes himself dwelled extensively on vestiges of the bicameral mind in the modern world, discussing phenomena such as possession, song, hypnosis, and schizophrenia (1976: 317ff). Persons suffering from hallucinations typically report of these as 'happening' to them or 'overcoming' them beyond their control; both the source of the voice and the underlying 'reasons' of what is said are inscrutable; in the case of command hallucinations the voice's instructions are often experienced as compelling, even if their content is rationally or morally repugnant (Hersh & Borum 1998). This is a far cry from having "access" to contents that are "freely available". Morever, neuro-imaging research indicates that patients suffering from auditory hallucinations, sometimes in connection with schizophrenia or epilepsy, show increased activity in the right-brain homologues of classical left-brain language areas during hallucinations, as predicted by Jaynes's theory (Sommer et al. 2008; Woodruff et al. 1997). This may help to relieve the suspicion that bicamerality is a merely verbal or cultural construc-

tion; there is a neural reality underlying phenomena of auditory hallucinations that is different from 'normal' brain activity.

The picture that is emerging here is that of two different types of mind working with different types of mental content, A-content ('A' for 'access') and B-content ('B' for 'bicameral'). A-contents are contents in the sense described by current Western folk psychology. They are the items conceived as sentence-like representations or 'propositional contents', to which a person may take a number of 'propositional attitudes' such as believing that *P*, feeling that *P*, or desiring that *P*, where *P* is a structured ensemble of concepts analogous to the way sentences are composed of their elements. What A-contents are about (roughly, what a mind can *use* them for) is determined by their place in the overall network of A-contents. More technically, an A-content's type-identity conditions are substantially determined by their place in an articulate and sufficiently large system of rational (in particular inferential) relations holding between contents, spelled out in terms of propositions. A-contents are used by A-minds, one of whose defining characteristics is A-consciousness in Block's sense. A-contents are poised for free use in reasoning and planning of action by the A-mind. In point of fact, it is this possible use in reasoning that determines the identity conditions for A-concepts.

The identity conditions for B-contents are quite different. Minds with B-contents have no 'access' to them or to anything like 'inferential relations' between them, for there is no such access, and no virtual room for inferences to be drawn. B-contents are used by B-minds, one of the defining characteristics of which is the absence of A-consciousness. Persons with B-minds have no 'access' to their alleged 'thoughts', 'desires' and 'beliefs' (these are probably not the right words for them[6]): that is, they are unable to analyze them into conceptual components in terms of which the contents' logical relations to other contents and to behaviour could be spelled out. B-contents in the B-mind do not present themselves in a 'virtual working place' for analysis and for processing, nor can their identity conditions be explained in terms of any such analysis or processing. By comparison to A-contents, B-contents are blurred and vague; they are typically described as a nondiscursive 'rage', 'enthusiasm', or 'blindness'.

Summarizing the above discussion, I think that the evidence used by Jaynes to establish that the ancient Greeks lacked the concept of consciousness (as was quickly granted by critics such as Block) is actually evidence that they were not A-conscious, and that the sorts of mental contents occurring in ancient

[6] I think it is doubtful that B-minds are able to take different attitudes to the same content. In particular it is not clear whether one and the same B-content (say, a particular kind of 'blindness', *F*, that seizes a person) may also serve as the content of a different mental state (say, a different kind of blindness, *G*). Generally speaking, these considerations make it doubtful that B-minds are able to entertain beliefs, desires, and other propositional attitudes of the sort familiar to us.

minds were substantially different from the familiar contents of current minds.

6. Shrinking Minds

Jaynes's study of the bicameral mind may serve as an example of a strategy for dealing with fringe minds that is more viable than eliminativism and expansionism. The above discussion exemplifies three key features of the sort of strategy that I think is appropriate for dealing with the problem of fringe minds. First, it requires a breach with the prevalent presumption of continuity in the history of the mind. Secondly, it uses a sophisticated view of folk psychology for tracing substantial discontinuities in the history of the mind. Finally, its primary focus is not on distant fringe minds, such as neonates, Neanderthals, primates or "very much lower animals", but on the minds of our closest fellows in cultural history.

Let me call this type of strategy 'restrictionism' to bring out the fact that it is in several ways the exact opposite of expansionism. Instead of trying to *expand* the scope of the modern conception of the mind, it tries to let it *shrink*. Instead of trying to push the fringes of the mind as far out as possible, it tries to find out how far the fringe mind reaches in. The primary purpose of searching for fringe minds as close to home as possible is to identify what is distinctly 'modern' about the mind as conceived by current Western folk psychology. If it can be established that a certain attribute *M* of the mind in the modern sense came into existence only fairly recently in cultural history, then this is reason to exclude *M* from reconstructions of yet earlier (or in a sense, 'more primitive') minds. A major problem for expansionism was the risk of attributing specifically modern traits to premodern minds. This risk is eliminated, or at least minimized, in restrictionism. The heuristics of expansionism was to find as many as possible similarities between distant minds and our own; the heuristics of restrictionism is to find as many as possible differences between nearby minds and our own.

If *M* is presently considered a substantial trait of the mind (e.g., intentionality, consciousness, unity, personality, or rationality), then one should accept the fact that the mind underwent substantial change in the course of history. The grounds on which a change of mind can be claimed must be found in the history of folk psychology, for the simple reason that no other sources of evidence regarding a community's state of mind are available. Different folk psychologies are (at least prima facie) evidence of different minds, as they reflect the ways in which members of a given community organize and communicate their behaviour in a social context. The mind being the 'virtual machine' that makes such organization and communication possible, it is best approached through folk psychology.

The reconstruction of folk psychologies is a cumbersome task. Even when there is ample documentation about a culture's psychological self-understanding, even in the form of textual sources, there are hermeneutical hurdles to be taken. It is hard to keep our present self-image from obtruding itself, in history as well as in contemporary social anthropology (cf. Winch 1964). As the evidence gets thinner when one moves from historical to prehistoric times, or from linguistic to non-linguistic creatures, the situation gets even worse to the point that there seems to be no folk psychology left to reconstruct. What can be gathered about anything even remotely resembling 'folk psychology' from prehistoric bone scatterings and Levallois flakes (Mithen 1996; Gabora 2009), from feeding behaviour among birds, or social play among coyotes (Allen & Bekoff 1997)? The apparent absence of a folk psychology in such cases may seem to undermine the feasibility of restrictionism, but I think it is actually a strong argument in its favour. Where the evidence on folk psychology grows thin it is very hard (and maybe even impossible) to tell whether a given characteristic of the mind, *M*, was present or not. This was the case in the cave art example discussed above. By comparison it is much easier to establish that *M* was absent in more recent cultural history, where the evidence on folk psychology is so much richer; and if *M* was lacking in recent minds, it was probably lacking in earlier minds too. Analogously, if it was lacking in recent human minds, it is probably lacking in animal minds too. Adopting restrictionism as a research strategy enables one to use relatively richly documented changes in recent cultural history as stepping-stones toward a better understanding of historically and developmentally earlier minds. At the very least our understanding of these minds will be less biased by assumptions about our own minds when the restrictionist *via negativa* is followed.[7]

Restrictionism accepts the possibility that human beings very much like us, even in recent history, did not have minds in the modern sense of the word. This can be taken in either of two ways. On a strict reading of 'mind' it means that it is possible that many of our fellow humans in the past did not have minds at all, and even that many of our fellows today do not have them. Taking 'mind' in a looser sense, it means that they have, or had, minds of a substantially different sort. For example, the previous sections argued that our closest cultural ancestors, including the ancient Greeks, did not have consciousness in the modern sense of the word. Does this mean that the ancient Greeks did not have minds, or that they had minds of a substantially different

[7] The case study of the Mycenean Greeks is only one example. Restrictionism encourages the search for substantial changes in folk psychology that may have occurred in even more recent history, which in their turn should be able to improve our understanding of Jaynesian bicameral minds. For example, literacy seems to be responsible for a number of significant aspects of our present self-understanding as thinking creatures, both in the history of society and in the development of the young child, as has been forcefully argued by D.R. Olson (1994).

sort? I think the proper thing to say here is: certainly the second, and maybe the first. However, this 'maybe' should not be taken to mean that further *evidence* is required to establish that the ancient Greeks did not have minds. In my view it takes a *decision* rather than a discovery to settle the issue. We may either decide to use the word 'mind' in a strict sense, such that every mind is conscious by definition, or decide to use it in a looser sense that allows mind to be non-conscious. The dispute is merely verbal.

Notice that restrictionism makes no attempt to *solve* the fringe mind problem. The problem from an expansionist perspective was how to decide when to stop trying to apply standard folk psychology to developmentally and historically earlier minds, that is, to the sorts of minds that find themselves halfway between mindless nature and full-blown minds in the modern sense. The expansionist's way of dealing with the problem was to keep it as distant as possible. Restrictionism, by contrast, makes no such attempt. It looks for fringes as nearby as possible, and in fact allows them to multiply indefinitely: with each substantially new type of mind that may be identified in the course of history, a new fringe mind problem presents itself.

Now, assuming that restrictionism makes its way through consecutively earlier stages of the mind's development, it should at some point hit the border between mind and non-mind. For expansionism that was the point where the conceptual apparatus of psychology breaks down, facing an inexplicable gap between mind and non-mind. How does restrictionism deal with the situation? Restrictionism is prepared to accept substantial discontinuities in the history of the mind. Assume that a series of such discontinuities has been empirically established. Now, imagine that the history of the mind is played back in fast reverse from the present into the distant past, as seen from the vantage point of our present self-understanding, *P*. With each step back in history certain characteristics of *P* are lost. Some will be accidental, others substantial. As more and more substantial aspects of *P* are lost, the minds under consideration will be progressively less mind-like in the sense of *P*. At each step, even at the first step, we may ask ourselves whether we should keep the word 'mind' to describe the phenomena; at each step, even the first, we may decide to drop it. The step from mind to non-mind is just one of the discontinuities. It is not any one of them in particular, such that it would be conceptually impossible to keep the word 'mind' any longer, but just the one at which we decide to drop it. Assuming that we have retained the word 'mind' through many consecutive steps (as I would be prepared to do), the sort of mind/non-mind we arrive at when we finally decide to drop 'mind' will be quite unlike our own minds. Only the barest skeleton of a system for organizing behaviour will have remained, without any of the characteristics we think of as essential for *P*-minds. Dropping the word 'mind' for describing this skeleton will probably cause neither grief nor relief, and is unlikely to be seen as a major switch of vocabulary.

References

Allen, C. & Bekoff, M. 1997. *Species of mind*. Cambridge, MA: The MIT Press.

Baker, L.R., 1987. The threat of cognitive suicide. L.R. Baker, ed. *Saving belief.* Princeton: Princeton University Press.

Barkow, J., Cosmides, L. & Tooby, J., eds. 1992. *The adapted mind*. Oxford: Oxford University Press.

Bermúdez, J.L. 2003. *Thinking without words*. Oxford: Oxford University Press.

Block, N. 1981. Review of Julian Jaynes' The origin of consciousness in the breakdown of the bicameral mind. *Cognition and Brain Theory,* 4: 81-83.

Block, N. 1994. Consciousness. S. Guttenplan, ed., *A companion to the philosophy of mind:* 210-219. Oxford: Basil Blackwell.

Block, N. 1995. On a confusion about a function of consciousness. *Behavioral and Brain Sciences,* 18(2): 227-247.

Call, J. & Tomasello, M. 2008. Does the chimpanzee have a theory of mind? 30 years later. *Trends in Cognitive Science,* 12(5): 187-192.

Campbell, D. 1974. Evolutionary psychology. P. Schilpp, ed. *The philosophy of Karl Popper:* 413-463. La Salle, Ill.: Open Court.

Campbell, D. 1975. On the conflicts between biological and social evolution and between psychology and moral tradition. *American Psychologist,* 30(12): 1103-1126.

Churchland, P.M. 1979. *Scientific realism and the plasticity of mind*. Cambridge, UK: Cambridge University Press.

Churchland, P.M. 1989. *A neurocomputational perspective* Cambridge, MA: The MIT Press.

Corbey, R. & Roebroeks, W. 1997, Ancient minds. *Current Anthropology*, 38 (5): 917-921.

Davidson, D. 1999. The emergence of thought. *Erkenntnis,* 51(1): 7-17.

Deacon, T.W. 1997. *The symbolic species.* New York: Norton & Co.

Dennett, D.C. 1986. Julian Jaynes' software archeology. *Canadian Psychologist,* 27: 149-154.

Dennett, D.C. 1996. *Kinds of minds.* New York: Basic Books.

Donald, M. 1991. *Origins of the modern mind*. Cambridge, MA: Harvard University Press.

Donald, M. 2001. *A mind so rare*. New York: Norton & Co.

Fodor, J.A. 2000. *The mind doesn't work that way*. Cambridge, MA: The MIT Press.

Frankish, K. 2004. *Mind and supermind*. Cambridge, UK: Cambridge University Press.

Gabora, L.M. 2009. Mind. A. Bentley, H. Maschner & C. Chippendale, eds., *Handbook of theories and methods in archaeology:* 283-296. Walnut Creek, CA: Altamira Press.

Gärdenfors, P. 2003. *How* Homo *became* sapiens. Oxford: Oxford University Press.

Gopnik, A. 1999. *The scientist in the crib.* With A. Meltzoff and P. Kuhl. New York: William Morrow & Co.

Gopnik, A. 2009. *The philosophical baby.* New York: Farrar Straus Giroux.

Hersh, K. & Borum, R. 1998. Command hallucinations, compliance, and risk assessment. *Journal of the American Academy of Psychiatry and Law,* 26(3): 353-359.

Humphrey, N. 1998. Cave art, autism, and the evolution of the human mind. *Cambridge Archaeological Journal,* 8(2): 165-191.

Jaynes, J. 1976. *The origin of consciousness in the breakdown of the bicameral mind*. 2nd edition, with a new Afterword, 1990. Boston: Houghton-Mifflin.

Johnson, D.M. 2003. *How history made the mind.* Chicago/La Salle, IL: Open Court Publishing.

Lakatos, I. 1970. Falsificationism and the methodology of scientific research programmes. I. Lakatos & A. Musgrave, eds., *Criticism and the growth of knowledge*: 91-196. Cambridge, UK: Cambridge University Press.

Mithen, S. 1996. *The prehistory of the mind.* London: Thames & Hudson.

Olson, D.R. 1994. *The world on paper.* Cambridge, UK: Cambridge University Press.

Premack, D. & Woodruff, G. 1978. Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences,* 1(4): 515-526.

Ryle, G. 1949. *The concept of mind*. London: Hutchinson.

Sleutels, J. 2006. Greek Zombies. *Philosophical Psychology,* 19(2): 177-197.

Sommer et al., I. 2008. Auditory verbal hallucinations predominantely activate the right inferior frontal area. *Brain*, 131(12): 3169-3177.

Stich, S. 1983. *From folk psychology to cognitive science.* Cambridge, MA: The MIT Press.

Winch, P. 1964. Understanding a primitive society. *American Philosophical Quarterly*, 1(4): 307-324.

Woodruff et al., P. 1997. Auditory hallucinations and the temporal cortical response to speech in schizophrenia: A functional magnetic resonance imaging study. *American Journal of Psychiatry,* 154(12): 1676-1682.

Wynn, T. 1995. Handaxe Enigmas. *World Archaeology,* 27(1): 10-24.