

Consciousness and its objects

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March 26–31, 2012

Thoughts and Things. Thoughts are subjective and Things are objective. The former mental the latter physical. Russell makes a distinction of what we know by direct acquaintance, such as our thoughts, and things that we know by description, namely things. In the latter case we make a distinction between ontology and epistemology, while in the former case we cannot really separate the two. Knowing turns out to be identical with existence, there cannot be any existence without knowledge, is this not what consciousness really entails? The division seems intuitively unbridgeable, and hence there emerges a philosophical problem, namely the mind-body problem. How can we ever hope to relate the objective to the subjective, the mental with the physical? Instinctively most people recoil at the idea that their minds can be reduced to the material. That if their minds are to be identified with their brains, it is truly upsetting that those are made out of ordinary atoms. Maybe their unease would be somewhat ameliorated would it be the case that the atoms of the brain were not ordinary atoms but special 'soul atoms' even if they would behave in the same way as the ordinary atoms. One solution, a desperate one in my opinion, is to speak about panpsychism, meaning that the soul is present in the smallest material ingredients.

Now to state the problem in those stark terms is to come to an impasse. There is almost no way to turn, and we find ourselves almost in the same position as someone who wants to explain why there is something rather than nothing from first principles. Any starting point is by definition either illegal, if it becomes before the divide, and obviously insufficient if situated on the other side. The distinction between the mental and the physical is somewhat problematic. To say that the physical resides in space and the mental is independent of position, may comply with our basic intuitions, but is logically untenable. For one thing space may be thought of a construction of the mind, and we put things in space because space is a good way of organizing what we instinctively experience as being outside us, of things of which we have only a perceptual and inferred knowledge. So what is truly outside us? First we have the experience of our body as something distinct from other things out there. True we have a privileged relation to it, we can normally move our limbs and digits by pure will, not something we are able to do with other things, unless we first activate our body¹. Nevertheless we think of it as outside us. We can certainly lose a leg without losing ourselves. Our leg then becomes an alien part but our extension of ourselves is not affected. It is a nuisance, but does in no way diminish our conscious grasp. In fact our consciousness is usually so strong that even if we lose a leg we will be reluctant to let it completely go, as testified by the phenomenon of phantom legs and arms. Some organs we cannot live without, still they are not felt as intrinsic inalienable parts of us. We cannot live without air for that matter, but we do not consider the air around us as part of our innermost being.

¹ This must be one of the first remarkable discoveries we make.

But this gradual shelling off of layers does not stop with the body it also invades the mind itself. Thoughts are mental things, but also things, once we think of them. As William James repeatedly warns of in his treatise as being the psychologist's fallacy, we should not confuse the thought itself with its contents. A thought that is the object of another thought also becomes something alien to us. It becomes material, although in no sense can we think of it as occupying space. In fact much of our mental life seems somehow outside us. I am thinking of memory and the way that thoughts somehow are born by association. Although our minds are private, much of it appears outside us. We can often note the mechanical way the mind works, and we can often in retrospect reconstruct the mechanics that seems to have guided some rapid successions of thoughts and mental actions, especially when they have been faulty (and thus cause for concern and subsequent review). I do not know the sequence of letters on the keyboard, I would never be able to recollect them and pronounce them in the right order, still my fingers 'know'. I can type blindly if I want, although I often do not trust myself for longer stretches, just by feeling. The process is not conscious, but is it even mine? Does it not in some sense belong to the fingers, even if the fingers are controlled by the brain, the 'brainy' fingers located in the brain, are just part of the body as much as my physical fingers, and not really part of my core, whatever that is. The same goes for our language ability. We acquire the ability not only to articulate language, but to understand it and form involved sentences without any technical effort (I am at the moment neglecting to dwell on the aspects of meaning and intentions). Speaking and writing seems automatic, not really that different from many motor skills, such as walking. And once again it does not seem to be part of our inner self. The list can be continued, and although it may consist entirely of mental things, we have no problem conceiving of them to be rationally and materialistic understood, because we have no instinctive problem with correlation of such mental phenomena with various firings of the neurons in the brain. We can understand how you could in purely physical ways enhance our brains as to make our capacity for memory much larger and our memory retrieval much more efficient. In fact we are doing this already, and have been doing it for time immemorial, by using our environment as a prop to extend our mental mastery. Then we are very curious about hidden capacities of our brains, necessarily unconscious ones. How do we learn language so quickly and efficiently, and why can it only be done during a rather narrow window². Chomsky famously has a theory that our minds have been especially evolved to do so. As there is very little empirical support for it, it is considered mostly as part of philosophy rather than science, although Chomsky did conceive of it in a scientific way, and he was right of course. It really is not part of the fundamental mind-body problem, it is potentially part of science, once it becomes better understood in a technical way and is subjected to the usual rituals of attempts at falsification. There are further questions like that, amenable to scientific study, such as our uncanny ability

² Of course you can learn languages at any time of your life, but that presupposes that you have already learned your mother tongue that serves as a template. It is assumed that your relation to your mother tongue is special, while in other languages you learn grammar consciously, in your own language it is innate. To give a crude exemplification, in languages with different genders and different adjective endings to match, you derive the gender from the ending in your native tongue, while in your acquired you derive the ending from the gender the classification of which you have at one time painfully memorized.

to recognize faces from very few cues and even under severe distortions, coupled with curious cognitive restrictions (such as viewing faces in the negative or more surprisingly upside down³) Other potentially interesting studies can be directed at our olfactory senses, which seem rather undeveloped for mammals. Could it be that much of our sense of smell is subconscious? That such unconscious processing plays a very important role in say sexual attraction. Some tentative studies indicate that it might, but clearly what has been observed so far may only be the tip of an ice-berg. Clearly there is plenty of science you can do on the brain that it is truly fascinating but which does in no way impinge on the real mind-body problem. Such scientific knowledge may at the end instruct us and enrich our sense of the mental and thus may enable us to articulate the philosophical question in more varied and interesting ways without really contributing to a solution, whatever this is meant to be, although I can well imagine that many people would assume that a greatly enhanced knowledge of the brain and the mind may eventually let the mind-body problem resolve itself automatically, probably even anti-climactically.

So what remains of the mind when we keep on shaving off one layer after the other? Will it just be the case of the proverbial onion leaving us at the end with nothing? Although the author would object I still think that thinking in terms of ontology equals epistemology is apart from a seductively elegant formulation helpful in trying to pinpoint what we are actually aiming for. What comes to our mind are notions such as qualia, intention, free will, the sense of an 'I', the sense and meaning in general, the elusive notion of understanding including intuition. And the result of the exercise is somewhat disturbing, rather than feeling and finding that those core qualities are everywhere present, saturating our mental world so to speak, as the spirit in a drink, they are marginalized and form at most a thin layer in constant danger of evaporation. In a sense a surface phenomenon the depth of which is illusory. How tempting to will it out of existence as a (philosophical) nuisance, yet however elusive it stubbornly refuses to go away. Could it be that the last thing that leaves the degenerating brain in the case of dementia is this elusive layer? The demented person drowns in confusion, but what drowns is not part of the confusion. In short, dementia provides no protection against the fear of extinction, on the contrary the fear may be enhanced as the layer is being more and more exposed and it cannot even be articulated.

The layer is elusive by its thinness, and whenever we try to pick up examples to inspect, we need to include lumps of extraneous mental matter, just to get a purchase. Hence our examples will manifest various degrees of relevance. Qualia are usually considered as the quintessential examples, but is not the quale of a color say more of a quale than that of a pain? The experience of pain we can to some extent will away, while it seems impossible to will away the experience of a color when we are watching it. Also it seems easier to describe a pain in terms of being sharp or dull, throbbing and vibrant as opposed to steady or intermittent, while colors can only be described in terms of other colors if even that. The fact that one plus one is two seems to us so obvious that it cannot be explained. It too is a kind of quale, and we cannot conceive of a world where it is not true. On the other hand that $17357 + 21862 = 39219$ is far from obvious, it is an inferred quality. It does

³ We have no problems rotating simple figures in our mind, but we cannot mentally rotate faces, would we be able to we would have little problem recognizing faces upside down. This seems to indicate that our visual conception of faces follows other pathways than our visual construction of simple figures.

not appear to us in a flash, although we can assure ourselves of its veracity with a high degree of certainty. It is also amenable to description, while it is very difficult to explain to somebody that one plus one is two, it is very easy to describe the process at which you can arrive at the answer of a more complicated addition⁴. On the other hand it may be harder to explain the underlying logic that underpins that very process, in fact it might be even impossible to conclusively identify it. Euclid includes self-evident axioms of the character of postulates, but the way of reasoning itself is not axiomatized but taken for granted. In fact we can reason about logic itself assuming some tacit principles of thought⁵. To include basic logic in the discussion of qualia may seem to be stretching things too far. For one thing is not basic logic as well as the notion of number prime examples of objective mental phenomena and not subjective personal. While we can claim exclusive personal rights of our qualia of our experience of red, we can hardly claim a personal qualia of two? But why not? Or does it merely reflect the conceit of an excessively cerebral mind? To that we will return.

The distinction between ontology and epistemology is fundamental in philosophy and I would like to claim that this is the basis of Platonism⁶. I also believe that in trying to identify where the distinction no longer apply provides a powerful stimulus to your imagination. I will thus in true mathematical spirit persevere in defining subjectivity as where the distinction no longer holds, thus moving the line of demarcation between objective matter and subjective spirit into the non-spatial realm of the mental. It is this that explains the idea of Solipsism. But even the solipsist cannot escape objectivity as I have tried to explain, because so much of what is going on in our mind is 'matter' in the sense of being objective. What solipsism really boils down to is the denial of other

⁴ It is very hard to gauge the number of things without some systematic process usually referred to as counting. It seems that beyond three and four the human mind cannot perceive instantly, and in this regard its cognitive capacity does not exceed that of rats and crows. In fact one can argue that 3 cannot be conceived otherwise as $2+1$ (not as $1+1+1$ as that would assume the notion of three itself) or 4 is always regarded as $2+2$, so even at five there will be an extended process of three steps ($(2+2)+1$ or $(2+(2+1))$ (one set of parenthesis being omitted as typography does not allow them space to be inserted) which can only be done in a process involving memory and thus deprived of immediacy. This argument is an attempt to set a definitive cut-off in a gradual process by arguing for 1,2, many. As in the nature of arguments it is subjected to doubt and thus constitutes an invitation to criticism.

⁵ A game is defined by its rules, but we do not include the rule 'follow the rules' in the rules for obvious reasons, yet to follow the rules is crucial to the idea of a game. Playing the game is another idea that is intrinsic to games, and which for the same reasons you cannot include in your definition of a game. They all belong to the metaphysics of the game so to speak. This would make it very hard to play a game with an extra-terrestrial intelligence. One may also speculate that social games involve tacit understandings which are so obvious that they are similarly invisible, and thus not amenable to communication and transmission.

⁶ For some reasons the notion of 'Platonism' makes many people shy away. It seems almost as important to distance yourself from the notion as it is during our age to distance yourself from racism and similar anti-democratic manifestations. But a name is just a name and in principle you are free to name everything by anything as their true nature will be emerging from the context anyway. For those to whom 'Platonism' has definite connotations and thus is a well-established trade-mark for better or for worse I am willing to compromise and speak about weak Platonism.

minds. Thus anyone who carries the idea of solipsism beyond its purely logical aspects is overwhelmed with a cosmic sense of loneliness. In a sense solipsism is true, our subjective worlds are exclusively our own and as a result we are imprisoned in them. We are in fact monads in the sense of Leibniz. Related to the insight of solipsism is the claustrophobia of being enclosed in your own 'I', an early adolescent experience reported by many⁷. To the child those distinctions seem more fluid, I recall as a young child wondering why I could not be someone else. After all my conscious experience of myself was an objective fact as well as those of others. But our very subjectivity prevents us from experiencing the subjectivity of others. This statement seems almost tautological in the sense of being analytic. Implicit in the remark there seems to lurk yet another operative definition of subjectivity. The fear of death, and I mean the real one, can be recalled with some effort of will at most times⁸. What is remarkable that this fear is not diminished by the realization that the ultimate experience may be far off, even if it would be million years ahead in the future, the terror of it once becoming manifest is palpable. The reason must be that you believe in the stability of your own identity, so fundamental seems the inner (or outer, referring to the surface metaphor) life be that it is conceived as unchanged over time. Anything that will change over time will be considered not part of your essential essence. Likewise this idea implies that you have always existed and will always exist, and life is just a gift (how could we otherwise talk about a gift if there would be no pre-existent recipient?) you may enjoy for too brief a time before it is taken away from you. Thus most people think of death as a permanent case of sensory deprivation. You will no longer see, hear, smell, everything will be black. If fate is really cruel it will also take away your memories and the fact that you have ever lived, Thus cessation will be compounded by obliteration. On the other hand what else can you expect of a subject contemplating its own non-existence? But once you are dead your accidental subjectivity is removed and you are free to experience other developing conscia. This is a statement that should not be taken too literally because there will be no causal connection between the two individuals (not even an unconscious one), so you do not fall in the trap of transmigration of souls, an idea that strikes most people as even more preposterous than Platonism. What does it really mean? After my death I will be in the same position as before my birth. New conscia will develop all over the place, each with its unique gripping features. It may be hard to pin down what it means, but it should not be hard to pin down the ethical lesson it imposes. Empathy with the suffering of others is a case of ethical epistemology, but there is also ethical ontology. The real thing. Suffering happens not just vicariously experienced. The simplest way of trying to make sense of it is to refer to the case of hyper-dualism which McGinn briefly plays

⁷ Among others Sven-Eric Liedman in his recent autobiography. I similarly recall a few times in my early teens when for a few seconds being overcome with the sense of my own existence, or more basically still the existence of anything. No ordinary anxiety attack but one of metaphysical dimension! One can also see it as some kind of higher order consciousness, as I did at the time. Consciousness makes the world appear (I used to lament the fact that the interesting eras of the dinosaurs had no conscious beings to bring it into reality, it could as well never have existed) but there is also a really direct awareness of consciousness as opposed to the more theoretical we usually are content with. It is frightening.

⁸ a temptation that for good reasons is resisted, but for the very same reason that makes you touch a sore that hurts you may actively seek it out

with tongue in cheek. Namely a realm of universal consciousness in which the individual taps in⁹. Does this smell too much of woolly-minded mysticism? This is the price you pay once you try to articulate metaphysical ideas. Metaphysics, like metaphors, should never be taken too literally, then it becomes merely silly.

To recall, Thoughts are our most intimate possessions. In fact the thought-experiment of stripping off layers to come to the core, can be thought of a stratification of your possession. The wealth of a rich man is considered extrinsic to himself, he can lose it all, and hence be reduced to 'almost' nothing, at least in the eyes of the world. Still his wealth as long as it is in his possession can still be seen as a source of sexual attraction instances of which are far too numerous to be listed. That precious attraction of his will be lost once he is ruined. Different it is with beauty, that cannot be taken away from you, it is part of your body. But of course age does that, still beauty is considered as a more genuine source of attraction than wealth. What about intelligence? Age does not take that away, barring of course dementia,¹⁰. A person who demands to be loved for his or her own sake, would she be satisfied being loved for his or her intelligence? But even a persons intelligence may be considered on par with material wealth, an extrinsic gift that is independent of the core personality, that effervescent layer. We may imagine ourselves not only much more knowledgeable but also more intelligent without feeling that we will have changed in any essential way. In fact, as previously noted, our sense of identity is so deeply entrenched that we recognize ourselves from the very first moment of conscious memory as being the same. In the same way this holds locally, according to James. We recognize our successions of thoughts as belonging to ourselves, that we are the ones that think them. But as noted, thinking a thought and the thought itself are different. Once we think of a thought, as opposed to thinking a thought, we make it into an object, a thing¹¹. There is a kind of metaphysics of thought, and once we try to make that metaphysics explicit it ceases to be what it was. The thought becomes a thing. It is in this thinking of the thought that the subjectivity lies, in our perception of it, which cannot really be separated from the thinking of it. Thoughts are both objective as things and subjective in their appearances which are only manifest to their thinkers. Popper makes a big thing about the products

⁹ This reminds me a little bit about Feynman's idea of a positron as an electron traveling backwards in time, and thus there being just one electron in the universe going back and forth, each time slice literally cutting its path in trillions of places. Will there only be one person after all, who is instantiated trillions of times. The idea is a kind of solipsism that appears at least as depressing and scary as the standard kind.

¹⁰ but even in the case of dementia this is not entirely clear, the verbal proficiency of a demented may be impeccable, it is only that the supporting actors that are needed to display intelligence are absent. It is hard to exercise your power of thought when you no longer have a working memory, so the effect is the same as a lack of intelligence

¹¹ I believe that Pierce makes that point, although I am not sure. Once you have understood a thought of some other you have incorporated it and makes it your own and forget its progeny. In a way this is very sound, no one can claim exclusive possession of their thoughts. Objective, communicable thoughts belong to everyone. However, in the economic structure of a society, such an attitude is untenable. And then there is of course a matter of vanity, but vanity is a kind of economical recompensation. Those who dismiss money are usually fairly well-off as well as vain.

of the mind, World Three so to speak¹², and the crucial element in Collingwood's idea of history is to reconstruct the thoughts of its actors, and what he has in mind are thoughts as objects, and thus objective and communicable. Qualia are never communicable, they are subjective and thus known solely by direct acquaintance never by description, to recall Russell's distinction. They are not part of history, as Collingwood never tires of reminding his readers, as little as are the events of the natural world (to which he displays a curious antipathy). His history is purely human, and what is human are the sharable thoughts of humans.

The author plays with the idea of inversion. Granted that there are two kinds of objects, mental and physical, the first known by description, the other by direct acquaintance. But as the ontology of an object is indifferent to its epistemological access, we could imagine an inversion, where the physical properties are known directly and hence never doubted, while the mental only by description. I must admit that I do not find this thought-experiment very helpful, in fact as I am committed to my definition of truly mental such an inversion is analytically impossible. On the other hand it gives rise to a very interesting description of God¹³. God knows the physical world by direct acquaintance, but the mental only by description. Thus he needs not to be skeptical about the real world, it is his own creation, as our qualia our ours. However, the mental worlds of its denizens are more opaque to him. Thus although God is omnipotent in the real world, he is not so in the mental ones. The souls of people are beyond his ken, he can only appeal to them. This of course ties well in with classical theology, in which man has the option of defiance on his own restricted turf. In particular he may decide not to believe in God, which seems to be the ultimate sin. One may also interpret God more abstractly as Truth¹⁴. The Truth is manifest in the real world, while in the mind of men there reigns confusion, the purpose of their lives is to acquire knowledge about the world and its true relations. To deny Truth is of course the ultimate sin.

More serious though is the thought-experiment of an atomistic theory of the mind to parallel the prevalent atomistic theory of matter, implying that our understanding of the mental world is on par with the understanding of the physical world displayed by the Old Greeks. It is a mistake in the sense that it does not really give a serious alternative, but is just the same thing in a different dressing as the old material explanation. Because what is really a material explanation? Commonly understood it is an explanation using physical

¹² Poppers ideas about the three worlds is philosophically embarrassing. I used to think that he meant it metaphorically, as a figure of speech, but apparently he took it more literally than that.

¹³ A description does not necessarily imply existence. In his chapter on the Objects of Intentionality he gives a very lucid explanation of why such objects in general do not exist and why this is not a problem. However, to a mathematician used to the reasoning involving empty sets this is child's play and needs no apology.

¹⁴ Truth is one of those elusive notions that seems to evade definition, although all sentient moral beings know what is meant. However, Tarski gave a commonsense circular definition of Truth as accordance with the facts. This was enthusiastically picked up by Popper as the definite clarification of truth, which testifies to his philosophical naivety. On the other hand Popper naive or not was a hard-nosed pragmatist that saved him. He did not make the fatal mistake of confusing a definition of Truth with a criteria for it. Thus his enthusiasm had no ill effects, it only freed him from referring to truth embarrassingly.

laws on matter. Matter being naively thought of as small solid featureless particles. For one thing, as the author admits, what should constitute physics has changed with time. Electromagnetism cannot be explained in terms of gravity (and gravity itself is as Newton ruefully noted occult) and thus can in the context of gravity itself be considered mysterious. In fact we have a collection of seemingly irreducible forces, the unification of which has been one of the main projects of theoretical physics¹⁵. We have the problem of what constitutes an ultimate explanation. Now material explanations are not about matter per se, which is often thought of as solid featureless particles as noted above, but as combinations thereof. Thus materialism is really a principle of explaining things by abstractions which are far more mental than material in the classical way. As physics has progressed matter and matter has indeed become more and more elusive and abstract. Thus materialism is in a sense something that takes place inside your mind. A materialistic explanation takes the form of a long logical chain of arguments based on mental principle. In this way it becomes transparent and another word for transparency is emptiness. If we can think it up, it cannot be so deep. This is of course understood and recognized when we speak about materialistic explanations as being rational. Our rationality is somehow transparent and reductive and we feel that it is intrinsically incapable of providing an explanation of what it emerges out of. It is once again the problem of explaining how something can come out of nothing. Now to think of an atomistic theory of the mind¹⁶ is just to make a new kind of rational explanation, and hence materialistic in its essence, even if the irreducible building blocks may not be material¹⁷. And once again, wherein lies this opposition to a rational explanation of consciousness?

We have all had explanations of say our hearing works. Each new step in the chain seems only to be a reformulation bringing us no closer to the actual sensation of hearing, When you program you do something similar, one thing interfaces with another, and so on, and the implementation of a simple idea may be rather involved, but in the end it all works out, even if you as an individual cannot follow all the steps beyond those taken inside the software. There is also hardware, which to the programmer is a black box, but there are people working on that, so it is not too surprising that in the end there will be a result. Strings typed on a keyboard will eventually lead to a bona fide computation and produce something palpable in the real world. The program itself is of course not sufficient, it has

¹⁵ notably string physics, which purports to be TOE i.e. the theory of everything, as everything is ultimately reducible to physics

¹⁶ The author does of course not propose one, only gives an illustration of what a parallel explanation of the mind could consist in. But in a wider sense atomistic theories abound, this is what analysis and synthesis is all about. One of the more fanciful ones were given by Freud, in which he tried to explain the human psychology in terms of some underlying principles. The attempt was beautiful and imaginative, and as Wittgenstein remarked, very seductive. However, it ossified into a dogma, and thus stalled in its development.

¹⁷ Once again it is like building a word out of different atoms - 'soulful atoms', basically obeying the same kind of laws. Note that the exact form of the laws is not crucial, the crucial thing is the conceptual form of the argument. It is impossible to pin down what about the physical laws which are offensive and thus to suggest how they should be changed to become more palatable. To make an obvious point, it clearly would not matter what the actual values of the physical constants are.

to interface with something physical, and that is beyond the program itself (you cannot program a program to implement itself, as long as it remains on a piece of paper, or more appropriately as a string of zeroes and ones on a file it is inert). Now all explanations we know of are concerning things known by description, and the explanation itself becomes something we know by description. We have no further ambitions for it. Things we know by description we never expect to know by direct acquaintance. However if we want to bridge the gap, to give an explanation that explains something we know of directly with something we know of by description we expect that we should know the explanation by direct acquaintance. This clearly presents insurmountable problems. In order to progress we need to specify in what conceptual sense we should aim for an explanation. Should an explanation be so thorough that it will create the subjective feeling itself. In particular we will know what it feels to be a bat. But what does that mean? If we use a definition of subjectivity in terms of occlusion, i.e. we can only know subjectively our own subjective state, the ambition is impossible even on the analytic level.

However there is always the possibility of correlation. Correlation is not the same thing as explanation. Far from it. Often it can lead us totally astray, But it has certain practical if unpredictable uses. Pain-killing is one example. It is about preventing certain neurons to fire and thus to cause the sensation of pain. It has nothing to do with our perception of pain. Drugs have definite impacts on our mental life, especially as to mood and such things. If you take appropriate hormones your sex-drive will be effected, but of course this tells us nothing about the nature of the moods or our sex-drives. Much is going on in our inner life which we do not know about. We may think we are in love, but of course we may not be sure, although we have immediate acquaintance with our mood, but cannot classify it. Love is a social term and it is not that easy to compare our sensation with others and thus gauge whether it can be so classified. There is a lot of social pressure and expectation to be in love, and there are sexual urges. Love is supposed to follow certain conventions which will vary over cultures and times. Thus the question of love is not exclusively a matter of our inner lives, it is foremost a question of the social game. The feelings may very well be exalted and love is usually presented as an example of a phenomenon that artificial intelligence cannot truly simulate. In other words it can have no materialistic explanation. However there is no principal objection against your simulations of characters, so called zombies, who would display all the intricacies of a true love relationship. In fact the objective content of your inner world, in other words that which can be communicated, should be within the capacities of simulation. It should not be impossible to create the contents of thought as opposed to the actual thinking of thought. Thus the claim of Turing that any machine that creates output indistinguishable from that of a human being should be considered for all intents and purposes as a successful simulation, should have no bearing on the actual mind-body problem.

More generally much, if not basically everything, that goes under psychology may very well be an internalization of the social. As Popper suggests, sociology is not based on psychology, the latter may be an outgrowth of the sociology of our proto-human predecessors, even going further back. Dogs and humans share similar sociologies, which is the basis of the special man-dog relationship thriving on mutual misunderstanding¹⁸. The Jungian

¹⁸ Dogs believe humans are dogs, and human tend to ascribe human qualities to their canine pets. As

metaphor of the collective unconsciousness is not so far off the mark really, ridiculed as it may be. Language is the most palpable and the one easiest to argue for in those lines. This leads to the final aspect, namely evolution and natural selection, usually referred to under the heading of Darwinism.

Natural selection is an eminently rational explanation of how order can blindly arise out of chaos with no need of a guiding intelligence. The process of which is known as evolution. The explanation is so simply and striking that when one first encounters it one cannot be but convinced. The principle is so general that it has much wider explanations, and its increased abstractness runs the risk of turning it into a mere tautology. To Darwin, natural selection was anchored in the natural organic world, and although his vision was originally on par with philosophy, through the synthesis made in the 20's with Mendelian inheritance, and the subsequent breakthrough thirty years later with the DNA, it has become mainstream science and something of a catch-all explanation, not only encompassing the world of animals but human beings and their so called higher faculties as well. It is an eminently materialistic theory, which explains the initial unease it engendered (and still does). While previous materialistic theories had been even more radical, they were also too abstract to catch the general imagination. With Darwinism and the descent from apes, it all became shockingly concrete.

The theory in its vulgar forms explains everything in terms of genes, in other words, we are all encoded in DNA sequences. Every one of our traits can ultimately be linked back to a gene. Now, little reflection is needed to show the preposterous nature of such a claim. What is a trait? There are far more traits than there are genes. To explain every one of your actions, skills and tendencies by an underlying gene, known as genetic determinism, is clearly absurd. Even more absurd is to argue that our specific skill in driving cars is an evolved one, although there is of course a whole thriving cottage-industry churning out Kiplingesque yarns. Clearly many traits are combinations of more basic traits, and as such they tend not to be directly inheritable, and thus not necessarily subject to natural selection, even if genetically encoded. Also when the genetic coding is being unfolded, the DNA plays a very indirect role, much of the actual architecture of the body is the product of local laws and environmental noise. DNA produces proteins, the active chemical nature of which is very much connected to their spatial shapes, which in principle can be calculated from fundamental laws in physics. Thus this is materialism par excellence, in the sense of complicated combinatorial configurations. One should bear in mind that if chemical compounds could be made like those old-fashioned models by balls and sticks there would be no chemistry at all. The chemical property of a compound manifests itself in its participation in effecting new compounds. Thus given our inability to recognize faces upside down how can we explain it? That there never was any evolutionary pressures to hone that ability. This is a standard explanation, but what would it involve in practice. We would then relate this ability to a certain protein production and exhibit a long chain that links that to the actual inability. A tall order indeed. In fact detailed explanations of such phenomena do not yet exist and we may only have hope to achieve them in simple almost trivial cases. Yet much of our mental dispositions, including that of our language ability, seems within reach. There are no compelling philosophical arguments why such an

with many such mutually reinforcing illusions it can work very well, as testified by marriage.

approach would not eventually achieve its goals. As I want to emphasize again, this is not part of the philosophical issue that the mind-body problem poses.

It is tempting to assume that all our cognitive capacities can be explained by evolution. In fact the evolutionary tree provides us with a more or less continuous movement from the highest forms of life down to DNA molecules, at which level there may well be a molecular evolution the details of which so far are completely hidden from us. It is then tempting to define truth pragmatically as what is compatible with our survival. As the author points out our cognitive capabilities have evolved for certain purposes, that is why we are so good at some things, like face recognition, and so bad at others (mental arithmetic¹⁹). As Chomsky points out, we may be very adept at using language, but we have no theoretical clue how we do it. People can speak their native tongue grammatically perfectly without knowing any formal grammar. In fact grammar as we know it only encodes a small part of language use. It is perfectly possible to exhibit (even if it in practice may not be so easy) texts that are grammatically impeccable from a formal point of view, but nevertheless do not sound right for a variety of reasons it is by definition impossible to put your finger on.

What features of our mental set-up can be explained by natural selection? Language, as we have mentioned several times, seems a very typical instance of something uniquely human. What about numbers? Chomsky apparently argues, according to the author, that numbers follow from our language ability. How should this be interpreted? That language is more fundamental than numbers and in particular that numbers are just a human invention, doing away with any suggestion of a platonic independent existence of mathematics. One should make a distinction between the platonic concept of number as independent upon the human mind, and number as a human conception. Numbers are not just numbers for us, they come equipped with all kinds of associations, their decimal representations not to forget. Such features are irrelevant to their nature, just as their colors that some people, notably Nabokov, report as part of their aura. Some of those special private conceptions of numbers may be part of our qualia and thus part of that thin layer of irreducible consciousness. What about creativity? Are there hidden resources of our mental world which defy explicit codification. Thinking that cannot be reduced to algorithms? But even then, just as the case with language formation, we may still believe it is part of the relevant cognitive function, and thus in a sense, like language, outside us, and hence from the perspective of materialistic explanation within reach, even if far away.

Now from the evolutionary perspective we humans are not special, although we are of course the result of a winnowing process that has been going on for literally billions of years²⁰, yet there is no reason why our epistemic capacity would be the last say. We do not expect dogs to solve the riddle of the universe, so why should we assume that we are so superior to dogs? The argument is of course classical. If God has infinite intelligence how can we expect our own finite one to be a match to his? This is an irrefutable argument that

¹⁹ There are calculating magicians. It has been suggested that in order to perform their feats they need to tap into parts of the brain that is usually employed in social intercourse. To quickly recognize a face, especially under adverse conditions, is a computational feat fully comparable with multiplying say ten digit numbers.

²⁰ Sustained exponential growth is an impossibility, although all modern political action is based on it. However sustained growth in organic complexity does not seem to be bound by any obvious constraints.

of course cannot be falsified and hence in the nature of a theologian's trump card. McGinn proposes that the mind-body problem lies beyond our cognitive capabilities. By this claim he achieves two objectives. On one hand he does not deny a materialistic explanation and thus evades the accusation of invoking magic, on the other hand he does not commit himself to any particular, in fact he reserves himself the right to discard any proposed explanation is impossible. Talk about having it both ways. Now in what sense does this explanation differ from a more classical one in which we refer to magic? This problem is soluble, but only by a magician. There is of course a difference. While the classical pseudo-explanation would cause nothing but derision, this one is respectable as it places the putative magic cognition within a developing evolutionary tree. If we would be able to predict evolution, or at least map out its potentials, all kinds of cognitive abilities would be within our reach, in particular the one needed to solve the mind-body problem. So from a simple logical point of view either we do not have the cognitive ability to work out the consequences of evolution, or such magic beings are beyond the tree of life. Maybe what is needed are abilities to work out literally an infinite number of cases. Such a being would be capable of solving mathematical problems beyond our ken, such as the consistency of non-trivial system of axioms, to say nothing about the Riemann Hypothesis. But now we are beyond even science-fiction. Besides why should such beings be interested in mind-body problems of humans? They may have their own mind-body problems with which they are struggling mightily and in vain. However, I have no sentimental objections against such a claim, and I find them as satisfactory a statement on the mind-body problem as anything else that has been proposed, my only query is whether it really contributes anything above magic.

The human success at epistemology is remarkable, on the other hand could it have been otherwise? By definition we cannot imagine the unimaginable, and thus we expect that the world we meet and will be able to meet is the ultimate one. Whatever we need to know we will eventually know. This is clearly, as the author points out, pure arrogance on our part. But what is beyond our understanding is for intents and purposes magic. Why do we assume that the brain is the only one of our organs which is related to consciousness, could it be that our bodies are guided by several conscia totally isolated from each other interpreting the movements of the body in their own term²¹. This is pure speculation beyond the ken of science. But according to Popper science is not everything, only what we can rationally conduct; while the positivists held that all of ontology is within our reach.

But maybe it is? Our cognitive capability as immediate sensing number is, as we have already discussed, extremely limited; yet through certain well-known stratagems we are capable of transcending those. Could it be that once you come up to a certain threshold complexity everything will follow, just as there does not take too much bytes to set up a universal Turing machine. As examples of universal claims in logic we can point to what a computation consists in or what is a formal language. Does this bespeak a lack of human imagination or have we conquered the computational universe? Computation, by the way, seems to me to be more or less equivalent to materialism. In logic there is the favorite gambit of self-reference, also known as the diagonal trick. If evolution only provides us with

²¹ As has recently been suggested, free will is an illusion caused by retrospection. We do not will the movements of the body, the body guides our will.

the cognition necessary for our reproductive survival, what about the theory of evolution itself? Does the ability to form it confer a reproductive edge? Should it be considered false because it is the product of a deficient cognitive capacity, deficient because it is the product of the very evolution it predicts? Of course this might be considered a cheap shot, any serious inquiry leads you into a circle, this is something we must metaphysically accept. It merely shows that our theories and ways of thinking of the world are problematic, as if we did not already know that!

Finally the author discusses philosophy, as if it is a subject among others, maybe only distinguished by its problems being intractable. From the point of view of university administration this is of course true. The structure of a philosophy department is not different from other departments. There are the professors, the students, the syllabus. Papers are written, debates are carried on. There are conferences, promotions, prizes. The usual professional hierarchies. Its classic texts and heroes. Yet is it not fundamentally different, not any branch either of science or the humanities. Although from the point of view of University administration it is definitely part of the humanities. Collingwood considered it a part of history. Russell thought of it as a proto-science. Once some part of philosophy attains maturity it is chopped off and developed into a regular branch of science. What is left is the more and more recalcitrant part. But if a different intelligence would be able to solve our philosophical problems would it not rather be engaged in their own? To say that philosophy is the poetry of science may be thought of as a put-down (and admittedly if the metaphor is taken too literally it would condone bad and irresponsible practices), when it is meant to be a kind of exaltation. Philosophy does not need to ape the sciences, it views the world from an orthogonal and unexpected angle.

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