

It is never Known but Is the Knower

(Consciousness and the blind spot of science)

Transcript of a lecture by Michel Bitbol, Institut für Raumexperimente, Berlin, October 2013

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My topic today is what I like to call the ‘blind spot’ of science. Science has a huge blind spot in the midst of it, and, like every blind spot, it is ignored by the blinded subject. Yet even though it usually remains unnoticed, the blind spot has enormous effects on the practice and the interpretation of science. I will explain here how to define this blind spot, its visible effects on the very practice and results of scientific research, and the way it threatens the coherence of science’s broader self-interpretation. Finally, I’ll sketch a possible strategy for overcoming this blind spot.

To begin with, what is a blind spot? To find out, let’s do a little exercise. Please stare at this black cross while closing your right eye. Keep your attention and your gaze focused on the black cross. Interestingly, at a certain distance from the cross, you no longer see the big black dot at its left.



Physiologically speaking, this has to do with the fact that on your retina, there is a certain area towards which all the nerve fibres converge, the stem of the optical nerve. In this small area, there are no more light-sensitive cells, and you therefore *should* see nothing. But it’s not that simple. What do you see when you no longer see

the black dot? Do you see a hole? No, you don't. You see a white surface, exactly the same white surface at the periphery of the dot. Therefore, at this stage, you have a blind spot, but you don't realise it. This is a crucial point. Something is currently missing, but you don't have any present clue to tell you that it is missing. The only strategy you may use to become aware of this absence is to *remember* the past moment when you could still see the black dot, and then *compare* the two moments retrospectively.

So we have just seen an example of a real, visual, concrete blind spot. Let's now move to the metaphorical blind spot of science. What plays the role of the black dot in this case? What is the missing element of science? What is the *unseen* item in science? What is not seen, in this case as in any other case, can be said in one word. What is unseen is the *seer*, the one who sees, the one who is seeing. The see-er.

This is a very old idea, actually. It was articulated in one of the earliest Upanishads, about 3,000 years ago, which beautifully and poetically attempted to characterise the supreme godhead: 'It is never seen but is the seer; it is never heard but is the hearer; it is never thought of but is the thinker; it is never known but is the knower.'¹

But let's be more precise. What *is* unseen in objective science? The first item that is unseen is my, your, own bodies – not the body as an object for anatomy, of course, but my body while it stands in front of any object whatsoever. If I am a scientist, I have a body. I go back and forth in the laboratory doing gestures, shaping chunks of matter, making instruments, in workshops essentially like this studio. But scientists dream of bypassing their bodies. When they build their theories, scientists act as if they were pure, point-like gazes from which they can enjoy the show put on by the world. This assumption extends to the scientists' instruments as well, which are usually subtracted or forgotten in the ultimate outcome of their work. Science wants to understand 'the world out there'; scientists no longer care about the instruments once they have used them to obtain whatever knowledge they're after. The position we occupy, however, is incredibly important. Though it seems like a banal observation, it is not necessarily immaterial that we are here in Berlin and not elsewhere, that we are macroscopic (large-scale) beings with certain characteristics and not microscopic (small-scale) atoms or particles, etc. Within the work of science, these factors are very often not taken as seriously as they should be, in part because scientists aim to find 'laws of nature', and these laws should presumably hold true

¹ *Brihad-Aranyaka Upanishad*, III.viii.11 (trans. Swami Nikhilananda).

equally in Lhasa and in Berlin and at every scale, suggesting that ideal scientific knowledge can ultimately ignore the position and scale of the scientist.

Body, technology, location: these are some of the components of our situation. By contrast, objectivity aims at stripping away all the elements of the human situation in order to retain a universal residue. You subtract standpoint, you subtract geographical position, you subtract the present time, you subtract the fact that you need to use instruments in order to see the very small and the very large. You want all these things to become mere transparent windows giving access to an unspoiled world. You wish to wipe out your own situation and treat it as if it were made of an invisible sheet of glass through which the things “out there” become known and visible.

By the way, this is a metaphor that was often used by the early artists of the Renaissance. According to them, a painting should be like a window through which you can see a scene of nature, and the frame was then supposed to symbolise this window metaphor. Nobody cared about the pigments, the colour paste, the brute shapes, the thick or thin layer of painting, or the wooden or metallic material of the frame. In classical science, and in classical art as well, the aim was to ignore situation, to see through it and beyond it, to transcend oneself and see the world, so to speak, from nowhere.

But the problem is that in all scientific revolutions, we are abruptly reminded of our situation; our situation comes back to us like a boomerang. In the Copernican revolution of the sixteenth century, for instance, astronomers were suddenly reminded that what they could say about the trajectory of planets was highly dependent on their situation as inhabitants of the earth. Depending on whether their earth (our earth) was motionless at the centre of the universe or, rather, moving in an orbit around the sun, their conclusions about the motion of planets were dramatically altered.

During the scientific revolutions of the twentieth century, such as the development of the theory of relativity and the creation of quantum mechanics, we were made aware of another component of our situation: the fact that we use instruments to perform measurements and that these instruments are large-scale bodies. Consider Albert Einstein’s paper of 1905, where he first stated his celebrated special relativity theory. He boldly wrote: ‘It might appear possible to overcome all the difficulties . . . by substituting “the position of the small hand of my watch” for

“time”.² In other words, when we define time, we cannot ignore the fact that we are using clocks to measure ‘it’. In a sense, clock readings take on a defining function of time. The readings themselves are taken as substitutes for time until there is no such thing as time independent of some measurement.

The same holds true in quantum physics. The important turning point in this field was the formulation of *matrix mechanics* in 1925 by Werner Heisenberg, a theory that is a major ancestor of modern quantum mechanics. In the introductory part of his paper, Heisenberg took inspiration from the young Einstein of special relativity theory and wrote: ‘It seems reasonable to try to establish a theoretical quantum mechanics, analogous to classical mechanics, but in which only relations between *observable quantities* occur.’³ In other words, Heisenberg advocated a new attitude in which theoreticians no longer attempt to figure out what the world *is* independent of their act of observation, but only formulate law-like connections between observable quantities. Since these quantities are obtained by way of measuring instruments, we are here reminded of our concrete position as human beings in a laboratory with technological abilities. Here, again, scientists were brought firmly back to their own situation. Indeed, this motif of a sudden return to subjective situation begins to look like a permanent feature of the epochs of creativity in science.

Now, let’s go even further than the spatial and technological components of our situation. What is the most glaring absence in any description of the world? What is still absent and yet roaming around, not only when we consider our environment, but also when we describe our spatial position in it or our technological abilities? This ubiquitous absence is *experience* itself. Right now we see everything, the world and our clocks as well, through this universal ‘window’ of experience, a ‘window’ that is more transparent than anything else. This window is absolutely omnipresent. And, in fact, it is more than a window since there is no such thing as an object without experience. Can you think of an object that is completely independent of experience? Can you think of one?

OLAFUR ELIASSON: A meteorite.

² Albert Einstein, ‘On the Electrodynamics of Moving Bodies’, trans. W. Perrett and G. B. Jeffery, *On the Shoulders of Giants: The Great Works of Physics and Astronomy*, ed. Stephen W. Hawking (Philadelphia: Running Press Book Publishers, 2002), 1168.

³ Werner Heisenberg, ‘Quantum-theoretical Re-interpretation of Kinematic and Mechanical Relations’, *Sources of Quantum Mechanics*, ed. B.L. Van der Waerden (Mineola, NY: Dover Books, 1967), 261.

MB: A meteorite? OK. Is it completely independent of experience?

OE: No.

MB: Why?

OE: Well, by thinking about it, I experience my thinking about it.

MB: Exactly. That is the trouble. As soon as you think about something that is independent of thought, this something is no longer independent of thought! As soon as you try to imagine something that is independent of experience, you have an experience of it – not necessarily the sensory experience of it, but some sort of experience (imagination, concept, idea, etc.). The natural conclusion of this little thought experiment is that there is nothing completely independent of experience. But this creeping, all-pervasive presence of experience is the huge unnoticed fact of our lives. Nobody seems to care about it. Few people seem to realize that even the wildest speculations about what the universe was like during the first milliseconds after the Big Bang are still experiences. Most scientists rather argue that the Big Bang occurred as an event long before human beings existed in the universe. They can claim that, of course, but only from within the standpoint of their own *present* experience...

Ironically, then, omnipresence of experience is tantamount to its absence. Experience is obvious; it is everywhere at this very moment. There is nothing apart from experience. Even when you think of past moments in which you do not remember having had any experience, this is still an experience, a *present* experience of thinking about them. But this background immediate experience goes unnoticed because there is nothing with which to contrast it.

This was well understood by Ludwig Wittgenstein, probably the most clear-headed philosopher of the twentieth century. One of my favourite quotes of Wittgenstein's is this one: '[Conscious experience] is not a *something*, but not a *nothing* either!'⁴ The fact that conscious experience is not some *thing*, that it is not a *thing* at all, makes it easy to forget, or tempting to neglect. But this attitude of forgetfulness is utterly inadequate. As scientists and ordinary human beings who

⁴ Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe (Oxford: Basil Blackwell, 1953), §304.

participate in consumer society, we are so fascinated by solid things we can possess that we tend to overlook everything else. We are obsessed by what the philosopher Axel Honneth calls universal *reification*, which turns any value or living being into an object and which causes us to conflate ‘existence’ and ‘thingness’. But experience is by no means nothing, even though it is no *thing*. One could even argue that experience is *everything* for us at this very moment.

AUDIENCE MEMBER: Can I just ask, would you say that you could have an experience without thinking? Clearly we have autonomic processes that are happening, that we are experiencing, but we’re not thinking about them. For example, I’m not thinking about my heartbeat. Can there be non-thinking experience that can still be reflected on?

MB: Yes, there is experience without thinking. For instance, the experience of realising that you are now thinking is thoughtless. When you assess what you are thinking presently, your state of being is, so to speak, broader than the thinking process itself. This is what we might ascribe to a category called *contemplative disciplines*.

AUDIENCE MEMBER: When you’re an embryo, you probably register some kind of experience.

MB: That’s probably right. I agree with you that embryos might well have a form of experience, but I remain reluctant to be more assertive because I know that this is just a reconstruction. The best thing I can do now to find some arguments in favour of this thesis is to try to probe through the strata of my own history of experiencing. The goal, then, would be to dig deep enough in my own lived past to find a stratum of very elementary experience that can be related to embryonic experience. A fascinating attempt in this direction was Sándor Ferenczi’s book entitled *Thalassa*.

Now, let’s come back to the blind spot of science. A good metaphor for it was given, once again, by Wittgenstein, in his famous *Tractatus Logico-Philosophicus*, first published in 1921. The relevant sentence is the following: ‘Nothing in the visual field allows you to infer that it is seen by an eye.’⁵ Let’s think a little further about

⁵ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, trans. D. F. Pears and B. F. McGuinness (London: Routledge and Kegan Paul, [1921] 2001), 5.633.

this remark. When you see a landscape, how do you know that it is seen by an eye? Usually you don't even think about this; the eye is the unseen condition of seeing. But with a little effort, you can determine that there *is* an eye in the background. For instance, you can close your eyes and notice: *oh, now I don't see anything*. That suggests that this landscape was seen through this pair of little spheres that I am feeling with my palms under the shut eyelids. This is one method. There is also another method: putting yourself in front of a mirror and seeing your own eyes in the third person, objectively, as if they were somebody else's eyes. You then realise, by making a model of visual perception, by drawing straight lines between what you see and these eyes, that there are good reasons to think that they are a major condition of vision. But this is not all. There is yet another way to discover that things are seen by an eye. Let me ask you a little riddle. Can you see the eye from the first person's standpoint? Of course, you can't! You only see what is seen. You see the landscape. However, in the landscape, you find a glaring sign of the eye viewing the scene, a sort of geometrical projection of the eye. Indeed, the landscape has a very specific structure that you all know because you have studied Alberti, Brunelleschi, and all the painters of the Renaissance who discovered *perspective*. The landscape has the structure of a more or less linear yet somehow spherical perspective, in which a bundle of lines converge towards a certain point. . . . What is it called in English?

OE: The vanishing point.

MB: Yes, thank you: the *vanishing point*. The landscape has a structure that is polarised by the vanishing point, and you can easily infer that it is seen from a very definite *somewhere* by going back up from this vanishing point. So what Wittgenstein said about the impossibility of inferring that the visual field is seen by the eye is not entirely true. Actually, it is possible to discover our own visual situation by an indirect inference.

Now, when knowledge is at stake, things are quite similar. This was pointed out by Nishida Kitarō, a Japanese philosopher from the beginning of the twentieth century who was a specialist in German idealism and in Zen (both Zen practice and Zen philosophy). He noticed that 'as soon as one has adopted the standpoint of objective knowledge, the knower does not enter into the visual field'.⁶ This is almost identical to Wittgenstein's remark, but in a less metaphorical disguise. Here, the blind

⁶ Nishida Kitarō, 'À propos de la philosophie de Descartes', *L'Éveil à soi*, trans. J. Tremblay (Paris: CNRS Éditions, 2003), 253. (English translation, Michel Bitbol).

spot of objective knowledge is clearly pointed out: the knower is the unknown of this modality of knowledge.

Let's go a little further and ask about experience *beyond* vision and knowledge. It is tempting to extend Wittgenstein's remark not only to knowledge but also to experience: nothing in experience allows you to infer that it is experienced. What do you experience? You experience things, you experience properties, you experience relative positions. But you don't *experience* experience. Things are even worse here, in fact, than in the case of the eyes. The eyes can somehow be seen from outside (by means of a mirror), but what can we experience of experience from outside? Absolutely nothing. You don't have an outer view of experience; you don't have a naturalised knowledge of experience, as if experience were an object of nature. Experience is what is lived now and nothing else. If you try to distance yourself from this now – nothing is found. Well, in fact, if you try to distance yourself from your present 'you', you arrive at another experience a little later, and you are still *in* present experience, not outside it.

Our field of experience is comparable to the visual field, just fuller and richer. What belongs to experience includes the same visual landscape as before, but also involves tactile, aural, and intellectual elements. Using Wittgenstein's formulation of the problem of vision as a model, the question then becomes, can we infer from this fuller landscape that it is *experienced*? I think there is a way to do so.

You remember that in the visual field, there was a mark of the viewer's spatial situation, namely, the vanishing point. In the same way, there is a mark of our generic situation in experience: *finiteness*. Our experience has limits. It cannot include seeing the hidden sides of objects, existing in the past and future simultaneously, hearing low intensity sounds, completely comprehending other minds, or concurrently occupying places of the universe that are too far apart. Individual experience is situated and finite. According to the philosopher Martin Heidegger, experience bears the mark of *being-there*, and we ourselves can be called *Dasein*, 'being-the-there', as he wrote to French philosopher Jean Beaufret.⁷ This peculiar structure of experience, this mark of finiteness, is precisely what allows you to know that what is presented to you is indeed *experienced* by you.

⁷ 'Dasein is a fundamental word in my thinking, and therefore it is also the occasion for great misunderstandings. For me, Dasein does not mean *me voilà* as much as, if I can say it in a perhaps impossible French, *être le-là*. And *le-là* is the same as truth – un-hiddenness-opening.' Martin Heidegger, 'Lettre à Monsieur Beaufret', *Lettre sur l'humanisme*, trans. R. Munier (Paris: Aubier, 1964), 182-84.

This kind of reasoning, which starts from the structure of what is presented in experience and then goes upstream to its precondition, is called a *transcendental deduction*, a term taken from philosophers Immanuel Kant and Edmund Husserl. Just as you can go upstream from the perspectival structure of a landscape to the precondition that it must be seen by a localised eye, you can also go upstream from the structural finitude of some field of given-ness to the realisation that it is experienced by you, as a *Dasein*. In both cases you perform a transcendental deduction, and you infer a *transcendental knower* (a knower that transcends knowledge because it is not itself an object of knowledge). The knower that is not known, as it was called in the old Upanishad, can nevertheless be inferred and realised to a certain extent.

There are other, more specific circumstances that reveal that present things are experienced. By focusing or defocusing your attention, you can make something seemingly appear or disappear at will. Thus, you know that there is experience of this object, as well as the object, because the experience can vary, whereas the object is taken to be stable. Also, by practising meditation or by employing the famous phenomenological *epoché*,⁸ you can defocus your attention from objects and refocus it on the mental acts of perceiving them. Here, again, you become aware that the objects are *experienced entities*.

The author who best understood this blind spot of science was Edmund Husserl, in his late work *The Crisis of European Sciences and Transcendental Phenomenology*. Year after year, this book continues to live on my bedside table. Its aim is to perform a sort of archaeology of science and to understand what was forgotten in the very advent of contemporary science. Husserl was especially interested in Galileo, who he believed to be both ‘a discovering and a concealing genius’. Galileo was a discovering genius because he understood how to mathematise natural phenomena. This was indeed a major leap forward, which served as a foundation of modern science. But Galileo was also a *concealing* genius. Why? Because he substituted the mathematical world of idealities for the real world, which is the *lifeworld* (to borrow Husserl’s terminology) of embodied experience. The scientists who followed Galileo’s teachings were so fond of their mathematical

⁸ *Epoché* is a word used by the Greek sceptics to mean ‘suspension of judgement’: one suspends judgement about the world and its objects and brings attention back to the very process of judging. The same word was used by Husserl, the founder of phenomenology, to mean suspension of spontaneous perceptive judgement about the existence of things out there, and bringing attention back to the spontaneous mental acts by which we posit this existence.

constructs – they were so proud of their beautiful mathematical idealities – that they mistook them for a sort of symbolic key to reality. As a consequence, they forgot the very place where they had started – the *lifeworld* – through fascination with their own concepts. They put the hierarchy of knowledge upside down by declaring that they could reconstruct everything, including the *lifeworld*, which was their starting point, out of their mathematical idealities, which were their ultimate outcome. They turned their foundation into a secondary by-product and their constructs into a foundation. In particular, scientists declared that they could account for consciousness itself by way of objective science underpinned by mathematics. They claimed to be able to find the origin of experience in some appropriate law-like connection between experienced objects. This project looks perplexing when it is formulated this way, but scientists are still very much dreaming of it nowadays.

Husserl explained the paradoxical aspect of such a project well. The subjective-relative is supposed to be overcome. However, ‘. . . the subjective-relative is on the other hand still functioning . . . not as something irrelevant that must be passed through but as that which ultimately grounds the theoretical-logical ontic validity for all objective verification . . .’⁹ In other words, situated experience (namely, subjective-relative experience) is supposed to be accounted for by objective knowledge; but objective knowledge is itself grounded on situated experience (namely, on the subjective-relative). This is a half-buried vicious cycle. We can thus begin to understand Husserl’s discomfort with the concealing genius of Galileo.

Now how is this blind spot manifest in modern science? How does it reveal itself? What are its consequences? Is it neutral or highly damaging? You might believe (or hope) it is in fact neutral. You might then think it is useless to keep in mind the blind spot, the *lifeworld*, or our own situation. After all, scientists are so successful that it looks like their self-inflicted blind spot is harmless. Why should they bother to become aware of their own lived starting point, if just forgetting it has no harmful consequences? Unfortunately for them, this is not the case. The blind spot has devastating consequences for science. True, science grows increasingly efficient from a technological point of view, but its self-understanding is dramatically impaired by the persistence of an ignored blind spot in its midst. Science doesn’t understand itself, and it is therefore disoriented.

To give you an example, let me move to the current project of neuroscience: understanding consciousness. Some philosophers feel that this project is hindered by

⁹ Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, trans. David Carr (Evanston, IL: Northwestern University Press, 1970), 126.

an exceptional difficulty that they call ‘the explanatory gap’. They consider that explaining the emergence of conscious experience from the physical world is a ‘hard problem’ (so hard, in fact, that the perspective of solving it is bleak). But a lot of neuroscientists aren’t fazed by this problem. Rather, they are content with claiming something like: “OK, this is quite difficult indeed, but let’s strive towards a solution, and we’ll most certainly manage to overcome the difficulty in the future”. Now, if those very same scientists thought a little harder about the origin of their questioning, and about the nature of their methods, they would be much less optimistic about the prospects of ‘solving’ this ‘hard problem’ of how consciousness emerges from a physical world. To make this easier to understand, I will give you an alternative formulation of the hard problem that renders the paradox immediately visible and that shows how scientists are, in a way, falling into their own methodological trap.

The alternative formulation is ‘How can we give an objective explanation of the subjective?’ When you hear this collision of words – ‘objective’ and ‘subjective’ – you immediately feel that there is something wrong. The feeling that there is a contradiction increases when the methodology of *objective explanation* is made explicit: how can we recover subjective experience after having banished it deliberately by the process of objectification? Indeed, ‘objective’ is the name we give to a domain of phenomena from which we have subtracted as many elements of our subjectivity, and of our situation, as possible. How is it possible to recover subjective experience from the residual material that was obtained by subtracting subjectivity in the first place? One feels there is something basically wrong in this project, and even in the “problem” that triggered it in the first place¹⁰.

Let me consider another case: the case of the second principle of thermodynamics. In classical thermodynamics, there are two principles: the conservation of energy (which is called the first principle of thermodynamics) and the irreversibility of transformations (which is called the second principle of thermodynamics). The second principle states that a certain function of temperature and pressure, called *entropy*, is continuously increasing. It is also sometimes expressed by declaring that disorder is continuously increasing. Except for little pockets of stabilised order, such as living beings, global disorder is indeed increasing. Now the problem is that apart from this globally valid second principle of thermodynamics, which was postulated to account for certain large-scale phenomena, such as the impossibility of a spontaneous transfer of heat from a cold to a hot

¹⁰ M. Bitbol, *La conscience a-t-elle une origine ?* Flammarion, 2014

material, all the rest of physics applied to local phenomena is made of *reversible* laws. This is the case of Newton's laws in classical physics and Schrödinger's equation in quantum physics. In the context of these reversible laws, nothing fundamental changes if one substitutes decreasing time for increasing time in an equation; the second principle of thermodynamics, however, superimposed globally over all experiences in the physical world, holds true only for increasing time.

The difficulty is then the following: how can we arrive at the global irreversibility of entropy using these local reversible laws of physics?¹¹ How can we explain time asymmetry out of the basic, time-symmetric laws of physics? Here again, many scientists consider this a respectable research programme. But maybe the problem is wrong from the outset; maybe it is nonsensical to even ask this question. To understand why there is indeed a contradiction in the very formulation of the problem, you just have to think about how the standard reversible laws of physics were established. In order to arrive at physical laws such as Newton's laws or Schrödinger's equation, one overcomes the feeling of time passing, abstracts out time as a precondition for experience and only retains its measurement in the form of clock readings (think of Albert Einstein). Therefore, we first eliminate the experienced irreversibility in favour of abstract numbers (the clock readings) in local, natural laws, and then we expect to recover this irreversibility in the globally applicable law of entropy! This is a deep paradox once again – not a paradox of science, but a paradox buried deep in its most elementary foundations

Let's now consider a third example: the measurement problem of quantum mechanics. As you may know, one famous statement of this problem is Erwin Schrödinger's cat paradox. While we would think of Schrödinger's cat as capable of being either dead *or* alive, quantum physics appears to describe this cat as if it were in a state of superposition, both dead *and* alive. How is this possible? It looks like a very difficult physics problem. However, I suspect it is not a physics problem at all, but a problem of foundations and principles. When you reformulate this problem in the same way as the two former problems, this becomes immediately obvious. The reformulation reads as follows: how can we recover experienced actuality after having intentionally banished it in favour of pure statements of potentialities or possibilities? The quantum mechanics statements are statements of potentialities or possibilities: *if* you observe the cat in the future, there is a possibility that you will see

¹¹ 'How is it possible to account for the difference between past and future when an examination of the fundamental laws of physics reveals only the symmetry of time?' Paul C.W. Davies, *The Physics of Time Asymmetry* (Oakland, CA: University of California Press, 1977), 1.

it dead, *and* there is a possibility that you will see it alive. By contrast, what you see in a laboratory is an actual experience: *I am seeing the cat, and it is alive, not dead!* The ‘problem’ in Schrödinger’s paradox has to do with trying to derive manifest actuality from theoretical potentialities. Unfortunately, this is wrong from the outset. There is no such thing as actuality within potentiality. Potentiality refers to a set of possible future events, but it does not contain in it a single given actuality. So we see that Schrödinger’s paradox is not a physics problem; rather, it is a problem of foundations and a problem of misunderstanding.

Now let’s look a little closer at the first of these three foundational problems. Let’s examine how philosophers of mind and contemporary scientists deal with the hard problem of consciousness. They formulate what I call an *inductive argument in favour of the disappearance of the last mystery*. The last mystery, of course, is the mystery of consciousness. There is no other mystery like the mystery of consciousness.

To begin with, what is an inductive argument? It is an argument that applies the past to the future. According to it, what we have done successfully in the past will succeed also in the future. In the past, science has done so many wonderful things to clarify what we previously called mysteries that it looks like no mystery at all will be left in the future.

Let me list some of these wonderful achievements (using the formulation of the supporters of the inductive argument):

1) We have reduced heat to the kinetic energy of molecules. We have demonstrated that heat is nothing other than a macroscopic manifestation of the fact that microscopic constituents of matter (molecules) are rushing everywhere in gases and vibrating steadily in solids.

2) We have reduced living processes to biochemical networks. The discipline called molecular biology has disposed of the mystery of life.

3) We have reduced time to a dimension of Minkowski space, the so-called fourth dimension.

4) We have reduced colour to a function of the wavelength of the electromagnetic radiation that composes light. We know, for instance, that the colour red corresponds to radiation at a wavelength of 700 nanometres, whereas the colour green corresponds to radiation at a wavelength of 540 nanometres.

5) We have reduced thought to binary mechanisms by means of the famous Turing machine, whose present realisation is the computer.

6) We have reduced information to a probabilistic formula proposed by Claude Shannon.

And this list could go on and on.

So why can't we do the same thing for consciousness? The old, mystical explanations – e.g., the element of fire for heat, the vital principle for life, the detached intellect for thought, the divine Chronos for time – have all disappeared in the past. Therefore, some people conclude, the mystery of conscious experience will also disappear in the same way in the future.

But the question is, do you really believe this? I suspect you might be tempted.

Then let me give you some examples of people who are in complete agreement with this inductive argument in favour of the eventual disappearance of the last mystery, the mystery of consciousness. According to Daniel Dennett: 'We have now achieved mechanistic explanations of metabolism, growth, self-repair, and reproduction, which not so long ago looked too marvellous for words. Consciousness, on this optimistic view, is indeed a wonderful thing, but not *that* wonderful – not too wonderful to be explained using the same concepts and perspectives that have worked elsewhere in biology.'¹² In this argument, though, there are some hidden assumptions. One interesting assumption of this kind is contained in the word *elsewhere*. By using this word, Dennett immediately implies that consciousness is one biological phenomenon among many others, maybe an unusual biological phenomenon, but a phenomenon that is not basically different from digestion or breath. Therefore, he concludes, the mystery of consciousness will be dispelled by the very same methods that helped us to understand other biological phenomena. Is this so certain? I'll let you decide. Meanwhile, another difficulty arises. It arises from my use of a unique word to characterise both living beings and consciousness: the word *phenomenon*. Is consciousness truly a phenomenon? This is a deep question. Who has an idea about that? Do you think consciousness is a phenomenon?

OE: Well, what is a phenomenon? I wouldn't say yes or no. That word doesn't necessarily have clear boundaries, does it?

MB: Yes, that's an important point. A phenomenon is an appearance, according to the Greek etymology of the word. It's something that appears: clear light, blue shade, etc.

¹² Daniel Dennett, 'The Zombic Hunch: Extinction of an Intuition?', *Philosophy at the New Millennium*, ed. Anthony O'Hear (Cambridge: Cambridge University Press, 2001), 31.

I want to submit to you the possibility that the answer to my question, ‘Is consciousness a phenomenon?’ is negative. Why? Because conscious experience is not an appearance; it is the *condition* for anything to appear. Consciousness is definitely *more* than a phenomenon; it transcends phenomena; it holds a *transcendental* position with respect to phenomena.

But let me come back to the popular inductive arguments according to which the mystery of consciousness will be dispelled in the future. Here is another one. According to Patricia Churchland, ‘Temperature is known by me directly, by tactile sensing, whereas the mean molecular velocity is not; however, who could deny that for a body to have a certain temperature and to have a certain mean molecular velocity is one and the same thing?’¹³

Who could deny that, indeed? *I* deny that, because once again there is a hidden and unwarranted assumption in this sentence. The hidden assumption is that what was reduced by physics to mean molecular velocity is an *experience*: a tactile experience of hot or cold. Is it really the case? Let’s examine this point a little bit more closely.

What was actually accounted for in the series of reductions performed by science? Is it an experience? Or something else? I will argue that *in every case*, it is, in fact, something else.

What was ‘reduced’ to average molecular kinetic energy is an *objective* variable called ‘temperature’ that you can measure by, say, plunging a thermometer into a bath, but *not* what is felt and experienced *subjectively* as hot or cold.

Similarly, what was explained by molecular biology is not the whole of life. Indeed, life is not only a phenomenon ‘out there’ or something to be seen under a microscope. It includes the fact that when you *are* a living being, you *live* a lived experience. Let me insist on this point. According to Renaud Barbaras,¹⁴ the verb *to live* has two meanings: an intransitive and a transitive one. A fish is living (intransitive), whereas Hamlet is living a strong emotion (transitive). An essential aspect of life must then be ignored in order for the process of reduction to be performed: the transitive aspect, the fact that to understand a living being requires asking, *what is it like to be that living being?*

The same can be said of thought. What has been reduced to a mechanical process is objective derivation or inference, but not *experienced truth*. When you

¹³ Patricia Churchland, ‘Reduction Qualia and the Direct Introspection of Brain States’, *The Journal of Philosophy* 82:1 (1985): 20.

¹⁴ Renaud Barbaras, *Introduction à une phénoménologie de la vie* (Paris: Vrin, 2008)

perform an act of reasoning, you don't only mechanically associate one symbol with another symbol, which is something a machine can do even better than we can. You also achieve an amazing result: you *reach a realisation* that an argument is either true or false. Realisation is an *experience* that is left apart by the computational process of 'artificial thought'.

Finally – time. What was reduced to the fourth dimension of Minkowski's space? A coordination of clock readings that can be read objectively on the clock dial; but certainly not *experienced* duration.

Thus, we can see that experience has actually been reduced in *none* of these cases, not even the slightest feature of it. In this long series of science's past reductions, there is a persistent, untamed, irreducible residue, which is nothing other than the very blind spot of science as a whole: lived experience. Lived experience is completely, absolutely untouched, by any one of these reductions.

You may still have the conviction that reduction of experience to some 'mechanism' will occur in some unfathomable future. Nothing prevents you from feeling so. But my point was to show you that the past of science does *not* favour this belief about the future. None of the cases of past reductions offers even the smallest clue for performing this ultimate reduction; none of them provides us with a good analogical reason to think that the reduction of the ultimate mystery of conscious experience will indeed be achieved by similar methods. Reduction of experience cannot be a limiting case of a series of reductions, if these reductions *always* leave experience out of reach.

AUDIENCE MEMBER: But do the sciences actually claim this?

MB: I think so. The dream of many scientists is to reduce everything, *including* experience, to neural or other physical processes, or, alternatively, to show that experience 'emerges' from such processes. But there are interesting nuances among them. Some of them, following Churchland or Dennett, just consider that the hard problem is no problem at all, in so far as it is not a scientific problem. Other scientists believe that they have already captured the secret of consciousness. This is the case with Giulio Tononi, who claims that consciousness is 'integrated information' of the brain. The trouble is that what he has somehow 'reduced' to integrated information is by no means lived experience. It is only some of the *functions* that are usually ascribed to consciousness, such as the ability to coordinate a bunch of elementary cognitive processes in order to allow a complex behaviour associated with speech.

Once again, as in the case of hot-and-cold, life, truth, time, thought, etc., something is left out, a permanent blind spot. This blind spot is always the same one – lived experience, which is the origin of everything else. Don't forget that even the project of reducing experience to an objective process stems from somebody's lived experience...

AUDIENCE MEMBER: Can I ask you – in the last slide, you have written 'objectivity' and 'certainty'. What is the relationship between the terms of objectivity and certainty? Does Heisenberg come into this?

MB: You mean 'uncertainty'? Like in Heisenberg's uncertainty relations?

AUDIENCE MEMBER: Yes.

MB: Yes, there is indeed a connection between objectivity and uncertainty. There is one, but it would be a little intricate to explain this now. Let me just give you a taste of it. The connection arises from the fact that two types of variables – say, position and velocity – are measured by two different types of instruments. You cannot just skip and forget the apparatuses with which you perform the measurements. This is a limitation of objectivity. Moreover, these two types of apparatuses cannot work together. They cannot give simultaneously precise values for the two sets of variables. This is why we are confronted with uncertainty.

AUDIENCE MEMBER: At the end of the day, Heisenberg is saying that there is no such thing as objectivity, just an approach towards objectivity dependent on how, who, or what is measuring, right?

MB: Right. This is a good example of what I was pointing out earlier. There was a moment in history in which scientists realised that they could not completely ignore the methods they used in order to get knowledge, and more generally, they could not ignore their own *situation*. So objectivity in the most extreme sense of complete detachment and indifference with respect to instruments, methods, and situation turns out to be impossible. Yet objectivity in another, weaker sense is perfectly accessible. What is accessible is elaborating a form of knowledge that can be shared and agreed upon by any embodied, situated knower. Let me consider an example. Thermodynamics has managed to render its variables, like temperature, independent

of the subjective feeling of hot and cold. But it has not managed to become completely independent of the fact that thermodynamics specialists are situated beings using large-scale thermometers and manometers. At the same time, it has formulated general laws that are valid for *any* being able to manipulate these instruments.

So you can ignore any part of your situation, but not every part of it. That's the crucial point. Because science can go very far in this direction of ignoring elements of our situation, scientists hope that at the end of the day, they will elaborate a form of knowledge that has absolutely nothing to do with situatedness. But from time to time they bump into some unwelcome consequence of this hope: a stubborn paradox.

This reminds me of a lovely metaphor by Kant. He wrote: 'The light dove cleaving in free flight the thin air, whose resistance it feels, might imagine that her movements would be far more free and rapid in airless space.'¹⁵ Even though the dove has an easier flight in thin air, it cannot fly with *no air at all!* In the same way, science can make itself independent of many aspects of our situation, but it cannot eliminate completely the very fact of situatedness.

So my polemical conclusion at this point is that the blind spot of science is concealed by scientists in the future of their discipline. They believe, but without warrant, that in the future, something that is still inconceivable today will allow objective knowledge to account for subjectivity. This is like someone saying, walk far enough and you will eventually reach the horizon. To me, the project of reaching our experience by means of a structure that has been methodologically emptied of experience is just as meaningless as the project of reaching the horizon by walking far enough in its direction. The problem of reaching the horizon is ill-posed because the horizon is not a thing located in space. And the problem of accounting objectively for experience is ill-posed because experience is no object at all.

Maybe you are disappointed at this stage and you think, ah, this is a failure of science, what a pity! But is this something to complain about? We could have a more positive reaction. For instance, we could adopt a non-materialist, dualist metaphysics according to which conscious experience is one more constituent of nature, in addition to material objects and properties. Even better, we could adopt Baruch Spinoza's so-called neutral monist metaphysics. In this metaphysics, conscious

¹⁵ Immanuel Kant, *The Critique of Pure Reason*, trans. J. M. D. Meiklejohn (Seattle: Pacific Publishing Studio, 2011), vii-viii.

experience and material appearances are two facets of the same unknown stuff. Spinoza called this stuff 'God' – '*deus sive natura*' (God or Nature). According to Spinoza, God was a two-sided coin, with tails made of matter and heads made of conscious experience. This is indeed a fascinating option. Yet I would like to advocate another possibility, one that dispenses with belief in any metaphysical entity whatsoever. I lean towards this alternative possibility because I am the most extremely sceptical person you will ever meet. I believe in nothing except in what I can experience. For me, even Spinoza's neutral stuff is an abstraction with which I am not very comfortable. So what is the alternative option? It is no longer a metaphysics, but a stance, an attitude – the attitude of taking experience seriously, very seriously indeed.

Experience is not something you can reach by going out into the world, but you can dwell in it, you can appreciate it. As soon as you have fully appreciated it, you tend irresistibly to change the direction of your questioning. In particular, you tend to change the limit between scientifically answerable and unanswerable questions. Let me consider a case of a scientifically unanswerable question, a question that scientists are reluctant to ask. This is Gottfried Wilhelm Leibniz's famous question: *why is there something rather than nothing?* Almost no scientist thinks that this question could or should be addressed by a scientist. Most of them declare (as we have already witnessed with those who ponder the hard problem of consciousness), this is not a scientific question, and therefore this is no question at all.

But this *is* a question. Why is there *something* rather than *nothing*? Why are we here, now, speaking together? Why is there this workshop rather than none? Why do we exist at all? Why is there something standing around us and in us, instead of the complete absence of anything, instead of dumb, thick darkness? It's bewildering.

As I said, scientists usually don't ask this question. They connect phenomena to one another by 'laws of nature', but they presuppose that there are phenomena, and they do not try to explain *why* there are phenomena rather than nothing at all. For instance, they explain why, when I drop this object, it suddenly falls. They connect the phenomenon of seeing the object here in my hand to the phenomenon of seeing it later on the ground. This connection is made by means of Newton's laws. But what about the glaring fact that there *are* phenomena rather than none? Silence. Scientists tend to say: This is a question for the damn philosophers, right? This is not a question for us.

But things would be too simple if what I have just said were true. Some immodest physicists declare that they can ultimately provide us with an answer to

Leibniz's question! They say that the reason why there *is* a universe rather than *no* universe at all is that there has been a huge fluctuation in the quantum vacuum, a fluctuation that we call the Big Bang. The problem is that philosophers have any number of reasons to remain deeply dissatisfied by this answer. They might further ask: OK, but why is there a quantum vacuum rather than nothing at all, *no* thing, not even this elusive ocean of potentialities out of which a universe arose? Silence again.

At this point, philosophers have made an important move: they have analysed the meaning of the word *something* in Leibniz's question. Even the quantum vacuum is something, not absolutely nothing. Scientists can (hopefully) explain the origin of a material universe out of something called the 'quantum vacuum', but they cannot explain the origin of something out of nothing at all.

Now, let's go a little further. What is the 'something' we find when we first open our eyes? What is present here and so obviously different from nothing? Is it a heap of material objects, chairs, tables, stars, galaxies, and buildings? Look more closely. What is present here is . . . presence: it is *experience* of chairs, tables, and buildings. Experience is what is most immediately, most primarily, most radically given to us. Now, if this is so, we are left with no alternative but to change the limit between the answerable and unanswerable questions. Leibniz's metaphysical, scientifically unanswerable question becomes: *why is there experience-of-a-physical-universe rather than nothing at all?* Experience intimately partakes of what is given, of what is *there*. Then, the proper meaning of the Leibnizian problem is that we can explain rules of succession between experiences, but not that there *is* experience rather than none.

In other terms, we have to broaden our perception of what is given to us. Usually, we say that what is given consists of the things around us or in us – material objects, living beings, thoughts, etc. – but *all* these things are just present appearances surrounded by present expectations about future appearances. Therefore, what is most fundamentally given to us is the very fact of appearing. Just broaden your sight and you find . . . seeing.

This was the first change of attitude among those advocated by Francisco Varela for dealing intelligently with the hard problem of consciousness. The second change derives from the first one. Let's accept that experience is given, that we are thrown into the world of appearances. What should we do next, once we have accepted and realised this amazing situation? Try to see everything from outside? But how could we jump outside our own situation, how could we be absent from our own *Umwelt*? This is impossible. We are here. If we move anywhere even by thought or by

imagination, we are still in our *Umwelt*; we are still thrown into the world of appearances.

Therefore what can we do? Well, we can *cultivate* our stubbornly extant situation. This is exactly what Francisco Varela advocated in his new discipline, called ‘neurophenomenology’: cultivate the experiential side of what is given, just as much as you cultivate the objectification of the given for the sake of extracting categories and structures out of it. Cultivate the attention to experience just as much as you cultivate the structures of experience, and then connect the two aspects to one another. Connect, for instance, your third-person knowledge of the brain and your first-person knowledge of the structures of experience, and then build a new kind of knowledge, which is no longer limited to an objective domain extracted from some bundle of experiences, but includes the very fact of experiencing.

Does this approach, advocated by Varela, *solve* the hard problem of consciousness? No, it doesn’t. But this is not because the hard problem of consciousness is too hard. This is because the problem does not even arise if the right attitude is adopted. In the proper attitude, you immediately perceive the absurdity of this problem because you know how to reformulate it. For instance, in a reformulated version of the hard problem, you may ask: *how does phenomenality emerge from a certain phenomenon?* The brain, often regarded as the locus of our experiential capacities, is also a phenomenon, and it appears in experience; how could phenomenality as a whole (namely, experience) *derive* from a phenomenon?

The reason why you are thus able to reformulate philosophical questions like the hard problem of consciousness is that from now on, after those little exercises of phenomenology, you know where you are: you are permanently aware of being thrown into a world of appearances, you are aware of being aware; and you also know that the objects ‘out there’ are objects of your present experience (i.e., ‘within’ that experience). This sudden realization completely changes the epistemological perspective. Such a change of perspective consists in accepting that the physical world of objects is no longer the ultimate standard of being, and objectivity is no longer the ultimate standard of method. But what do we get instead? Should we renounce any precision in thinking? By no means: we can keep precision and still broaden our field of perception. Let’s examine more closely the new perspective.

Here, the standard of being is underpinned by a standard of *self-evidence*. Indeed, if we see broadly enough, we realise that our ultimate reference concerning being is nothing other than *our own* being, our being here and now. Our best standard of being is not represented by tables and chairs. Tables and chairs could well be an

illusion, as René Descartes asserted in his first meditation. Everything could be an illusion, but what cannot be an illusion is our present experience of doubting. Everybody knows this. But this is not all. Once this has been recognised, the standard of objectivity should be replaced by a project of intersubjective agreement. Indeed, beneath objects, there are *experiences* of objects, and these have to be coordinated to one another if one wants to elaborate a universally valid knowledge. All research striving towards objectivity is grounded in intersubjectivity. Now, the interesting point is that we can get intersubjective agreement in a much broader area than just about these objects we are pointing at with our fingers. We can also reach intersubjective agreement on certain patterns of our own lived experience. You are now paying attention to something; you are paying attention to my words, or you are paying attention to the object I am pointing towards. So, we are all doing the same thing at the same moment, be it with our inner or with our outer attention. We are tending towards intersubjective agreement, be it about a structure of our experience or about some object of the environment. Intersubjectivity is not *less*, but *more* than objectivity.

So where does that leave us with the hard problem of consciousness? To start moving toward an answer, I'll once again draw a parallel to Wittgenstein. He wrote: 'The solution of the problem of life is seen in the vanishing of the problem.'¹⁶ What Wittgenstein calls the problem of life in this sentence has to do with the difficulties we have in life, the moral issues, the uneasiness of existence, and so on. And he implies that there is no simple formula to solving such a problem. But suddenly, you can find a way of life, a stance, an attitude in which the problem of life is no longer felt, no longer with you as a burden. You are walking in life without feeling the problem, because you are now beyond it. We might perhaps call this *enlightenment*.

Now, let me translate Wittgenstein's remark into Varela's language: The solution of the hard problem of consciousness is found in a stance and research programme wherein the problem vanishes. In other words, we won't find the solution of the problem of the origin of consciousness in some abstract formula. We'll find it in a certain attitude of utter familiarity with experience. Indeed, in this attitude, experience manifests as the obvious given, not as something derivative. In this attitude, experience is the solution, not the problem.

¹⁶ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, trans. D. F. Pears and B. F. McGuinness (London: Routledge and Kegan Paul, [1921] 2001), 6.521.

Let me summarise what I have said up to this point. First of all, no scientific description can be completely abstracted from the lived situation of those for whom it is relevant. No science can ignore its experiential blind spot forever because at a certain point, this blind spot manifests itself as an intractable foundational problem. Conversely, I consider the foundational problem of certain sciences as the incontrovertible sign that they have ignored their blind spot. But if the essential method of science is to attempt to disregard the knower's situation from the object of its knowledge, every science is bound to come up against the same wall.

Clearly, the sciences cannot cope with their dream of total knowledge without becoming aware of their own origin. But the revelation of the situated origin of scientific knowledge is cryptic, and it goes against the ethos of a large majority of scientists because their dream is to reach a world of pure abstraction in which the human situation looks ancillary. Very strangely, then, Western culture seems to be averse to the ultimate conclusions of the science it has itself produced. As a consequence, changing science is not enough; one has to act on the very culture that made science possible in the first place. In order to understand collectively the foundations of our own science, a major cultural shift is needed. This is likely to be our programme for the next century.

Thank you for your attention!

OE: I think in art history, for the last thirty years or so, there has been a tendency to refer to classical art history and then new art history. To generalise the notion of new art history, it attempts to take into account the role of the subject who is writing it and the relativity of the notion of history as such. Obviously, this is an idea that is now somewhat common, a general acceptance of the importance of the subject as a producer of the past, so to speak. You outlined something like a lack of experience informing science, which also has to do with the notion of the placement of the subject. Do you think maybe science is the last place where the notion of the subject is actually going to be introduced?

MB: In fact, there are many disciplines in which this tendency is manifest, and sometimes they connect to one another. When I started my research on the foundations of quantum mechanics, I came across a text by Heisenberg about the relation between art and physics. Heisenberg wrote that what he was doing as a physicist looked remarkably similar to what was happening in the art of his time. In both cases, he declared that we can no longer consider our productions as transparent

and irrelevant windows that open onto the world. In both cases, we can no longer dispense with examining the so-called 'window'; in both cases we fail in our attempt to represent a world beyond the window, independent of it. In physics, you come back to observables, and in abstract art, you pay more attention to what is present on the canvas than to what is (allegedly) beyond the canvas.

AUDIENCE MEMBER: You were speaking before about the mystery of consciousness and what's going to happen to it in the future. Do you have any image or a metaphor that you think will replace the mystery of consciousness? Is there something else that will take the place of the mystery of consciousness?

MB: I consider the mystery of consciousness to be the mystery of mysteries. For what is mysterious in it is that there are mysteries at all. If there were no consciousness, there would not even be a sense of mystery. Usually, the sense of mystery is not reflected upon itself; it is, rather, directed towards something else. As a consequence, when people wonder about anything, including about the origin of consciousness, they usually project their attention towards something else. They don't realise that in this precise case, by raising the question of consciousness, what they are trying to do is account for the origin of their very question. This is a unique case; there is no other problem like the problem of consciousness. All the other problems are about something, but this one is not about something, it is, so to speak, about 'aboutness'.

AUDIENCE MEMBER: So would you say that our relation to consciousness is more like a spiritual position?

MB: No, I would not say that, because as soon as you have pronounced a word, such as 'spiritual' or 'mental' or something, you unwittingly objectify the issue. You oppose the spiritual, say, to the material. But here, in the case of conscious experience, there is nothing to oppose it to, because any opposition is itself experienced. Opposition, as everything else, is part of the mystery of mysteries.

AUDIENCE MEMBER: So what could be the next step then? Being unconscious about everything?

MB: OK, you've got a good point. This is a possibility that is advocated by the most

lucid scientists. Since they are not interested in the ultimate mystery of consciousness because it is unscientific, they tend to insist that many mental workings can unfold unconsciously, and they get interested in implementing these latter processes on computer simulations. Even consciousness is defined by them in abstract terms (such as meta-cognition) which deprives it from its most crucial nucleus which is experiential or “phenomenal”. So much so that they open the way to the project (or nightmare) of post-humanistic mental-like and conscious-like systems. But we are not *only* scientists or engineers, we are living, sentient beings, and we are *extremely* interested in the vexing issue of lived experience. In fact, we are *necessarily* interested in interest!

Once again, when I speak about conscious experience, I introduce a lot of self-referential loops because it is the only way we have to grasp an essential aspect of the problem. In order to begin to grasp it, once again, we must suspend any attempt at fleeing towards objects, including cognitive, mental or spiritual objects. We must suspend interest in everything except interest in interest itself. This suspension is what Husserl called *epoché*. A well-known buddhist metaphor is sedimentation. When you let dust settle into water, it falls, the liquid slowly grows transparent, and you *see* transparency. With *epoché*, things are similar. You suspend attention to objects, and suddenly you see what you were after; you dwell in it. It’s no object, but it’s there.

AUDIENCE MEMBER: Here is another question, regarding language because it seems like a lot of this gets lost in linguistic precision. Heidegger started by basically saying, we all think we know what ‘being’ is, but I want to return to a question we all think we know, so I am going to ask again: what is ‘being’? And then he spends the next fifty years talking about what it means ‘to be’. Wittgenstein says, what we can’t talk about we must pass over in silence: if we can’t talk about it, we just leave it alone. So the question becomes, is language this thing that is helping us think, or is it actually hindering us from thinking about something because we have to filter everything through words? To even begin to follow your ideas, I have to figure out what you mean by ‘being’, I have to figure out what someone else means by ‘embryological consciousness development’, and so on. Language allows us to form a bridge between ideas and thinking and doing, but it often seems like it can be much less exact, like all we need is just to send a signal, not necessarily a language, just something that gives us a working knowledge.

MB: Wittgenstein wrote another wonderful sentence about language: ‘It’s funny that in ordinary life, we never feel that we have to resign ourselves to something by using ordinary language.’¹⁷ We don’t realise that we are renouncing something important by the mere fact of using language!

AUDIENCE MEMBER: What do we renounce?

MB: Ah, that’s the point! What do we renounce? According to Wittgenstein, we renounce myriads of possibilities of thinking and living simply because language is already constrained by a certain scheme of what can and cannot be said, which has a direct impact on the way we understand existence. When we were taught language, we received not only a set of words but also a set of implicit rules that formally exclude certain propositions. For instance, I never utter the proposition ‘a world exists’ because this is an assumption that is rooted in the latent rules of language and whose reverse would contradict the very act of speaking.

OE: I work with the language of an artist, but this is a non-verbal language. When we *do* speak, we are just momentarily throwing out thoughts onto the architecture of real language before we return to our doodles and constructions. I think the notion of a subject or the idea of experience actually exercises its relevance much more efficiently for me within a spatial context than it does within a verbal context. Verbalising experience is already almost a paradox, but I do think also that I can still use words to push my abilities with space and give some structure to my feelings. But my action or reaction to the experience itself, I think, is very often actually a spatial proposition. In general, it is just a making-explicit of some space. So do you think there could be a language of space, a language of ‘spatial experiments’, which is the term we use to label this school?

MB: Since ordinary language has quite a few limits, there exist many disciplines whose aim is to crack these limits. A remarkable example is poetry. Each time language is silently constrained to some mental pattern, poetry breaks these patterns and shows you what you had never thought and never seen before. Poetry displays something of the unknown, beyond the explicit, expressive boundaries of ordinary language. I think it is the same for art in general. An important function of your art is

¹⁷ Ludwig Wittgenstein, *Wittgenstein’s Nachlass: The Bergen Electronic Edition*, Wittgenstein Archives at the University of Bergen, MS-149, 3v.

to find new ways to crack the limits of thought or representations and to invent new spaces in the most concrete sense. Not only the figurative space adumbrated by language, but also some truly new spaces to penetrate with and feel magnified by our bodies.

OE: So you might say that poetry is, in fact, just another form of experienced space.

AUDIENCE MEMBER: Maybe one could also ask what this reflection on consciousness is actually doing to our thinking. I might say that I am actualised through being conscious, so I am actualising myself in a history, or even call it my 'biography'. So to speak of consciousness is to speak of history, history as something more related to a disciplined way of thinking, keeping us occupied by asking the question of what consciousness is. Maybe you could approach the question of consciousness not from this biological way of neuroscience but from the history of ideas. Ideas as ideology.

MB: Absolutely right. Many excellent philosophers at the end of the nineteenth century, such as Wilhelm Dilthey, said exactly that. The best way to discover the structure of our own minds is by studying their cultural by-products as they unfold in the course of history. The structure of the human mind is sedimented in literature, architecture, sculpture, etc. The true reflection about ourselves is not achieved by a study of our brain but by an examination of our culture.

AUDIENCE MEMBER: You could even abstract this equation: if you name an object, the subject, and the experience as the fundamental components of 'world', the experience itself can be variable to the object and subject, but the subject and object are equally variable to a given experience as well. Those two endpoints are just notes that you can interchange with this experience, experience as this process that keeps objectifying and subjectifying.

MB: You are right here again. We should not speak of subject and object, we should speak of objectifying and subjectifying.

When you realise that there is no such thing as ready-made objectivity and subjectivity, but a sort of twofold process of objectification and subjectification in which you are immersed, you have done exactly what I advocated: realising that experience is the origin of any process, including the polarity of subject and object.

On this point, you could read Paul Natorp, a philosopher of the neo-Kantian school of Marburg, who worked at the end of the nineteenth century and at the very beginning of the twentieth century. According to an argument in his book *Allgemeine Psychologie nach kritischer Methode*, subjectification is not even possible without objectification. There is no such thing as a subject before objects are constituted. Before objectification, there is the given, the pure appearing, but certainly not a well-defined subject. Being in Berlin, it's even more natural for me to strongly encourage you to read all these remarkable German philosophers!

AUDIENCE MEMBER: Just to add something, I think it's Gilles Deleuze who said something to the effect of, don't talk about objects, they are objectiles – that is, they are on their way somewhere; they are part of a journey. This board comes from a forest, comes here to make a chair, it's on its way somewhere else, always in motion that we set or somehow are involved in. What about the consciousness of things? Does this come into any of your thinking now? I mean, trying to see us from the vantage point of a different species or different objectiles, to evaluate what impact we, individually, are having on what we're doing in this whole enormous system.

OE: How does the tree know that I am there? What is the subject of the tree? Or maybe to the tree I am an object? Is that what you mean?

AUDIENCE MEMBER: Yes.

OE: From Sigmund Freud to James Lovelock to Bruno Latour, the interobjectivity and intentionality of the object. This used to be a tree, and soon it will be compost, decomposed, maybe at some point a tree again. Not animism, but in this direction.

MB: There is a philosophical theory that is very close to this many-points-of-view approach. It is Leibniz's monadology. According to monadology, every single entity that you can see from an external standpoint also has an inner standpoint, called a *monad*. This inner standpoint corresponds to an experience, not necessarily a full-blown consciousness, but at least some sort of feeling. This experience may be simple, contentless, and instantaneous when the entity is simple and lacks organisation. But experience becomes intricate, reflective, and stabilised by memory when the entity is as complex and organised as an animal. A tree is somehow intermediate. It may have experience, but not reflectivity, not experience of

experience, not a multi-layered, developed consciousness.

OE: Didn't Varela also introduce this kind of plural perspectivism, introducing something like a 'climate' of many perspectives at the same time and attempting to see people from the point of view of this climate, a multi-perspectival position?

AUDIENCE MEMBER: Or what is it like to be a bat? This is Nagel's theory.

MB: Yeah, I very much like Nagel's ideas, at least the critical part of his work. *Inter alia*, science is missing an account of the bat's standpoint!

AUDIENCE MEMBER: Will you explain Nagel's theory, because I don't think we all have read it?

MB: Yes, OK. I'll try to tell you more about Nagel . . .

OE: As a conclusion!

MB: Thomas Nagel is a well-known American philosopher, born in 1937. He noticed that even when a scientific theory has accounted for every aspect of the world that is invariant with respect to changes of standpoint, it is still missing an account of the variable, lived standpoints themselves. For instance, biology can know everything about the organism and the biochemistry of a bat, and also about the ultrasounds that the bat produces in order to orient itself in the night, but it still misses something absolutely crucial. It misses nothing less than *what it is like to be a bat*, namely, how you would feel if you were a bat. In particular, science cannot figure out what you feel like when you perceive the kind of sensory qualities that correspond to the process of echolocation (self-location by echoes of ultrasounds), which is used by the bat. We know what it is like to see; we know that the bat has a quality of colour. We know what it is like to smell; we know that the bat has the quality of scent. But we don't know what kind of sensory quality is lived by a bat when it uses ultrasound echolocation. To recapitulate, Nagel makes an important distinction between the constitution of things as disclosed by science and *what it is like to be* that thing, which is, in principle, out of reach of any scientific approach. Yet one does not only study things from outside, one also occupies a standpoint; and moreover, studying things from outside is always done from a certain standpoint!

My own evaluation is that even though Nagel has made a very important remark about the inescapability of our own situation, he has also partly missed an even more crucial issue by equating somehow this situation with a standpoint. Since he is an American philosopher who has little familiarity with continental philosophy, he has just neglected the fact that dealing with situations differs greatly from dealing with standpoints, because situatedness is an issue of fundamental ontology, not at all a matter of spatial positions. Situatedness means *being-there*, in Heidegger's absolutist sense, not being *somewhere* relative to a system of coordinates. Let me be more precise. What is the difference between a point of view and being-there? Nothing prevents you from *changing* your point of view. You can say, OK, now I am here, but I can go and occupy the same place as you, and then I have acquired your standpoint. When I do that, I am still Michel relocated somewhere else. I am Michel occupying Olafur's standpoint. But if I want to know *what it is like to be Olafur*, I cannot content myself with sitting close to Olafur and occupying virtually the same standpoint. I have to *cease* to be Michel and *become* Olafur. The problem is that in this case, there is no Michel left to know what it is like to be Olafur. There is Olafur, who just happens to coincide (as always) with that feeling of being him. There is Olafur's absolute being-there, which is not only irreducible to any outer, objective account, but also irreducible to any account in terms of some peculiar point of view. Well, even Nagel should definitely have read more German philosophy!