



The Role of Husserl's Epoche for Science

A View from a Physicist

Piet Hut

School of Natural Sciences
Institute for Advanced Study
Princeton, NJ 08540, USA

There are two ways that the epoche can be used for science: as an internal tool, to make progress within a given field of science; and as an external tool, to evaluate the very notion of what science is, and the role of science among other ways of knowing.

1. A Rude Awakening

For almost half a century, since the end of the second world war, discussions about the role of science in society focused mostly on the consequences of applications of science and technology. Among ways of knowing reality, science reigned supreme, and there was little real doubt about the fact that science alone produced true (reliable, objective) knowledge about the structure of the world. Or so it seemed to virtually all scientists and most intellectuals.

The early nineties formed a period of rude awakening for physicists. On a practical level, the end of the cold war brought a halt to the near-automatic funding of major scientific projects in the name of a science race between the United States and the Soviet Union. Large projects in physics were either canceled or scaled down. The most prominent event was the demise of the Superconducting Super Collider, in 1993 when Congress unceremoniously pulled the plug on the project after billions of dollars had been spent and a 14-mile tunnel had been dug under the Texas grasslands.

At the same time, there was a shift from physics to biology as the discipline that drew the center of attention. Even if the SSC had been built, the Human Genome Project would have drawn more attention, producing the code underlying the blueprint underlying human life. With this shift came serious new ethical issues, starting with the danger of bioterrorism and questions concerning genetically modified food. While physicists and chemists had lived for many decades with the responsibility for guarding the know-how for how to kill millions of people, biologists are now rapidly developing the know-how for infecting and modifying people, a knowledge that carries even graver responsibility for its unforeseeable consequences.

Amidst these major changes in funding and potential consequences of scientific research, a minor form of rude awakening took place, for which the label 'science wars' would soon be used. From the

late seventies onwards, a number of sociologists, philosophers, and historians were no longer content to describe the societal conditions leading to science and the consequences of scientific discoveries for society. They began to question the status of scientific knowledge itself. What part, if any, of scientific insights can really be considered objective and universal, and what part (any? all?) is inextricably linked up with our culturally determined way to ask scientific questions in the first place?

By and large, scientists didn't like this outside attention a bit. At first they simply ignored 'science studies', as this new field became known. But in the early nineties, perhaps because of the other rude awakenings, a number of scientists became quite rude themselves in their ferocious attacks on science studies. Rapidly the field became polarized, with lots of name calling from both sides, and little attempt at respectful debate.

2. Counter Currents

Curiously, while some scientists felt called upon to defend the forts of rationality against perceived attacks from the outside, other scientists quietly began to form study groups on themes that had been more or less taboo for half a century. Conferences on the scientific study of consciousness appeared, and workshops on science and religion were held. Suddenly, many scientists came out of the closet, so to speak, happily surprised that they no longer had a need to wash their mouth when uttering words like 'consciousness' and 'spirituality' among their peers.

Clearly, science is in a period of transition with respect to the question of how it sees itself. Age-old philosophical questions, which traditionally had been asked by many leading scientists, once again can be heard. Future historians will have a field day trying to explain why philosophy had been declared virtually off limits in the scientific community during the second half of the twentieth century. Was it simply arrogance, triggered by the plethora of new scientific discoveries, which seemed to obviate any need to ask others for advice? Was it a reaction to the misuse of philosophy in the hands of the Nazis, which seemed to tar all forms of deep philosophical questioning in the eyes of many scientists? Was it the shock of a loss of innocence, after the design and use of the first nuclear weapons, which made scientists reluctant to ask the deepest questions?

Similarly, future historians have a rich palette of possible reasons to choose from, when trying to understand why the anti-philosophy era began to wane. What happened in the nineties? The generation that had fought in the second world war, and had helped to rebuild the economy thereafter, had retired. The new generation holding power had finished their studies in the sixties, that period heady with idealism followed by the disillusionment of the Vietnam War and Watergate. Wouldn't it be natural if they would show different priorities in evaluating science, with perhaps more of an open mind towards the inherent limits of the dogma of objectivity that had ruled science for so long?

Within science itself, a number of developments were making the idea of pure objectivity burst at the seams. The promise of quantum computing brought discussions about the interpretation of quantum mechanics, and thereby the role of the subject in physics, into the hard-nose engineering domain. Brain studies showing where thoughts and emotions are localized begged the question of how to translate between neurochemical processes and the actual experience of the subject. And robotics, coming of age after a slow start, made us think from scratch about how to design artificial subjects, after tens of thousands of years of experience making artificial objects.

3. Which Direction to Explore?

With all these signs of a new willingness to scrutinize the underlying assumptions of science, and to explore alternative interpretations, the burning question is: where to look? In other words: in which direction can we search for new perspectives; how can we gain a new type of innocence, that knows to ask questions where others run past?

Perhaps we are ready to return to the old question "What is Reality?", with a new form of openness, which has been lacking for at least half a century. It has been unfashionable to ask about the structure of reality from scratch, without already having chosen a framework in which to ponder the answer, be it scientific, religious or sceptical. As a consequence, a sense of wonder at the sheer appearance of the world, moment by moment, has been lost.

To look at the world in wonder, and to stay with that sense of wonder without jumping straight past it, has become almost impossible for someone taking science seriously. The three dominant reactions are: to see science as the only way to get at the truth, at what is really real; to accept science but to postulate a more encompassing reality around or next to it, based on an existing religion; or to accept science as one useful approach in a plurality of many approaches, none of which has anything to say about reality in any ultimate way.

The first reaction leads to a sense of wonder scaled down to the question of wonder about the underlying mathematical equations of physics, their interpretation, and the complexity of the phenomena found on the level of chemistry and biology. The second reaction tends to allow wonder to occur only within the particular religious framework that is accepted on faith. The third reaction allows no room for wonder about reality, since there is no ultimate reality to wonder about.

Having lost our ability to ask what reality is like means having lost our innocence. The challenge is to regain a new form of innocence, by accepting all that we can learn from science, while simultaneously daring to ask 'what else is true?' In each period of history, the greatest philosophers struggled with the question of how to confront skepticism and cynicism, from Socrates and Descartes to Kant and Husserl in Europe, and Nagarjuna and many others in Asia and elsewhere. I hope that the question "What is Reality?" will reappear soon, as a viable intellectual question and at the same time as an invitation to try to put all our beliefs and frameworks on hold. Looking at reality without any filter may or may not be possible, but without at least trying to do so we will have given up too soon.

Within Western philosophy, I find Husserl's epoche to be a useful tool for making systematic explorations of tacit assumptions underlying our everyday view of the world, and I feel that its application to science can hold great promise. Briefly, the epoche is a form of suspense of judgment -- a way to let the phenomena speak while 'bracketing' the usual presuppositions that are in force in any given situation. I see two major applications for the epoche in science, one internal, and one external.

4. Internal Applications of the Epoche in Science

The method of phenomenology, including the use of a form of epoche, can be found everywhere in science, in the actual way that scientists engage in scientific research. It does not carry a specific name, and it is not seen to be connected in any way with the school of philosophy called phenomenology. Most scientists probably have never heard of the school of phenomenology, and hardly any of them know the word epoche. And yet something akin to the epoche is being taught implicitly in any good science class.

All major breakthroughs in science stem from a form of epoche. Galileo, when looking at how the Sun seems to revolve around the Earth, bracketed the common belief that the Earth itself is immovable. It was then easy to see that a rotating Earth and a fixed Sun would give rise to exactly the same phenomena. By separating the phenomena from the belief structures in which these phenomena had always been embedded, he found new interpretations which opened new doors for scientific exploration.

Newton, when interpreting gravity as action at a distance, bracketed the belief that any form of action should occur through material contact. Einstein explored the consequences of Maxwell's equations, while bracketing all the presuppositions that had been used to derive those equations in

the first place, including the absolute character of space and time. From purely phenomenological thought experiments, he thus derived the relativity of space and time, together with the precise rules according to which they can be transformed into each other.

Bohr bracketed the notion that a particle must have a definite state before one makes a measurement, when he developed his Copenhagen interpretation of quantum mechanics. The list can be extended almost indefinitely, from the most important breakthroughs down to the day-to-day little `aha's of laboratory research and pencil-and-paper derivations in theoretical research. Whenever we seem to be stuck, we `wiggle the wires' of our presuppositions, to see where we can find a way out, by bracketing one or more of those presuppositions.

In daily life, too, a similar pattern holds. I am convinced that I have parked my car in a particular section of the parking lot, where I always park my car. It is not there. Is it stolen? Before calling the police, I bracket my conviction that I left my car there, this morning. By doing so, I make more room for the possibility to recall what I exactly did, this particular morning, rather than falling back on my justified belief that I (almost) always park in this particular section of the parking lot. And indeed, I then remember that this morning there was a particular and highly exceptional reason for me to park the car elsewhere.

There seems to be a continuum running through all these examples, from the most brilliant breakthrough to the most mundane form of problem solving. The main difference between bracketing prejudices in science and in daily life is the fact that science has developed systematic structures that encourage bracketing. The scientific system of peer review, together with its encouragement of new ideas combined with a very critical attitude in testing those new ideas, has been refined over the last four centuries into a remarkably efficient enterprise.

5. External Applications of the Epoche in Science

For all its strengths, the scientific attitude has a major weakness in that it is not designed to be applied to itself. Science does not encourage bracketing of itself, lock, stock and barrel. Scientists, no matter how flexible and ingenious in exploring new approaches within specific areas of science, are rarely willing to apply the very same method they have been using all their life to science itself.

Sure, scientists are willing to question the foundations of science, because they know from experience that what are called foundations actually have more of ornamental function. The foundations of each discipline have repeatedly been replaced, while work on the higher floors of the discipline went on without a glitch -- try doing that with a real building! From a practical point of view, what really grounds science is not the principles that seem to capture the most parsimonious summary of the state of the field at any given moment, but rather the sum total of the activities that make that field what it is: science is what scientists do.

In my experience, scientists are willing to question the `foundations' of what they do, and they are willing to question any of the particular actions and presuppositions they are working with. However, they seem to be very ill at ease in the face of a form of questioning that addresses the status of the scientific view of the world. The very notion of doubting the truth of science simply goes against the grain.

My proposal is: let us try to find a way to open the discussion about the role of science in a modern world view, by using the notion of the epoche. After all, the epoche is already such a familiar tool for the working scientist, and as such is can play a bridge function from science to phenomenology.

For such a discussion to be successful, two ingredients are needed. Philosophers must help us to clarify the very notion of what it means to perform an epoche, and scientists must find a way to overcome their reluctance to question the ultimate truth of that which they are immersed in.

To start with the latter, the reluctance of scientists to question their own enterprise is reminiscent of the reluctance with which former rulers approach the notion of democracy. The very idea to have to defend your ideas in the marketplace, with others attacking you, is not very appealing. It requires considerable practice to separate an attack on your ideas from an attack on yourself and your own personal integrity. For those not raised in a democratic culture, any form of debate can feel like a threat. Unfortunately, the recent 'science wars' have shown how some scientists can come across as equally dogmatic as fundamentalists in various religions. To find ways of letting scientists lower their defenses against what might at first look like an attack on the scientific 'truth', is a high priority.

An equally high priority is to find ways for philosophers to offer a technique, a systematic approach (scientists love systematic approaches) that can help to unpack and bring into focus the layers of sedimented unquestioned assumptions that have accumulated in science. These assumptions are passed on from one generation to the next, by osmosis during the undergraduate years of college, and are further polished and sealed off in graduate school. A beginning student quickly learns which questions to ask and which not to ask. And after years of not asking, even remote memories of those questions fade into the background. Reviving those questions, in more mature ways, is one step towards an attempt to regain innocence, to retain a beginner's mind, and from that viewpoint to look at science as a whole.

6. Bracketing the Scientific World View

To reopen a dialogue between scientists and philosophers, both sides have to take each other seriously. It is clear that science, narrow as it may be in its angle on the world, should be taken seriously, given its amazing accomplishments, theoretically as well as experimentally. In my opinion, philosophy should be taken equally seriously, but not only for the reasons usually given -- that philosophers may be able to analyze the logical structure of science with greater clarity and more of a historical awareness of how science has grown, in comparison to most working scientists. Interesting as that may be, I see a greater gift that philosophy can give to science.

Rather than talking only about epistemology, philosophy can return to a discussion of ontology. Scientists are no longer very impressed with discussions about epistemology. They are used to such discussions in quantum mechanics, and by now many scientists have at least heard something about theory-ladenness of experiments, falsifiability as the criterion for a good scientific theory, etc. But a rekindling of the question of ontology addresses different concerns. Ask a scientist what the world is made out of, and he or she may talk about atoms or molecules, or quantum mechanical wave functions, or possibly strings or vacuum fluctuations, depending on the level on which one wants to focus. Diverse as those answers may be, they all have in common that they borrow elements from descriptions of building blocks of nature, as used already within contemporary physics.

Now propose to a scientist that everything could be seen as 'made out of experience', or at least, for starters, as 'given in experience.' The scientist may admit that, epistemologically, all that we know is given to us in our experience. He or she may also admit that this whole world we experience could be the result of a dream, something we experience either solipsistically or collectively, or in more modern terms: it could all be a huge form of virtual reality. But by and large, such discussions are unlikely to be more than an intellectual game. The first time you realize that perhaps all you ever experience is experience, you may be surprised or even startled. But the second or third time you hear someone talking about it, you are likely to dismiss it as boring, obvious, and ultimately trivial.

It is possible, however, to be really struck by this option, to make a deeply felt shift from living in a material world to living in an experiential world. Clearly, Husserl was affected by the application of the epoche in ways that may seem odd when one contemplates the epoche in the usual way, as only an intellectual game. Towards the end of his life, Husserl described the epoche as a 'complete personal transformation, comparable in the beginning to a religious conversion' [The Crisis of European Sciences, 1970, Northwestern Univ. Pr., p. 137]. Is this a subjective epiphenomenon, an interesting personal quirk of Husserl, without further significance for philosophy? I don't think so.

A better way to get at least a hint of how Husserl saw the epoche is to read his letters, in which he shows at least a little more of his true colors. In Husserl's Briefwechsel, III/281, in a letter to Roman Ingarden, he writes that none of his old students understand what he is really trying to do, and concludes: "Es ist schwer, das Schwerste der Philosophie ueberhaupt ist die phaenomenologische Reduktion, sie mit Verstaendnis zu durchdringen und zu ueben." But even in his letters, he remains the ultimate scientist/scholar, who does not want to speculate. In III/422, in a letter to Dietrich Mahne, he writes: "Seit 1907 lebe ich ja ganz in diesen Gedankenreihen, denen speciell -- soweit ich wissenschaftlich Begruendbares sagen kann, was darueber hinausgeht, verschweige ich principiell, mag es mich noch so sehr innerlich beschaefigt haben -- der II. Bd. der 'Ideen' gewidmet ist."

7. A personal entry into Husserlian thinking

I feel a strong affinity with the way Husserl not only describes, but also feels himself into the epoche. In fact, it was a certain familiarity with the type of shift that can be triggered by the epoche that drove me to study Husserl in considerable detail. Entering his thinking through a side door, starting with the epoche, I was less bothered than many others seem to be by Husserl's dry and long-winded writing, and his attempts to continue fighting late nineteenth century battles that most people consider to be totally outdated. Rather, I was struck by the fact that I found, smack in the middle of Western twentieth century philosophy something that I had first encountered in various ancient Asian writings, and that had transformed my life and my way of looking at the world.

Exploring various contemplative schools in Hinduism, Buddhism and Taoism, and to some extent also in Christianity and Sufi traditions, I had always been struck by the similarities between the experimental laboratory method of science and experiential methods of meditation and contemplation in many traditional spiritual approaches. The idea of stepping out of the world so to speak, in order to observe the world and your own role in it better, makes a lot of sense. Taking a step back, in order to better jump forwards in ways that otherwise would have been difficult to do, is a common technique in many arts and crafts, from playing scales on a musical instrument to going to the moves of a dance step by step.

The idea of viewing my own life as a laboratory has always appealed to me. To view the world through the lens of working hypotheses, ideas to be tested and challenged, and used until they can be safely replaced with something better, all that seemed so much better than relying on dogma, faith or just plain habit. In laboratory mode, theory is used as an indispensable tool for exploration, but nothing is put into stone. Theory presents possible identifications, but working in a lab can teach you a form of freedom from identification. In the light of new experimental results, all previous ideas are up for grabs. And while we need a lot of firm results before we even begin to think of making a major overhaul in our theoretical ideas, the possibility of such overhauls is built in into laboratory life.

After I had been searching for ways to flesh out this parallel between contemplative and scientific research, through the common element of a lab method, I finally stumbled upon the Husserlian epoche as a stepping stone or connection piece between the two. While it is very difficult to formulate what type of parallels are involved in a move between contemplation and science, it is easier to try to describe the move between matter-based science and experience-based phenomenology, on the one hand, and between phenomenology and contemplative spirituality on the other.

In the remainder of this paper, I will focus on the first move, by describing and comparing four different ways of looking at the world: two versions of materialism and two versions of phenomenology. It is my hope that these world views may serve to set a stage for further discussion between Husserlian philosophers and interested scientists.

8. Radical Materialism

The simplest and in a way most straightforward interpretation of what science tells us about the world is to view the world as a complex play of energy, also known as matter, in space and time, according to the rules of quantum mechanics and relativity, based on our present understanding of the standard model of the strong, weak, and electromagnetic forces. While this model will not be the final answer within physics as to what the world is made out of, it can be argued that any future discoveries in the realm of string theory or other forms of quantum gravity are unlikely to change the by now well-tested standard model in its domain of applicability.

In other words, we now have in hand the basic equations that seem to describe all phenomena on Earth as well as in the Heavens, past, present and future, with the exception of what happened in the earliest fraction of the first picosecond after the start of the Big Bang. What a far cry from a hundred years ago, when you could throw some salt in the fire, and have no idea how to compute or even understand the wavelength of the Sodium lines in the spectrum that give off such a characteristic bright yellow -- and no idea of the mechanism by which the Sun and stars are shining, since nuclear energy had not yet been discovered.

Isn't it tempting to leave it at that, and to declare the search for 'what reality is made off' to be finished, once and for all, for all practical purposes? Tempting indeed, and yes, the discovery and thorough testing of the standard model does stand as one of the milestones in human understanding. There is indeed a sense of awe that strikes anyone who has gone through the derivation and at least some of the consequences of those equations, which can be written on one sheet of paper, and seem to capture all of reality as through a magic spell.

This view I will label as 'radical materialism', radical in the sense that it proclaims that there is nothing else to look for, and materialism in the sense that it views all of reality to be made out of complex patterns of matter (or its equivalent energy), draped across space and time, according to the well-defined equations of the standard model. We have reached the end of our quest, begun as long as humans could ponder the structure of reality, formalized by the Greeks in their philosophical speculations as to what constitutes material reality, set into full swing four hundred years ago by Galileo, Newton, and their followers, and now finished for all intents and purposes -- according to the radical materialist.

9. Elegant Materialism

There is an alternative interpretation of the success of the standard model, one that I would call more elegant. It pays more respect to the fact that we still have very little idea as to how to apply our knowledge of the basic laws of nature to derive anything at all from first principles. Knowledge about quarks does not help us as yet in deriving the behavior of atomic nuclei, for example, and we are a far cry removed from computing the spectrum of ionized iron from a knowledge of electrons and iron nuclei. And so it continues for many levels up. Our knowledge of the human genome forms only the very first step on the much longer path of trying to determine the structure and function of the proteins encoded by the genome, and the complicated ways in which many proteins simultaneously interact with each other.

Elegant materialism speaks in terms of emerging properties, a convenient term to describe how ensembles of many particles on one level often give rise to qualitatively new types of behavior on higher levels. Phase transitions, such as melting of ice or condensation of vapor, are examples of such collective phenomena. The formation of molecules, given the laws governing atoms, and the way a biological organism functions, given the behavior of all its cells, are other examples. What is not clear, however, is whether the elegant name 'emergent property' really points to something new and fundamental.

It is true that many 'emergent properties' were first discovered on the higher level of analysis in which they play their role, rather than predicted from the detailed dynamics at a lower level of analysis. But what does this tell us? It seems to indicate a form of limitation in our power of

reasoning and intuition, but does it signify a real break between the layers of analysis? After all, once we have recognized and more or less understand the phenomena associated with an emergent property, we can often (in principle if not yet in practice) derive that property from lower levels of analysis. What, then, is really new in emergent properties, other than a fancy name and the difficulty that human beings happen to have in figuring out how to ground these properties in lower levels of description?

While my heart goes out to the elegance of a description in terms of emergence, I really don't see what exactly the term buys us, and I must admit that I would side with the more radical materialists, if our only choice of world views was between what I have called the radical and elegant forms of materialism.

10. Elegant Phenomenology

Fortunately, there are alternatives, and here is where phenomenology comes in. Let us take the example of a blind person feeling objects in the world with a stick. This person is keenly aware of touching objects. But when asked concretely what is felt by him or her, the answer is: the stick. Through the stick everything else is felt, and knowledge about the world can be represented through motions in the stick. In a roughly analogous way, we can describe the way we deal with the world in purely experiential terms. Since the whole world is given to us in our experience, we can present the world as experience, thus bracketing the question of whether there is anything at all underlying the experience of which we are conscious.

Phenomenology, by redirecting our attention to what is most directly given in experience, and as experience, can help us overcome all kinds of mistaken identification. As such, this help comes for free: who do not have to pay any price in terms of giving up other views we may have; we are only asked to bracket them, for the time being.

For example, when we believe that everything can be explained by materialism, but have too limited a view of what material properties can be, we tend to diminish our outlook on the world. Something like that happened in the nineteenth century, when the world was seen as a material clockwork, before quantum mechanics taught us that nature sports an inherent form of spontaneity. The clockwork picture of the world was not a limitations of materialism per se, but rather a limitation on the contemporary degree of insight into the structure and behavior of matter.

What I would call 'elegant phenomenology' uses this reasoning as a pragmatic trick to get away from practical limitations of a straightforward form of materialism. No attempt is made to argue with the view that matter (energy) is all there is. Rather, such a statement is just seen as not very informative. Without disagreeing the least with a materialist, whether of a hard-nosed radical or a more elegant version, the elegant phenomenologist chooses to analyze the world in exactly the way the world is given in experience. The perceptual psychologist Gibson made a move that was somewhat similar, when talking about the ambient optic array, rather than focusing on physical objects that scatter light.

In a sense, the elegant phenomenologist drives the program of looking for emergent properties to its logical conclusion. Accepting a human being to be ultimately nothing more than a biological organism that is constituted through complex patterns of atoms and molecules, he or she chooses to analyze self and other and the whole world in terms of the highest level of 'emergence' in human beings: consciousness.

11. Radical Phenomenology

As an alternative, a phenomenologist can take a more radical position. Just as the radical materialist does not want to take the notion of emergence very seriously, the phenomenologist can take the same radical stance, but with a totally different outcome. After all, the jump from material brain

properties to human consciousness does seem to be larger than the jump from atoms to molecules, or from cells to tissues to organisms. Starting with a focus on consciousness, it is not clear that we can find our way back to the atoms and molecules that are supposed to give rise to consciousness -- a belief inherent in the previous three positions.

We may some day find a precise correlation between a third-person description of electrochemical processes in our nervous system and our own first-person experience. But such a correlation still may not 'explain' in any way why or how sufficient complexity in an objective description gives rise to the 'emergence' of subjective awareness. A radical phenomenologist, refusing to wave the magic wand of emergence, will view all talk of matter as just that: a handy way to summarize the correlations that are present between the many phenomena in our consciousness that we interpret as being material. We seem to be back here at the old division between materialism and idealism, but with a new twist: there is no need to posit a mind in any reified way, least of all a Mind of God, as Bishop Berkeley did.

By staying with conscious experience as it is given, without trying to ground it in anything or Any One else, the radical phenomenologist has made a move which bears some similarity to that of radical materialists. The latter were forced to abandon attempts to ground electromagnetic radiation in a hypothetical ether, and they have thus learned to deal with waves without a medium in which something is forming waves. Similarly, in even more extreme ways, quantum mechanics has taught us that we cannot talk about properties of particles before measuring them, not even in principle. Attributes in physics seem to have come unglued from the 'things' that were supposed to 'carry' and own them. Hard-nosed materialism is facing the challenge to come to grips with a world that is less and less 'grounded' in the classical sense of the world. The equally hard-nosed phenomenologist who refuses to talk about ways of grounding experience in reductionistic models does seem to be in good company!

12. A Return to Innocence

As a happy amateur in the field of Husserl Studies, I have enjoyed reading much of Husserl's works that were published in his lifetime, as well as bits and pieces of those Husserliana Volumes that came out after his death, together with some of the letters that appeared in his ten-volume Briefwechsel. The more I read of the Old Master, the more I am impressed with the image I got from him after first reading the Logical Investigations and the Ideas: that of an eternal beginner, someone who approaches reality with a true beginner's mind, a German nineteenth-century scholar trying to make contact with what is almost an antipodal notion, a childlike innocence that shows the world new and fresh in each moment, when seen and experienced through the epoche.

I am honored to be given the opportunity to speak here at this meeting of the Husserl Circle, and I look forward to engage in dialogues which I hope will continue beyond the few days of the meeting. I am especially interested in what I see as the main challenge in such a dialogue for most scientists and for many philosophers as well: to invite each other to really taste the experience of radical phenomenology, whether we want to make that our preferred position or not. Is there really something new there, and if so, can we find ways to talk about it that are sufficiently intersubjective that we can start a meaningful discussion about 'what it is like to be a radical phenomenologist'?

My broader question, to the community of Husserl scholars, is: can radical phenomenology still be presented as a viable world view, or should we be ready to throw in the towel, and cede ontological ground to scientific materialists, be it in the form of radical materialism, or more elegant versions of either materialism or phenomenology?

I think it can, but I look forward to hear arguments otherwise. Let me give away here my ultimate argument for a radical phenomenology position: no matter how convinced one may be of the existence of the material world, an acceptance of that existence is bound to come in a package deal with a certain understanding of what 'material' implies. This will no doubt place limitations on one's

expectations and on one's strategy of looking for new aspects of life. Therefore, even if materialism would be the only correct position, the best strategy may be to perform an ultimate epoche, and thus refuse any form of identification with any particular picture one may have of matter.

PS: This would be a safe place to end, but I can't help paraphrasing Galileo, in remarking about the mind: ``and yet she moves".

Back to [publications](#)

Back to [activities](#) or to [table of contents](#).

Back to [Piet Hut's home page](#).