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## The View from the Background

*»It is not the epistemological subject who brings about the synthesis, but the body...«*

Maurice Merleau-Ponty

*»... perception depends dominantly on expectation and marginally on sensory input.«*

Walter Freeman

### **Abstract**

*There is wide agreement that background knowledge is unconsciously applied and is not formally representable, but views diverge as to whether this sort of skill should be considered knowledge in the proper sense. In this paper I attempt to show that background infrastructure is a type of skilled knowledge which serves as a precondition for the mind to be 'about' things in the world. Contrary to the common understanding that background is primarily mechanical, the view presented here affirms that it is a totality of knowing taken up by the body and converted into an implicit 'know-how'. It appears as a mode of mind's 'enworldment', as well as an organ of potentiality.*

### **Introduction: Towards a Broader Picture of the Mind**

That the first thinkers in the Western philosophical tradition habitually saw everything in terms of one or several elements (be that water, earth, air, fire or whatever), with a view to understanding complex phenomena by figuring out their constitutive parts and forms of organization, is a burden for the history of philosophy. From this tradition one is tempted to mistakenly conclude that 'to be made of' implies 'to be', and that familiarity with structural forms and functional laws is equivalent to possessing an exhaustive explanation of the object under consideration. If the object is the mind, then one might believe that one can fully understand it once one knows how the underlying processes of its operations are organized and what the make-up of its 'hardware' is.

It is probably because this sort of identification is so ingrained as an explanatory model that we have become insensitive to its errors. This also accounts for the fact, at least in part, that many a contemporary scientist and philosopher of mind readily declares, without much opposition, that matter, form and function are all that matter in understanding the mind. For if structure and function define what the mind *is*, then there is nothing else that really counts.

So long as one assumes that we must see the mind in terms of something else, and hence that the mind is always something else, there will be no restrictions to the reductionist project. On this score, the whole can be defined in terms of, and identified with, a single element or aspect. The metonymic taking of a part or aspect for the whole has such a long tradi-

tion that we do not easily realize that we now have a sort of caricature which errs against a more holistic perspective. Indeed, we have here a contemporary equivalent of the ancient Greek schema of 'four elements' in one – the 'it', and 'it' is habitually further decomposed into more elementary units all the way down to molecules and atoms. The subsequent outcome is the conclusion that the mind is 'nothing but' and 'no more than' that to which 'it' can be decomposed (neurons, molecules). The philosophical rhetoric of 'nothing but' and 'no more than' first applies the metonymic *pars pro toto*, and then eventually forgets what has been done. Thus the whole of the mind dissolves into, or is reduced to, the deliberately chosen aspect – and in some cases it even disappears altogether.

Though reductionists would probably say that their claims are not ontological, their analytic techniques are exclusive; and to leave no possibility of misunderstanding, in special cases they declare that their procedure is also 'eliminative'. The properties of the mind are not only selected and then explained away, but that which is selected is deemed the sufficient basis for determining what the mind is or might be as a whole.

During the past five decades or so, we have become extensively exposed to the idea that the mind, and the brain alike, is always something else.<sup>1</sup> »Because we do not understand the brain very well,« asserts Searle, »we are constantly tempted to use the latest technology as a model for trying to understand it« (1984: 44), and we thereby tend to do the same with the mind. Because our understanding of the mind is still rich with 'mysteries' and poor with positive knowledge, we design models of the mind according to the available technical and methodological means.

Common to reductionisms of all sorts, which exhibit a strong demand for (natural) scientific explanations, theorists in the field disavow everything that might have even the slightest trait of the psychological. The ensuing result is a conception of the mind that is nothing but the product of matter: a 'self' which is in the service of the 'it', a structure without life, an 'architecture' (of the mind) without a past and lacking development, often dismissive of either personal history or collective dynamics. The mind is an encapsulated entity – that is, closed and self-contained, without interactive coupling with the world – and, as a rule, is described as asocial, disembodied, emotionless and cultureless. The outermost bounds of the intellectual challenge are marked, on the one hand, by the absence of the embodied person (brains-in-vats) and, on the other, by the view that bodily stature suggests a lack of personhood (zombie).

In other versions the mind is reduced to, and then identified with, the brain; with a computer program; with the system of internal functional (input-output) relations; with dispositional responses to stimuli, and so on. This is indicative of how we stumbled across the positions of brain-mind identity theory, computationalism, functionalism and behaviorism.

The consequence of a theoretical strategy of this sort is by no means trivial. For by adhering to it, scientists of the mind are not only confusing the part for the whole, and a singularized aspect for a complex unity, but they more often than not, though perhaps unwittingly, leave the mind out of sight. And this in turn places a demand on theorists in the field to look for a broader picture of the mind.

## 1. The 'Enworlded' Mind

In view of diverse confusions in the science and philosophy of mind, the mind is considered 'lost', and then 'found' or 'rediscovered'<sup>2</sup> again. And the search for it continues. As already mentioned, one direction leads to reductionism; another leads to the opposite pole characterized by the *phenomenological* approach. In the final analysis, the first ends in the neural or silicon atomization of the mind; the latter comes closer to a 'big picture' of mind insofar as it affirms a fundamental phenomenological theme – the *openness* of the mind to the world and its 'situation' of *being-in-the-world*. The approach that I am going to explore here is also world-oriented. Its basic premise, in a nutshell, reads: the notion of a worldless mind is fictitious, as is the notion of a mindless world.

The view I advance asserts that the mind is 'rediscovered' in its 'enworldment', which is to say its capacity to render the world intelligible. It is essential to stress in this context that »[i]t is impossible to characterize mental properties adequately without invoking the world with which our mind is inextricably concerned« (Auyang, 2000: 82). My claim, however, is even stronger: not only is the mind 'open' to the world, it is impossible to conceive the mind as being devoid of the world. The world, namely, is a dimension of the mind. In short, there is no world without the mind, but also no worldless mind.

One way to make the above position clearer is to recall Merleau-Ponty's statement that »[t]here is no inner man, man is in the world, and only in the world does he know himself« (1945: xi). This contrasts sharply with the traditional philosophical assumption that world and mind are two independent entities. Once the dichotomy is established, much philosophical effort is required to bridge the chasm, both epistemologically and ontologically, and this is in principle futile. For Merleau-Ponty, on the other hand, there is no 'internal' and 'external' reality, no inner world of the psyche and outer world of objects. Thus there is no need to construct bridges, and no revision of the dichotomy is required because none is presupposed.

Needless to say, mind-world interdependence is more profound than the ecological perspective. To be more precise, human being is not *in-the-world* in exactly the same way as one is *in* one's environment. The former is to be understood along the lines of the Heideggerian *Dasein* as *in-der-Welt-sein* which avoids the pitfalls of dualism and reveals Cartesian intermediary representations as untenable. If one follows the phenomenological path of rediscovering the mind, then one might be well advised to consider Merleau-Ponty's impelling words: »My body is geared into the world« (1945: 250). Or Hubert L. Dreyfus' version of the same thought: »[T]he *whole* organism (is) geared into the *whole* world«. <sup>3</sup> By bringing the organism – that is, the body *and* the mind – into the world, one has gained a significantly new stance. But with it a problem arises: How does the (whole) organism relate to the (whole) world? This question generates numerous related questions, such as whether the 'organism' enables our being-in-the-world, and whether 'enworldment' is the exclusive merit of embodiment.

<sup>1</sup> See the Introductory to this collection, p. 231.

<sup>2</sup> E.g. Searle (1994).

<sup>3</sup> »How Merleau-Ponty's Non-Representationalist Phenomenology is Supported by Recent Cognitive Science« (manuscript, p. 15).

Without wanting to get bogged down in a detailed analysis of all the questions involved, I would say that we are in the world not only by virtue of our bodily gearing into it, but also by virtue of our acts of mental engagement.<sup>4</sup> Insofar as we think and feel, desire and guess, imagine and hope, we leave our cognitive trace on everything knowable, and thus we imprint our cognitive stamp on the world as a total product of knowing. Even seeing is not an act of up-taking, but a means of molding the world in a particular way. Insofar as we perceive and speak, measure and calculate, and even dream and fantasize, write sonnets and compose sonatas, we leave the blueprints of our doing on that which becomes our world. And in this sense, it is philosophically – and above all epistemologically – justified to assert that the human mind is not only ‘enworlded’, but that the human world is also ‘mindful’.

## 2. Beyond the ‘Attention Room’

One way to approach the mind-world relation may be to consider the accounts of a neuroscientist, a biologist and other ‘hard’ scientists. Paul Ehrlich and Robert Ornstein put it this way:

»Modern analysis of the nervous system and the mind yields a surprising conclusion: instead of experiencing the world as it is, people experience only about one trillionth of outside events: a small world indeed!« (1989: 73)

Though the finding itself may be amazing, the way it is interpreted is ill-founded. When these two authors claim that »the ‘big’ outside world doesn’t enter in directly« (73), they presuppose that there is a world apart from the mind, and that the mind is independent of the world. The major issue, then, concerns just how the big (external) world matches the small (internal) one.

»Our sensory systems do this by restricting incoming data to very little of what is actually present in the outside world. And our minds therefore must extract from the received cacophony of the entire ‘big’ world a specialized ‘small world’ in which an individual can act and live.« (72)

Ornstein and Ehrlich are right if what they say implies a reduced scale for mental world – but they are wrong if they think that both worlds are (pre)given, and that the number of stimuli determines their ‘size’.

The source of the misconception consists in the assumption that it is the quantity of sensations that decides on how ‘big’ a world can be, which is to say that it is the amount of data which dictates its complexity. The assumption would be right only if information or meanings are provided by external sources which are contained in the incoming sensory data. That, however, is not the case; for meanings emerge within the mind and at the level of the cognitive subject. They are not imported from without, and are certainly not provided in a ready-made fashion. Instead, they are created, so to speak, out of the mind’s own cloth. It is the mind’s art of interpreting, its capacity to make stimuli meaningful, which renders the world intelligible for us. Thus sensory adequacy and empirical faithfulness cannot be measured against external standards, and their status is to be decided within internally created criteria.

The world is neither big nor small; it is neither intelligible nor unfeasible according to what is given in the ‘input’. Rather, its ‘size’, complexity and

intelligibility are dependent on the mental ability to make it either big or small, either intelligible or unfeasible. In this kind of process it may just be that too much data is unmanageable, whilst scarce and fragmentary data is useful. As a rule, the ‘it’ and the ‘self’ have problems with an overflow of ‘information’ because they cannot meaningfully process them all. At the same time, they feel at ease with partial data, missing connections, with fuzziness and uncertainties, and even with a lack of ‘essential’ parts of data (such as the ‘blind sight’).

The amount of (sensible) data does not exhibit any particular advantage for our mental powers, nor is deficient or fragmentary stimulation necessarily a handicap. ‘More’ stimuli does not automatically produce more complex mental contents; for if this were the case, then perception, and knowledge alike, would be nothing but a collection or summation of such data. Accordingly, the attempt to extend the ‘one trillionth of data’ limit, and the attempt to thereby be receptive of an ever greater number of stimuli, is not that which would extend our world or increase our cognitive competence. Similarly, it would be futile to try to infinitely augment our vocabulary to obtain an all-encompassing language that would faithfully match ‘reality’. It would also be illusory for the mind to try to record everything which is mentally possible. Such an imaginary (‘ideal’) language would not only be so monumental that it would be impossible to memorize, but would also lack meaning. And the mind for which everything would be relevant would not only collapse under the burden of data, but its task would also lack meaning. Indeed, meaning can only be established through repeated usage, and *repetition* can only occur within a *limited vocabulary*. And as we already know from the philosophy of perception: no meaning, no perception. The analogy holds for our mental life *in toto*: no meaning, no conscious or other mental states.

So it seems that a limited mental stage is a prerequisite for mental processes which are meaningful for the organism, especially since a limited vocabulary is the precondition for successful language usage. To convey this idea further, consider the following metaphor of the ‘attention room’ as referring to the restricted stage for ongoing mental events.

Since it refers to conscious states, the ‘attention room’ is never empty. According to what we know from neuroscience, the brain is never at rest, not even in sleep, and our ‘self’ is always active, constantly receiving and recycling mental contents – and thus generating self-organizing processes which are capable of producing content that is a distant cry from the initial ‘input’. Yet the ‘attention room’ cannot be unlimitedly crowded either. Too much of everything is tantamount to nothing. Not everything can be relevant. Also, there is no way a mental state can be *about* something if it is not focused, and it can be focused only if it functions on a reduced scale, which enables the delineation of particular meanings against all potential meanings.

We now realize that it is crucial for conscious mental states (the ‘attention room’) to be limited, but we also know that we feel free and unlimited with respect to what we think, wish or guess. The question then arises: How do we reconcile the indisputable feeling that we are mentally unbounded and

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Clearly, for this sort of discussion it is crucial to look for possible interpretations of the body; that, however, would require extensive

elaboration here. But I may get back to the consequences of the major issue for the conception of embodiment later in the paper.

the fact that the conscious mental arena is necessarily limited if mental events are to be meaningful for the cognitive person? I will attempt to answer this question by focusing on what I call the ‘background infrastructure’.

### 3. The Background Infrastructure: An Outline

It is generally agreed that background mental abilities are non-representational.<sup>5</sup> To this I would add that background skill is applied unconsciously. Disagreements might arise, however, concerning the way we understand *skill* as not conforming to representation, on the one hand, and whether or not the unconscious infrastructure involved should be taken as a kind of *knowledge*, on the other hand.

Regarding skill, habitual illustration of the background includes examples of ‘swimming’, ‘riding a bicycle’, ‘driving a car’, ‘typewriting’, ‘cutting cake’ or ‘cutting wood’, as well as other daily automatized actions which do not appear in the ‘attention room’, for which no extra mental effort is needed. All of them, as a rule, primarily refer to motor skills. Though philosophical consensus on interpreting skills as merely physical (mechanical) abilities is fairly broad, my view does not conform to the tradition. I would venture to assert that skills (routine and automatized) can also be mental abilities and forms of action whose sophistication belongs to the category of ‘knowing-that’.

This position differs significantly from Searle’s, who notes that

»... [i]n order that I can now have the intentional states that I do I must have certain kinds of ‘know-how’: I must know how things are and I must know how to do things, but the kinds of ‘know-how’ in question are not, in these cases, forms of ‘knowing-that’«. (1983: 143)

I maintain, however, that motor skills not only traverse the painstaking path from rules to routine, and are thus not only indicative of ‘know-how’, but that everything we can learn can be turned into a skill. By that I do not only mean something like playing a music instrument, which is a type of intermediary example between motor skill and ‘knowing-that’. I also include human capacities such as perceiving and language usage. Just as a cello-player and pianist can make his/her performance (and profession) be *about* music only after he/she has acquired the necessary performative skills, so too ordinary perceivers and speakers can make their images and sentences be *about* their lived-world only after they have become adequately trained and educated in both skills. Indeed, the supreme aim of all knowing is for it to become an automatized routine or skill. Yet in its transfiguration into a skill, knowledge does not cease to be knowledgeable. By way of conversion into ‘know-how’, much of the ‘know-that’ can be preserved.

Here we are confronted with the problematic exclusiveness of ‘know-that’ and ‘know-how’ which, though helpful at times, is harmful insofar as it does not allow for mutual interdependence and exchange between these two types of knowing. It should be noted, however, that the conflict exists not because it is actually there, but because it has been created. On a broader scale, this leads to a polarization between explicit and implicit knowing, between the exact and the tacit, between reason and emotion, and in the final instance between art and science as two ‘incommensurable

rivals'.<sup>6</sup> All these divisions have been with us for a long time, and precious little effort has gone into revising them.

Even the greatest discoveries and creative achievements lose their 'greatness' with time and repeated use, as one becomes less conscious of their importance, and even of their presence, after which they slowly become part of common-sense usage (first within the scientific community, and then outside it). Just as syntax gets hard-wired, so too our knowledge of the availability of water and food, for instance, or the convenience of using artificial light through electricity, or the ease of speedy communication and transportation, become skilled forms of implicit knowing which is not to be found anywhere in textbooks.

Questions regarding background as a form of *knowing* usually converge on the dilemma as to whether or not such a skill should be considered knowledge – in short, as to whether or not '*knowing* how' is knowing at all. The »most important part of commonsense knowledge,« states Herbert L. Dreyfus, »is not 'knowledge' at all but a skill« (Baumgartner & Payr, 1995: 77), and this implies that skill is a particular sort of competence that cannot be equated with knowledge. Indeed, if skill is used primarily to refer to car-driving, cake-cutting and other everyday acts, as is frequently the case in the philosophical literature, then we might be tempted to put the word 'knowledge' in these specific contexts in quotation marks, suggesting that it is not knowledge in the proper sense of the word. If, on the other hand, a skill is to be taken not merely as a physical or mechanical ability, but as a totality of cognitive practices taken up by the body, then such an educated embodiment can rightly be treated as knowledge. 'Knowing how' would then be a kind of knowing after all.

On this score, Dreyfus likewise claims that

»... nowhere in the *Encyclopedia Britannica* does it say that people move forward more easily than they move backward, or that doctors wear underwear, as John Searle's latest example goes. The background knowledge is precisely what is not in an encyclopedia. It is what every person knows just by growing up in our culture. And a lot of it is not even facts.« (Baumgartner & Payr, 1995: 75–76)

Dreyfus' example – »people move forward more easily than they move backward« – and Searle's example – »doctors wear underwear« – seem to me to refer to a particular *type of information*, and not so much to a special kind of *skill* or *knowledge*. However, I think it is just a matter of selection criteria that two things do not (yet) exist as entries in textbooks. But I do not see why they cannot be included. An entry on the spatial orientation of humans might, and probably should, contain the experience – and even the 'fact' – that we move forwards easier than backwards, that we move more easily by walking on our feet than on our hands (and there are certainly convincing explanations for that from the evolutionary point of view). And doctors wearing underwear might be a topic of discussion on the 'dress code' in surgery. What is probably meant by the above examples is that we do *not need an encyclopedia for doing* any of the mentioned activities.

Skill is not to be viewed as something different or even opposed to knowledge.

<sup>5</sup>  
For instance (Searle, 1983: 143).

<sup>6</sup>  
The issue is relevant for the discussion, but requires further extensive elaboration which is beyond the scope of this paper.

Without the skill of converting practice into patterns, and rules into routines, it would be impossible to maintain mental life. If nothing is skilled, then *everything* would be relevant; and this would not only be burdensome to our memory, but the effect would also be that *nothing* would be meaningful and relevant. It is certainly a good thing that we do not have to consciously control »standing, walking, opening and closing doors, manipulating bottles, glass, refrigerators, opening, poring and drinking«. <sup>7</sup> But far more important than this is that we do not have to be conscious of the many mental processes which have progressed to the level of skill, and which enable, for instance, specific phonetic configurations to be *about* meaningful words, and retinal patterns to be *about* images.

#### 4. Reading as Background Skill

One basic lesson we can learn from perception is that there is no ‘naked’ or ‘naïve’ eye which is capable of seeing. Stated otherwise, there is no seeing without interpreting and understanding. Required is a competent *interpreter* because meanings are not provided or given ready-made in visual stimuli; they are acquired only by the cognitive person, and then turned into a skill. Only for a skilled perceiver, namely, can mental processes be *about* the seen. To put it yet another way, perception can function the way it does because there is a background infrastructure which provides the competence for seeing. Only the ‘skilled eye’ can see. For if it were otherwise, then it would be sufficient to open one’s eyes to see, and the contents of visual experience would be the same for everyone. And this is obviously not the case.

I now want to apply the lesson from perception to a very special case, the case of reading. The art of figuring out that which is written is more sophisticated than wood-cutting and cake-cutting. It demonstrates that background skills are not only mechanical, but show that reading actually represents the nature and import of the background more adequately. This fascinating ability of ours, by which we convert the graphical into contents of thought and feelings, is pretty much a neglected ability in the science and philosophy of mind, and thus deserves more sustained theoretical attention.

Perhaps the most elementary thing about reading is that it is not about (usually black) letters on a (usually white) piece of paper or screen, and it is not about the string of words and filled-in pages either. Reading is a complex mental act in which the skilled recognition of written signs helps us to create mental contents – thoughts, emotions, images and imagined realities. It is about complex games of affiliation between graphic signs taken as symbols and our competence to make use of them in a particular meaningful way so that they become intentionally relevant. We do not read texts by encoding strings of symbols one by one, letter by letter; and we do not read complex texts word by word. It might well be appropriate to say that reading is always holistic.

Once we have acquired the adequate *reading skill*, in reading we not only pick up signs, but we are also not consciously concerned with lines of words or with ‘pages’. For that reason, we do not say that we *see* the text, but that we *read* it. Texts are not to be *looked at*; they are meant to be *read*. And we can read a text from left to right, from right to left, as is the case in Arabic, or again bottom-up, as is the case in Japanese. A book can be read front-back, or back-front, but that does not influence the reading. For reading is



not about the way we look at letters, nor is it about techniques of writing or printing. Types of letters, font and colors do not matter – for one might use red or fluorescent for highlighting without influencing the act of reading – since reading goes beyond seeing the printed pages. In reading, we normally do not remember what the previous page of the book looks like. Rather, we remember what it was *about*. As soon as one develops the skill, which normally happens early on in childhood, reading is not about the letters any more; it is *about* the contents they evoke mentally.

Knowing this much about reading explains why authors are such poor proofreaders of their own writings – precisely because it is difficult for them to concentrate on the written text, on the graphic signs out of which it is composed, and ignore what those graphic signs are *about*. Indeed, the skill of converting signs into imaginary mental contents is so deeply ‘backgrounded’ that it requires extra mental energy to neglect the meanings and see the ‘written’ as it is visually laid down.

Since the *animal symbolicum* is so skilled in interpreting, he/she cannot resist permanently deciphering signs and symbols. We are, as symbol-making ‘animals’, only aware of what texts are *about*, and are insensitive to what there is literally ‘in front of’ our eyes. The *aboutness* of the text is primary; the sensibly given can only be derived with extra effort, and even then it is often difficult to bring it out to the ‘foreground’ from the background.

The same is also true of auditive perception. It is difficult, and indeed impossible, to hear spoken language as vocalized noise, and not as words and sentences. Even an exotic foreign language of which we do not have the slightest clue is heard as an incomprehensible language, and not as a vocal mass. As Heidegger succinctly pointed out, »[i]t requires a very artificial and complicated frame of mind to ‘hear’ a ‘pure noise’« (1926: 163). It is equally difficult to hear music not as a melodic piece, but as a conglomeration of tones. Even avant-garde musical performance is heard as ‘music’ of which we have no understanding, rather than as a completely amorphous acoustic mass. The *primacy of aboutness* is applicable here too.

What follows is a process whereby we *read in* the meanings rather than decode them *from* the stimuli. The same holds true for perception, be that visual, auditive, olfactory, tactile or gustatory. For in perceptual experience, we *read in* the possible significations they might have for the cognitive person. In perception in general, and in reading in particular, what matters is expectation. And we can have expectations only because we have a background infrastructure permanently at our disposal and are skilled in making use of it. It is owing to background skill, namely, that we navigate through our life-world instantaneously and effortlessly, without recourse to computation. And it is for this reason that ‘real time’ is so unbeatably short.

Once we realize that reading is not *of* the visual (or tactile) decoding of the sensibly given, but is about imaginary mental events, and that all perception is based on projected expectations, which make us meaningfully tuned to intentional objects,<sup>8</sup> further possible implications can be extracted. And this concerns the *intentional neglect of the presently given*. Reading is thus a

<sup>7</sup>  
Searle’s example of the background (1983: 143).

<sup>8</sup>  
Precisely in the sense of Goethe’s words:  
»Wär’ nicht das Auge sonnenhaft, die Sonne  
könnt’ es nie erblicken.«

wonderful example of the human being's unique capacity to get *intentionally emancipated from the given*, and be *about* anything imaginable.

### 5. Background: Aesthetic and Scientific

The path from the given to the possible is especially evident in the domain of aesthetic perception and appreciation. But it is also no less evident in observation and scientific judgment, in which much of what has already been said of reading finds an even broader and more variegated field of expression. In art, and in science, an interpreter is required to make sense of objects, and it is owing to the meanings attached to them by a skilled perceiver and observer that they can become works of art and science. Not unlike reading, both aesthetic and scientific messages are not 'written down' in the objects themselves, and so cannot be readily picked up, but have to be deciphered against the backdrop of the competence instantaneously supplied by the background infrastructure. This in turn requires investing expectations and projections into the acts of perceiving and observing, without which the physical objects would not be *about* works of art and science whatsoever. For example, a painting is a 'Mondrian' if it is recognized as such, and a glass object is an 'electrode' if the observer *knows* what the eye conveys. In both cases, perceptions are *about* something that significantly exceeds their merely visual features.

We can learn from the philosophy of science that there are no neutral sense-data and self-evident facts. The sensed and the factual *appear* to us in a variety of versions which are bounded by 'truth', on the one hand and, and 'falsity', on the other. Thus contrary to widespread belief, decisions pertaining to the scientific status of that which appears to us are not determined exclusively by the criterion of exactness, but are made according to a tacit knowing of the background.

One of the characteristic features of the background infrastructure, as pointed out above, is that its nature is such that it cannot be formally represented. But the inability to formalize it does not necessarily make it illusive, unreal or mysterious. On the contrary, this particular type of mental infrastructure manifests itself in various ways, though not immediately or explicitly. I would claim that the way we feel *about* things in the world, and the attitudes which we have *about* them, is grounded in that background knowing which provides 'reasons' for our acting in the world. Such a bodily *raison* makes us prefer some things and dislike others, feel good about some people and cautious about others. It may also create the pre-condition for someone to be a basketball fan rather than a baseball fan; prefer sailing to flying; be fond of good food rather than enjoy playing poker; prefer Bruckner over Mahler; enjoy the music of string quartets more than opera; be fascinated with Picasso more than Pissarro; feel more at home on the Adriatic than in the Alps. We can feel differently about the 'same' thing and feel the same about 'different' things. How we feel *about* them is less the merit of the 'given' than it is the art of 'taking' what there is. For this reason, we are sensitive to some things and 'blind' to others. And that is why one person is fonder of Turner and another person is fonder of Cézanne; why one person is touched by Schubert, and another by Shostakovich; why some people are more impressed when standing in front of Vermeer's canvas, and others in front of Warhol's picture.

Similarly, judging somebody's work – say, a lecture or a book – as either 'interesting' or 'boring' relies on some general understanding and intellectual *taste* that cannot be fully transcribed via rational argumentation. A judgment of this sort is the outcome of a bounty of elements which cannot be singled out, decomposed or analyzed in a computational fashion. Judging people and their work as either 'interesting' or 'boring' may lack a rational grounding, but this does not automatically mean that 'liking' or 'disliking' is completely blind, arbitrary or unfounded. It does, however, mean that it is not possible to find a formula according to which the judgment is done. The sought-after formula is lacking because it is not possible to formalize the background infrastructure from which the judgment originates. But on that account it is neither irrational nor insignificant. Analogous to the Pascalian 'heart',<sup>9</sup> the background infrastructure has its 'reasons' that are not accessible to propositionality.

To be or to appear 'nice' or 'kind', 'boring' or 'weird', is not due to any clear-cut single feature or set of peculiarities. Instead, it is the outcome of the general attitude or feeling one might have about a person – or, expressed otherwise, it is the product of many aspects that merge into a unified manifold which we cannot represent computationally.

The inability to formalize complex experiences such as music perception does not mean that we cannot provide convincing rational arguments *pro* or *contra* a positive appreciation of a piece of music. This is not the case, and I certainly do not want to suggest that aesthetic feeling is most authentic when it is blind or uneducated. Rather, what matters is that we can provide a diversity of arguments in favor of a piece of music, and equally provide a diversity of arguments to diminish its aesthetic value. But in the final analysis, we learn to appreciate it or not according to whether it fits the totality of experiential 'infrastructure' which remains propositionally non-constituted.

By no means am I implying that no rational explanation (even if only a partial one) of artistic preference is possible; but I certainly do want to claim that such explanations are shaped by some more profound 'feelings' which are not reducible to those explanations. After all, anything can be explained in one way or the other. Thus the capacity to give explanatory reasons alone cannot be the ultimate argument, and it alone is not all that counts. Our preferences in matters of *taste* are strongly colored by a whole bunch of elements that exist under the label of 'background infrastructure'. Indeed, could one possibly think of an algorithm for that which constitutes one's (artistic or scientific) taste?

I can surely provide a pretty extensive list of reasons as to why I like Bruckner's symphonies, but this does not mean that the list exhausts my 'love' for his music, or that my appreciation is reducible to the reasons contained in that list. In this context, an important issue arises: Does rational argumentation help make us feel a particular way about things, or are the arguments themselves already expressions of more fundamental feelings? Or stated more straightforwardly: Is our appreciation of works of art primarily *about* aesthetic arguments, or is it *about* more elementary feelings that motivate such arguments? In other words: Do aesthetic reasons deter-

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»Le Cœur a ses raisons que la raison ne connaît point« (»The heart has its reasons

that reasons does not know«) – Blaise Pascal, *Pensée*.

mine the background, or are they already prepatterned by the background? These types of questions require extensive discussion and exceed the scope of this paper. Yet, for current purposes here, I would say that irrespective of how intentional competence is defined, the way we feel *about* works of art is very much dependent on the specific background ‘profile’ which is not resistant to aesthetic arguments, but which cannot be reduced to them – precisely because it entails many aspects that can be neither successfully represented nor simulated.

The natural sciences are likewise not devoid of the extra-scientific, an aspect of which is *taste* (in the ‘transferred’ sense of the word). It is erroneous to believe, for example, that by turning away from soft artistic experience we also get rid of or lose the *aboutness* which is anchored in background preferences, and which is not describable in formal terms, as we find in the arts. Not even the ‘hard’ sciences are exempt from recourse to tacit premises which are articulated within the particular constellation of the background infrastructure, and which determine modes of *aboutness* even in the domain of exact thought.

In one sense, it is possible to say that we are biased by the background, and not only in perceiving. The manner in which we make theoretical choices and judgments, be they scientific or aesthetic, is already *background-laden*. Since this is the case, it is difficult to resolve disputes by means of rational arguments and logic alone. Moreover, to understand why the same (scientific) arguments are ‘sound’ for one person and completely unconvincing for another, and why the same ‘brute facts’ are plausible for some scientists and furiously rejected by others, requires that we appeal to background ‘criteria’.

Though not representable and formalizable, the embodied background infrastructure has nothing to do with irrationality, but rather with the totality of experience and knowing, for which it is impossible to find a propositional form. I believe all this speaks in favor of a far-reaching general implication: science too is, first and foremost, a human activity. Even in matters of science, namely, we act as embodied persons whose cognitive capacities rely heavily, altogether unlike brains-in-vats, on skilled knowing, on background ‘taste’.

## 6. Implications for Intentionality

Even the simplest cognitive acts are not the result of the dictates of the senses. To the question as to what sense data conveys, the only philosophically proper answer is: It depends! For as we have already seen, it depends on expectations and projections based on the background infrastructure. In addition, what the intentional object will be and how it is going to look depends also on our needs, interests, curiosity, chance, experience, competence, ignorance, and so on. The ‘same thing’, then, will not only turn out to be different according to the perspectives of different persons, but its ‘sameness’ will lose its stable status under the shifting focus of the *intentional preferences* we and other persons have. For instance, the person that suddenly appears ‘in front of your eyes’ can be an ‘unknown someone’, a ‘movie star’, a ‘pretty woman’, a ‘dear friend’, an ‘old love’, a ‘new neighbor’, an ‘acquaintance from student days’, and so on. The ‘same person’ is decomposed in a ratio which far exceeds 1:1 correspondence.

Just as there is no ‘naïve’ eye or uneducated reader, there is also no ‘ignorant’ intentionality. External sources do not supply what mental states are *about*, just as perception is not provided by visual stimuli, or language by graphic signs and phonetic pitches. An experienced and competent mind is needed to make *aboutness* possible in the first place. There are reasons to believe that, without the background ‘know-how’, we would lack the cognitive power necessary for mental states to be *about* things in the world.

There are no intentionally ‘given’ objects, just as there are no visually or linguistically given objects. In going beyond the sensibly given, embodied skill opens us room for intentional being-in-the-world, in the sense that is not merely ecological. As paradoxical as it may seem, it is *skill* which makes room for cognition and human creative intervening. Because we have highly developed background skills, we can be artful in dealing with the world, as well as describe it in scientifically exact terms. In short, we can be aesthetically imaginative and scientifically adjusted because we permanently have at our disposal a potentially massive repertoire of background ‘know-how’.

## 7. Background – The Organ of Potentiality

The skilled routine with which we make use of the background infrastructure does not only affect ‘higher’ mental functions, but extends its competence all the way ‘down’ to the bodily level. In this way, even the simplest bodily reflexes become intentionally educated. And if I am not mistaken in my reading of Merleau-Ponty, then it must be some such understanding that is also present in his subtle reflection on the ‘reflex’:

»It is this global presence of the situation which gives a meaning to the partial stimuli and causes them to acquire importance, value or existence for the organism. The reflex does not result from objective stimuli (...). Prior to stimuli and sensory contents, we must recognize (...) what our reflexes and perceptions will be able to *aim in the world*, the area of our *possible operations*, the scope of our life.« (Merleau-Ponty, 1962: 79; emphasis added)

This view accords with the one already mentioned above, that ‘objective stimuli’ do not determine our mind-world. If in the previous section we have seen that ‘higher’ cognitive functions (including science and art) are background-laden, then we are now in a position to learn and realize that the same holds true at the most elementary level of intentional ‘enworldment’. Background ‘know-how’ is acquired through and embodied in an organism’s most down-to-earth level, so that not even ‘reflexes’ and ‘impulses’ are totally blind and unaided. Subsequently, it is possible to say that ‘enworldment’ is discernible at a very profound level of the mind’s *aboutness*. In this way, like in the case of reading skill, we act intentionally *towards* stimuli at a very basic level, rather than act according to it.

The body of skilled knowing is much more than the sum of past experiences which is first routinized, and then embodied as a skill. Moreover, due to its self-organizing processes, it has a life of its own that we can neither deliberately influence nor control. It has a sort of autonomy which, for that reason, we cannot easily get rid of it or radically change – even when we want to. We cannot simply forget or ignore our background infrastructure, no matter how passionately we would like to do so (as a ‘fresh start’ in a creative process, for instance). The background is always with us, and it is a significant part of our ‘self’. The peculiarity of the background infrastruc-

ture makes it a sort of blueprint of mentality. That is why I tend to say that, being more than a propositional portrait or the particularity of *qualia*, it is the uniqueness of the background which makes us differ individually from one another.

Finally, there is a beneficial aspect of the background infrastructure that is far from trivial: because it remains unconscious, we profit from its ‘know-how’ without even noticing. If this were not so, then it would not only be energy consuming, but we would be stuck in trivialities – and that would limit the scope of our mental actions. We would not be cognitively playful due to the mental fatigue involved, and we would be consumed by the most down-to-earth acts of survival. Luckily for us, this is not the case. Thus we do not have to ‘think’ about the syntax of the words we use (at least not in our native languages), just as we do not have to think about our heart beats or the secretion of glands (so long as they do not malfunction). In making itself ‘invisible’, that is, unconscious, background knowledge enables us to be emancipated from the ‘given’ and the present, and to deal mentally *about* the possible and not-yet-existing. This in turn legitimates background knowledge as an organ of the potential. For in enabling the mind’s being *about* things that do not exist, it facilitates mental leaps towards the possible. And, in the final analysis, it may extend ‘enworldment’ into the fictional, and even the ‘impossible’.

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### Der Blick aus dem Hintergrund

*Es herrscht allgemeine Einigkeit darüber, dass die Hintergrundinfrastruktur unbewusst eingesetzt wird und nicht formal vorstellbar ist. Die Meinungen gehen jedoch im Hinblick darauf auseinander, ob diese Art Fertigkeit als Wissen im eigentlichen Sinne des Wortes verstanden werden soll. Im Artikel versuche ich zu zeigen, dass die Hintergrundinfrastruktur ein Typ des Wissens ist, der für den Geist als Voraussetzung dient, um von den Dingen in der Welt zu sein. Im Gegensatz zur gängigen Auffassung, der Hintergrund sei primär mechanisch, bestätigt die hier vorgestellte Ansicht, dass er eine Wissenstotalität ist, vom Körper übernommen und in implizites Know-how verwandelt. Er erscheint als ein Modus der »Verweltlichung« des Geistes und als ein Organ des Potentiellen.*

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### Une vue depuis les antécédents

*Il y a presque unanimité à reconnaître que le savoir des antécédents est appliquée inconsciemment et qu'elle n'est pas représentable formellement, mais les avis divergent quand il s'agit de décider si ce genre d'aptitude doit être considéré comme un savoir au sens propre du terme. Dans cet article, j'essaie de montrer que l'infrastructure des antécédents est un type de savoir technique constituant une condition préalable pour que la pensée soit sur le monde. Contrairement à la conception habituelle, selon laquelle les antécédents sont principalement mécaniques, le point de vue présenté ici les définit comme totalité de savoirs empruntés au corps et transformés en savoir-faire implicite. Celui-ci se manifeste à la fois comme un mode d'»assimilation au monde« et un organe de potentialité.*