

Konrad Lorenz and contemporary philosophy of mind

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Lorenz advanced in chapter *The Mind-Body Problem* of the «*Russian Manuscript*» some theses concerning the mind-body relations that are very impressive for the contemporary philosophers of mind. The way Lorenz deals with the origins, the role of consciousness and of qualitative mental states is up to date. He gives us also a way to deal with the knowledge argument, quite forty years the argument were worked out. Notwithstanding Lorenz was not a reductionist, it is possible for a reductionist using his perspective to take away from the knowledge argument its anti-reductionist value, so that to defend the identity theory.

Keywords: *Lorenz, philosophy of mind, mind-body problem, knowledge argument, reductionism, emergentism, identity theory, qualia, consciousness.*

1. *Forerunning pages*

In this paper I wish to call the reader's attention upon some pages Lorenz wrote in the Forties of the last century, well before contemporary philosophy of mind was born. Nevertheless, I think that these pages are extremely interesting for the contemporary philosopher of mind. With few exceptions, contemporary philosophers of mind neither quote Lorenz's ideas nor even name him. In particular, I shall illustrate pages that – as far as I know – have never been quoted in the philosophical literature on the mind. Moreover, it is hard that ethologists and biologists, given their training and interests, might have an adequate awareness of the contribution that Lorenz can give to the contemporary debate on the mind. In any case, be philosophers or scientists, scholars might be surprised to discover that Lorenz dealt with so many central issues that are still at the core of the current discussion on the mind.

I have been dealing with the mind-body problem for some years.¹ Recently I met with the so-called *Russian Manuscript* by Lorenz and I

¹ Cfr. Salucci 1996. More precisely, about the subjects I shall deal with below, cf. Salucci 2000, 2002, 2003 and 2004.

have found a chapter of it, *The Mind-Body Problem*, very impressive. This work appears to me to be extremely relevant to the current debate. I hope some readers will be tempted to study the original text and I am sure they will find in it more suggestions than I have been able to find.

In this note I confine my analysis to the chapter nine, *The Mind-Body Problem*, contained in *The Russian Manuscript*. Although the ideas Lorenz deals with in those pages are discussed in other of his publications too,² I am interested both in stressing the early time Lorenz proposed them and in the particular way those pages deal with the mind-body problem. In *The Russian Manuscript* I find a way to handle the so called knowledge argument, as we shall see below. Lorenz's pages I am concerned with, are not only tremendously rich in suggestions – maybe for the present-day philosophers of mind much more than Lorenz's contemporary ones – but literally astonishing. It is not exaggerate to claim that quite all it counts in philosophy of mind current debate is present in Lorenz's pages. To appreciate it, compare what I shall below explain about Lorenz with the clear synopsis G. Güzeldere gave of the issues of contemporary philosophy of mind. According to Güzeldere, philosophy of mind, particularly the studies on consciousness, has to deal with:

four *W* questions and [a] further-*How* question [...]:

[1] *What* are the media and mechanisms of consciousness? Can consciousness occur in any type of material substance [...]?

[2] *Where* is, if anywhere, the locus of consciousness? Can consciousness be localized in a specific organ, the brain (or a module in the brain) [...]?

[3] *Who* can be said to be a conscious being? [...] Is a chimp, a spider, a protozoan, or a robot conscious or *nonconscious*?

[4] *Why* is there consciousness at all, and what is the role it plays in the general scheme of mental life and behavior of an organism? To put it in evolutionary terms, *which* function does consciousness serve such that it was selected as a trait in the phylogeny of certain classes of living things?

[5] *How* does consciousness arise in, or emerge from, its underlying substance, structure, and mechanism, in the way it does? (Güzeldere 1999, p. 31).

The themes and problems debated by Lorenz are so numerous that it is impossible to provide here an adequate commentary; thus I shall discuss briefly only the fundamental topics. First of all I shall present a short review of the subjects Lorenz deals with and show how they can be related to certain issues in the present debate. Then I shall consider more

² In particular some of the issues I shall concern with are also available in Lorenz 1959, 1963 and especially 1973, overall cpt. VII. Relevant sources also in 1965 and 1970/1971.

extensively two issues debated by contemporary philosophers of mind. I think Lorenz had some fruitful and original ideas on such subjects. These ideas are even more appreciable if we consider the circumstances in which Lorenz elaborated them. It is known that he wrote *The Natural Science of the Human Species* while he was a prisoner of war in the USSR from 1944 to 1948.³ Although the work has been unpublished until 1992, it is not his last. On the contrary, as the editor notices in the preface to the book, it is the first. In fact, Lorenz used the manuscript as a source for other writings, lectures and lessons. At the beginning of the Sixties the manuscript was lost and it was recovered only in 1990, a year after Lorenz's death. Finally, in 1992, the manuscript was edited by Lorenz's daughter, Agnes von Cranach, published as Lorenz 1992. An English translation followed as Lorenz 1996.⁴

2. *Reductionism?*

To begin, it is necessary to state the general point of view from which Lorenz considers the mind-body problem. Such a position is well identifiable among those that are endorsed in contemporary philosophy of mind: it is a naturalistic position, aiming to a naturalisation of mental events. In the following I use terms such as «physicalism», «reductionism» and derivatives for I defend a reductionistic stance as regards to the mind-body problem. However it is highly questionable Lorenz maintained such a position too. On the contrary, scholars hold Lorenz maintained a form of emergentism. I do not mean challenge this point of view about Lorenz's thought. I shall not claim Lorenz's position is physicalistic or reductionistic. So I shall use the term «physicalism» referring to my own standpoint, not to Lorenz's one. I wish to stress I use some Lorenz's notion or argument to defend physicalism notwithstanding Lorenz had not been physicalist. No wonder if somebody handles your ideas just against you.

In summary I use Lorenz's suggestions to defend a reductionistic stance, that is not tantamount attributing to Lorenz a reductionistic stance. That is all, it is all I need to claim reductionism: it is not necessary to look upon Lorenz as a reductionist.

That said, it should be noted that if it is very hard to claim Lorenz was a physicalist, it is also very hard to claim some passages of him are not physicalistic. I refer to passages in which Lorenz affirms mental states are *identical* to brain states: this is exactly what «physicalism» means in

³ It is not the only case of «reproduction in captivity» for philosophy. Without going back to Boetius, I remember Wittgenstein's *Tractatus*, Russell's *Principia Mathematica* and Gramsci's *Quaderni dal carcere*.

⁴ Quotes and page references refer to the English translation (Lorenz 1996).

contemporary philosophy of mind. Such passages are available in *Russian Manuscript* and I shall quote them below (meanwhile cf., e.g., Lorenz 1996, p. 167: «We can just grasp the real *identity* of subjective-experiential and objective-neurophysiological processes», or, *ibidem*, p. 168: «the processes underlying this experience are, in their extrasubjective reality, *identical* with the fundamentally quantifiable, causally analyzable processes»). To be sure, those passages do not suffice to think Lorenz as a physicalist. However, they are available to a physicalistic handling. Here is my point.

So far I talked about Lorenz as a not-physicalist presenting some good suggestions for physicalist, and, really, this is the standpoint I adopt in this paper. But, even if incidentally, it has to be noted there are two other possible theoretical stances. First, Lorenz's antireductionism could be viewed less firm than it seems; second, we could question just the emergentism itself. As regards the latter, at least the following it must be said. Usually the emergence (or as Lorenz prefers to call it, the *fulguration*) of a new property appears when already existing elements work together so that the whole controls the functioning of its parts. When such an integral system is formed it gets some totally new property that is not reducible to the properties of the parts.

The discussion of such issues would lead us to a very different aim than I pursue in this paper. However I wish to notice that contemporary discussion on emergentism shows it is still in doubt if there are genuine cases of emergent properties. No case of really not controversial emergent property has been found. Moreover, emergentism must face serious difficulties as regards to causal overdetermination and causal exclusion in mental causation (cf. Kim 1998). But, considered the present paper aims, what we must be interested in it is that emergentism not necessarily implies the emergent properties are over and above the natural ones. A multilayered physical world is still a physical world, whatever is the level we examine. So I do not understand why a theory conveying such a view cannot be tagged as «physicalism». Anyway I shall use the term «naturalism», besides «reductionism», in order to avoid discussions I am not dealing with in the present paper.

Nowadays the project of naturalising the mind is increasingly widespread among philosophers and scientists. The *milieu culturel* in the Forties was very different; notwithstanding Lorenz's perspective was clearly naturalistic (however without being behaviourist, as we shall see below).

It was necessary to present here with considerable precision the theoretical position of inductive science with respect to the mind-body problem because it is of great significance for the conceptual and practical methods of comparative behavioral research (Lorenz 1996, p. 174).

As it is well known, such a view never has been in the past nor is today the unique point of view about the mind-body problem: dualism and functionalism are only two among the many other main options. On the other hand, naturalism itself has assumed several forms. Stated the theories of mind complicated landscape, let us settle even more precisely Lorenz's position. His naturalism is *not* of a behaviourist kind. This fact is remarkable if we consider when Lorenz wrote the work at issue: the early hostilities against behaviourism were opened only at the end of the Fifties.⁵ The natural science of human beings, Lorenz writes, cannot avoid to make use of *introspection* to know *inner experiences*. On the contrary, behaviourism, as it is well known, denied both of them.

It would constitute a virtually unpardonable refusal of knowledge if this discipline were to close its eyes to the fact that human beings possess a *mind*, therefore simply excluding introspection, the entire reality of the colorful world of experienced qualities, as a source of information (Lorenz 1996, p. 174).

3. *Six remarkable points*

Some elements in Lorenz's theory are consistent with the so-called identity theory. The identity theory posits, against behaviourism, inner mental states and introspection but, against dualism, identify them with brain states.⁶ Contrary to behaviourism, the identity theory is still today a chief character in philosophy of mind. Lorenz clearly states an identity thesis between mental and brain states in the following passage:

We may never forget that the cross-connection between a physiological process and experience *are not causal connections*. It is, for example, just as nonsensical and epistemologically misleading to state that the emotion of rage is the cause of disinhibition of fighting responses as it is to claim the opposite. One aspect cannot be the *cause* of the other for the simple reason that it represents *the same thing*. That happens to be registered from another direction, with a different receptor organ (Lorenz 1996, p. 171).⁷

So far we have considered Lorenz's general perspective. Now we have to consider the details of his position. I shall illustrate four of them

⁵ Cf. Chomsky 1959 and, as regards to philosophy of mind, Place 1956 and Smart 1959.

⁶ The mind-body identity theory was proposed early by Place 1956, Smart 1959 and worked out by Armstrong 1968.

⁷ Cf. the quoted passage with Place's one: «What is it, therefore, that leads us to say that two sets of observations are observations of the same events? It cannot be merely the fact that the two sets of observations are systematically correlated [...]. There are innumerable cases of [...] correlations where we have no temptations to say that the two

chosen among those seems to me the most important, and I shall summarise them in a schematic form (however they are, as I already said, susceptible of a wide commentary). Then, I shall examine two other subjects in a little deeper way. Note Lorenz had some well definite points of view about each subject. His ideas are always – *ante litteram* – according to or in contrast with the contemporary theory of mind claims.

(I) Lorenz begins his treatment of the mind-body problem stressing the historical and cultural sources of dualism and of the notion of soul.

The concept of the *mind* is an age-old inheritance of ancient and oriental philosophy. From a tender age, everything to do with the problem of body and mind or soul as been influenced by every word of our parents and teachers, by the entire authority of the Christian religion and idealistic philosophy, by every book written by our great poets, and even by the expressions of idiomatic speech. As a result the conviction as been hammered into us that the mind is something that exists in its own right and is independent of the body. In addition to this any contemplation of the mind must necessarily be an introspective contemplation of one's *own* mind. And this very mind the presence of an individual ego, is the *most certain* of all things. Indeed, it is the only thing that is beyond any doubt (Lorenz 1996, p. 157).

Considered the state of the contemporary debate, stressing the historical and cultural sources of notions we have provide to physicalist with a reply against the antiphysicalist arguments founded on the conceivability of brain states without mental states. The last form of such an argument (however it can be dated since Kripke 1971) was proposed by Chalmers 1996. He begins by defining the notion of *zombies*: they are beings physically and behaviourally identical to ordinary human beings, notwithstanding zombies lack mental states. Obviously, and Chalmers admits it too, zombies do not exist and cannot exist, but they are conceivable. It is their conceivability, Chalmers continues, that suffices to argue against physicalism (therefore against the identity theory too): if some being physically identical to us (i. e. a owner of brain identical to

sets of observations are observations of the same event [...] We speak rather of causal connection between two independent events or processes» (Place 1956, p. 48). Also Smart wrote: «that [sensations] should be *correlated* with brain processes does not help, for to say that they are *correlated* is to say that they are something «over and above». You cannot correlate something with itself» (Smart 1959, p. 53). In Lorenz 1996 are available other passages a reductionist can use, e.g.: «But the existence of a «mind» independent of any bodily processes (particularly nervous activity) can be seen to be particularly improbable from observations of cases in which the mind suffers persistent and incurable modification because of purely bodily effects, flowing damage to the central nervous system» (Lorenz 1996, p. 156).

ours) but without mental states is conceivable, then mental states are not brain states.

Clearly Chalmers' argument is based on the fact we can imagine brain states not joined with mental states. I concede that this is imaginable. Yet, what we can imagine is strongly determined and constrained by knowledge and beliefs we have in a given time and place. For instance, after Faraday's discoveries, we cannot think about the notion of metal without thinking about electrical conductivity. Similarly, because of the future developments of neuroscience, the idea of brain states without mental states could become inconceivable.

(II) Since Chalmers' zombies are physically identical to human beings, we are legitimate to wonder if human beings we meet in ordinary life are really human beings or, rather, zombies. The question we have to deal with here is known as the *other minds* problem and it is very old (cf. Güzeldere point 3). We can find a formulation of it in Descartes' *Second Metaphysical Meditation* where he wonders if the men he sees walking in the street are automata. A contemporary form of the other minds problem is the so-called *absent qualia*⁸ problem. It is a particularly serious problem for the functional and computational approach to the mind (therefore for the cognitivist psychology). These theories define mental states as functional states. For instance, fear can be defined functionally by means of conditions stating the relations between a definite set of inputs (seeing a lion), inner states (believing the lion will eat me) and outputs (running away). Given such a definition of fear, it is suitable both for organisms actually feeling fear and for zombies. Therefore, functional definitions of mental states are not able to grasp the quality of mental states. Nevertheless, since *feeling* fear is essential for fear, then the functional analysis must be wrong.⁹

The absent qualia problem afflicts not only the functionalist theory but the identity theory as well. How can we know if beings physically – besides functionally – identical to us have a mind? From the mere fact they have got a brain does not logically follow they have got mental states too. Nor it is possible to use some sort of «observation», since mental states are in principle private, i.e. observable only by their owners. So

⁸ Philosophers of mind make a wide use of the term *qualia* (sing.: *quale*). It means the qualitative feature of a sensation or a perception, e.g. the «painness» of a pain.

⁹ Besides the absent qualia problem there is the *inverted qualia* problem too. In this case an organism A, e. g., sees red what an other organism B sees green. It is impossible for A (or B) to check if B (or A) sees colours according to an inverted spectrum. Early the problem was posed by J. Locke in his *Essay*. About these issues in contemporary philosophy of mind cf. Block 1978.

stated, the entire problem appears to be a sceptical challenge: it seems there is no way to justify our spontaneous belief the others have minds. If we think about the issue with a speculative stance we are in impasse. Nevertheless, handling such problem from a natural point of view is far more constructive. Again, this is available in Lorenz's position:

The old idea that we can only experience the minds of fellow human beings by drawing analogies is *fundamentally wrong*, as was Helmholtz's belief that depth perception depends upon rational «conclusions!» Our shared experience of pain, joy, another experiences of our fellow human beings is *not* based on conclusions draw from our own spiritual life. Instead our sharing of experience and emotion is quite definitely based on innate forms of experience which are a priori in Kant's sense in just the same way as our experience of space, time, and causality (Lorenz 1996, p. 159).

(III) Strictly jointed to the point II, there is the problem concerning what are the right materials to support mental phenomena (cf. Güzeldere point 1). Nowadays the problem assumes often the form of the sentence: «can computers think?» Obviously, Lorenz doesn't wonder about the computers but pose himself a very similar question about animals' mental states (cf. Güzeldere point 3). As in the case of other human minds, observing animal mental states is impossible. However Lorenz shows a way to address the problem: it consists in studying the level of complexity of animals' nervous system. Greater its complexity, greater the probability it has mental states. Clearly the criterion to establish such a complexity is the closeness to human nervous system. Anyway, it is crucial that such a system has to be able to have *Gestalt perception* of itself and of the environment (Lorenz 1996, p. 165).¹⁰ To assume the principle stated by David Hume, according to which «the same causes, the same effects», it is consistent with natural science stance – even if not always in the philosophical-sceptical one. Therefore, notwithstanding the philosophers' scepticism, it is inductively reasonable assuming brain states (sufficiently complex) be jointed with mental states.

(IV) The functional definitions of mental states are independent from any physical, biological and environmental feature. Therefore, organisms are made orphan of such features. This is, from a naturalistic standpoint, unacceptable. Implicitly, functionalism has claimed justifying a universal psychology, a same psychology available for every organism. More, functionalism has charged reductive physicalism with anthropocentrism: if mental states would be brain states, then only human being would

¹⁰ About the crucial notion of *Gestalt perception*, see below.

have mental states; and what about of animals, computers, robots and aliens? However, many reasons – the difficulties functionalism must face (e.g. the absent qualia one), the widespread awareness of the classical computational theory inadequacy,¹¹ the advances of neuroscience – have emphasise that an adequate theory of mind has to assume organisms' specificity. That is physical, biological, behavioural, environmental and so on, specificity. The necessity of a naturalising and, broadly speaking, biological perspective concerning mental phenomena obviously follows from that. As much it follows that – against the functionalistic claim of a universal psychology – kinds of experiences and mental states are «highly species-specific» (Lorenz 1996, p. 160).¹² Thus, the kind of psychology *we* can develop is unavoidably human-based. Only the awareness of the unavoidable human feature of such psychology can prevent us from assigning human features to animals (Lorenz 1996, p. 161).

As I have said above, the issues I am overall interested in and on which I wish the reader pay attention are other two, i.e. those concerning:

(V) the origin and the role of qualitative mental states (qualia and consciousness) and

(VI) the explicative gap between mental and physical.

4. *Qualia and the explicative gap*

As regards point V, the question arises while Lorenz is identifying the *biological* role some mental states have. Stated that the unpleasant or pleasant qualitative features possessed by certain experiences have the role to promote or to inhibit behaviours, Lorenz tries to explain just because such experiences have the qualitative features they have (Lorenz 1996, pp. 165-166). It is notable that Lorenz poses such a question, since the mere fact an experience be – from the natural selection standpoint – advantageous or disadvantageous does not imply it be *felt* pleasant or unpleasant. As we have already seen above, some influential contemporary theories of mind entail that organisms to which we ordinarily assign mental states could live without mental states as well. It is easy to see the question at issue is nothing less than: «why does consciousness exist?». From a biological perspective the question becomes: «which are the evolutionary benefits, if any, resulting from have got a consciousness?» (cf. Güzeldere point 4).

¹¹ I mean the inadequacy in accounting for human thinking and perceiving. Functionalism and cognitivism are based on the classical model of artificial intelligence, the von Neumann's one (the GOFAI, i.e. Good Old Fashion Artificial Intelligence) as opposed to more recent connectionism.

¹² About «species-specific» in philosophy of mind cf. Lewis 1980 and Kim 1993.

According to Lorenz, organisms able to feel some physiological events happening into them as pleasant or unpleasant must possess a very complex and highly structured central nervous system. Such a system must be able to simplify a multitude of physiological events and to mark the results by a quality (cf. Güzeldere point 5).

When it is examined quite precisely the experience of pleasure and aversion is *not directly* subjective side of purpose-serving behaviour patterns and receptor processes. Instead, experience is the subjective side of a *mediating agency* that *governs* these purpose-serving processes. The objective function of this mediating agency is to label these processes with a plus or a minus, so that they acquire a positive or a negative value. This mediating agency has a very close relationship to the functions of *Gestalt perception!* [...] Because a Gestalt is an unmistakable complex quality consisting of a great number of individual sensory data that combine together to generate that quality, the mediating agency for experience has the possibility of labelling an entire large *complex* of processes with a big plus or minus sign according to its success or failure and according to its favourable or adverse contribution to survival. In fact, it is precisely this function that represents *the actual survival value of experience*. Volkelt has encapsulated this in his statement that experience is «the most important mediating agency in nature, as it is the agency that permits the organism to connect a single conclusion with a multitude of conditions» (Lorenz 1996, p. 165).

Lorenz uses the notions of *Gestalt perception* (i.e. holistic or total perception), *integrating function* and *general quality* to explain the origin and the role of *qualia*:

Now the nervous system of a higher animal, particularly that of a human being, is the most advanced and most complex of all organic entities that we know. It consists of a virtually infinite hierarchy of successively subordinate levels, each of which incorporates a large number of adjacent, lower components within its orbit of influence. *Every one of these* levels receives more causal links from below than it transmits to the next higher level. It is precisely this fact that accounts for the *integrating function* of the central nervous system. [...] The entire *integrating function* [...] *is only possible because the tails are excluded at every level that is passed.* [...] The knowledge of any higher state authority has this kind of relationship to the millions of individual processes that represent «elements» within its sphere of influence. The quality of *experience* is related in just the same way to the multitude of elementary physiological processes that are represented in an integrated form in the individual messages that are transmitted upward from subordinate levels. The experiencing subject registers no more than a *general quality*. (Lorenz 1996, p. 172).¹³

¹³ A similar notion of hierarchical instances is available in today homuncular functionalism, cf. Dennett 1978.

To improve their performances and to have best chances of survival, organisms need a simplified scanning of what it happens into themselves and in their environment. The (biological) necessity of a general and simplified perception of the really complex physical and physiological events is the origin and the essence of qualia and consciousness. Such an idea about the, as it were, «economical» feature of perception is available in some other contemporary author too.¹⁴ It seems to be the only satisfactory answer to the question «why does consciousness exist?». In fact, claiming, e.g., consciousness exists to the sake of we can evaluate, design, anticipate behaviours and so on, is unsatisfactory. Animals and computers can do without conscious evaluation what we, on contrary, perform by a previous conscious evaluation. That can happens, e.g., to animals escaping from a harmful situation or to computers controlling the flight of a plane.

Once it is stated that some mental/brain processes appear to us with a qualitative feature, and it is explained why this is the case, there is another problem in philosophy of mind that we have to deal with. That is the point VI regarding the explicative gap.¹⁵ The gap has its source in the fact that, as once Freud said, our consciousness gives us only qualities while natural science admits only quantities.¹⁶ As the other ones, such a question is very old. Without going back to Democritus, we can find it in Locke's and Galilei's distinction between primary and secondary qualities. Sir Arthur Eddington has formulated the problem in a way became a classical and often quoted way:¹⁷

I have settled down to the task of writing these lectures and have drawn up my two chairs to my two tables. Two tables! Yes [...] One of them has been familiar to me from earliest years. [...] It has extension; it is comparatively permanent; it is coloured; above all it is substantial. [...] Table no. 2 is my scientific table. [...] It does not belong to the world [...] which spontaneously appears around me when I open my eyes [...]. My scientific table is mostly emptiness.

¹⁴ «[...] purposive mental activity [does not] demand a highly self-conscious introspective scrutiny. Something far less may be, and normally is, all that is required. But without information of some sort about the current state of the mind, purposive trains of mental activity would be impossible» (Armstrong 1968, p. 327). Lyons 1986 (cpt. VIII, 4) notices to be directly conscious of what happens in the brain should be as useful as should be, for a watch, to know information about the spring moving it. If we had a direct access to our brain states we would know more about our brain states, but nothing about our mental life.

¹⁵ Early the term *gap* in philosophy of mind was used by Levine 1983.

¹⁶ Cf. Freud 1895, cpt. 1, par. 7.

¹⁷ More recently Sellars 1991 has opposed the *scientific image* of the world against the *common sense* one.

Sparsely scattered in that emptiness are numerous electric charges rushing about with great speed; but their combined bulk amounts to less than a billionth of the bulk of the table itself (Eddington 1929, p. 9).

Now, Lorenz is aware of the problem, as we can see, e.g., in the following passage:

With all that has been said so far, it has been assumed as virtually self-evident that all processes of subjective experience are *simultaneously* genuine life processes and hence physical, material processes. We of course *know* very well that psychological and physiological phenomena are simply *two different phenomenal forms in which the same intrinsic reality is reflected in our world-image apparatus*. Nevertheless, despite this knowledge, the mental/physical duality of all neurophysiological processes that are accompanied by experience remains the greatest of all puzzles to confront a human mind (Lorenz 1996, p. 167).

Indeed Lorenz, in a quite consistent way with what he claimed about the origin of qualia, works out some notes on the *difference* between having a given *experience* and having a theoretical *knowledge* about the physiological processes implied in having such a given experience. Such difference, as it is well known by the philosophers of mind, is crucial for the contemporary debate about the mind-body problem. Much of the discussion between physicalists and antiphysicalists concerns this issue. Lorenz's notes, I think, can be used to work out a decisive contribution to the whole debate.

The contemporary discussion in philosophy of mind has in a great extent to deal with the so-called *knowledge argument*. F. Jackson gave a classical formulation of the argument in 1982 (cf. Jackson 1982).¹⁸ Let us imagine Mary, a neuroscientist living in the future, who knows everything about colours and the physic-psychological side of vision and perception (the future neuroscience is imagined to have explained *all* the neurophysiological phenomena). Mary was born, raised and educated in a black and white room. She is, in fact, the victim of an experiment aiming to discover if mental states are or not brain states. One day Mary is released and she sees a coloured world. The first time Mary sees the colours she learns something she did not know before, notwithstanding she knew everything about the neurophysiological processes implied in colours perception. Thus, Jackson concludes, perceptions are not reducible to physical phenomena and reductionism is wrong. To defend physicalism from such an argument, some people (e.g. Churchland 1985) have replied that Mary knows in two different ways a coloured object. Therefore, there are not two different objects – one of which is physical and the

¹⁸ Nagel 1974 advanced early the knowledge argument yet in a different form.

other mental. In other words, the reply claims that all the knowledge argument shows is having a theoretical knowledge about a phenomenon is not having an experience of it too; and conversely, having an experience of a phenomenon is not having a theoretical knowledge of it too.

Now, such a rebuttal (a widely spread reply) of the knowledge argument is, to my view, available in Lorenz too; so thirty years before knowledge argument and pertinent objections were worked out. Let us consider the following passage.

It would amount to a complete misunderstanding of the holistic character of the constitutive *integrating function* of the nervous system if one were to expect to find in experience all of the individual elements that can in principle be dissected out on the physiological side of a given phenomenon. In other words, experience only emerges at a specific relatively high category of levels, namely at those which generate the connections between conditioned positive and negative taxes and remembered Gestalt qualities. We have to come to terms with the fact that experienced qualities are the products of integration processes which themselves lack an experiential side, like the function of the pyloric reflex [...] To our introspection and experiential quality is something which simply *preexists* and is *fundamentally invisible* on the physiological plane. Any attempt to identify «elements» within it is doomed to failure from the outset (Lorenz 1996, p. 173).

Similar ideas are also available some page above the just quoted one.

We can just grasp the real *identity* of subjective-experiential and objective-neurophysiological processes by bearing in mind the fact that we possess *two* forms of a priori intuition that are qualitatively completely different, two separate receptor systems for the *same* real datum. Each of these two forms of intuition can encompass only *one* aspect of an organic entity possessing subjective experience and our mental processes lack any possibility for constructing a bridge between them. This is true even of the thought experiment that was introduced at the beginning of this section as a utopian ideal case. In that case, we would have been able analyze a physiological phenomenon down to its ultimate causal connections at the atomic level and hence achieve complete predictability of its subsequent course. Yet this full insight into the material side of the process would not have brought us one iota closer to an understanding of the question concerning the *relationship* between it and the psychological phenomena occurring in parallel. Nor would it have told us why a particular neurophysiological process is accompanied by one particular experiential process and no other. Conversely, insight into the chain of *psychological* causes, however complete, would yield just as little information as to why they are the experiential accompaniment of these particular neurophysiological processes and of no others. *The thing is in itself a unitary whole*, namely, the holistic Gestalt of a higher organism with subjective experience. But our *thought processes* can only approach this unity from two incommensurable sides. These are two sides for which there exist *receptor organs* or – to use Kant's terminology – a priori sche-

mata in the form of innate forms of possible experience. It is just as if we were able to both see and smell a particular thing but were unable to link these two kinds of perception to that object in an informative fashion. There is, in fact, no conceivable bridge *between* the two a priori forms of intuition for the subjective contemplation of an organic entity equipped with subjective experience (Lorenz 1996, p. 167).

And finally:

[the] colorful world of experienced *qualities* remains *fundamentally* inaccessible to quantitative causal analysis, despite the fact that the processes underlying this experience are, in their extrasubjective reality, identical with the fundamentally quantifiable, causally analyzable processes. The causal quantitative side of the phenomenon is equally inaccessible to the experiential aspect. (Lorenz 1996, p. 168).

To summarise, Lorenz is maintaining:

- (a) we cannot obtain access to physical states by qualitative experiences notwithstanding these are identical with physical states;
- (b) introspection processes in which qualitative experiences originate, are as much inaccessible as qualitative experiences themselves;
- (c) introspection deals only with qualitative knowledge;
- (d) knowing physiological processes is different from having an experience, the first being a theoretical knowledge;
- (e) we cannot establish direct relations between theoretical knowing and experiencing (i.e. we cannot have experience of such relations).

In other words:

- (f) having a qualitative experience is having some given physiological processes, but experiencing a quality is not experiencing physiological processes. On the other hand, theoretically knowing the physiological processes is not experiencing the corresponding quality.

Clearly, from all that it follows that Lorenz could have endorsed the reply to the knowledge argument according to which the existence of two ways to «knowing» (exactly theoretical knowing and experiencing) does not entail the existence of two things.

The *lacking* of a faculty, or a «organ» (cf. Güzeldere point 2) – as Lorenz calls it, consistently with his naturalising approach to the mind-body problem – by which we could directly have access to brain states, explains because it is possible working out arguments like the knowledge argument. *The argument is just founded on that lacking*; it is based on the fact we can obtain only a theoretical knowledge concerning brain states (and, therefore, also concerning the possibility of reducing mental states to brain states) and not also a subjective experience of them. Assumed as hypothesis the lacking of an organ scanning brain states *qua* brain states

– that is an organ which present to us brain states in their quantitative side – it becomes clear because we cannot work out quantitative descriptions of qualitative states. In addition, it is just the same hypothesis that takes away the antireductionist value from the knowledge argument. The argument requires we have subjective experience about the fact the mental states are brain states. In order to see that, let us consider the argument can be resisted only under at least one of the two following conditions: (i) if knowing the objective description of physiological aspects of a given perception implied *having* the (described) perception too; (ii) if having a perception – i.e. feeling its qualitative content – implied also having the objective description (i.e. the theoretical knowledge) of its physiological aspects. It is very easy to see it is no way to satisfy these conditions. If it were possible to satisfy the condition (i), then it should happen that, e.g., reading a recipe for a certain food it should convey its taste. On the other hand, if it were possible to satisfy the condition (ii), then it should happen that, e.g., seeing a colour, should be also knowing what the pertinent neural wires are functioning.

The fact that it is impossible to experience brain states is a natural fact – following from the lacking of a right organ – and it is not, as the knowledge argument claim (or ought claim), something wrong in physicalistic theories. Such theories have the task to give us some reasons for a *theoretical identification* between mental states and brain states, they have not the task to let us *perceive* such identification.

According to Lorenz' suggestions concerning qualia origins (cf. point V) and differences between theoretical knowing and experiencing, I think we can also claim the qualitative side of experiences is quite the same fact we perceive mental states instead of brain states. As we have seen, I think Lorenz suggest an explication of such a fact: holistic perception (*Gestalt perception*) and integrating function producing general qualities simplify the perceptive processes thus maximising organisms' performances. Moreover, it can be added if we perceived brain states as such, then we, trivially, should perceive just internal brain states instead of states of the external world. It is clear that an organism has more chances of survival if it perceives states of the environment than it perceived its own inner states. Be that right or wrong, in any case a naturalistic standpoint must explain by biological reasons the fact the mental states appear to own owners in a radical different way from brain states. Evolution has privileged (at less in some species, including human one) qualitative perception, thus favouring the development of conscious beings rather than zombies. Maybe things are so because of the advantage of perceiving environmental states over perceiving brain states. That should mean that perceiving brain states should be far more complex than perceiving world states. This is the reason why we cannot access to

brain states (and also this is the reason of a great part of the current debate in philosophy of mind).

Finally let us notice that the lacking of an organ by which we can have access to brain states entails also the impossibility to «bridge» (cf. above: Lorenz's quotation from p. 167) theoretical knowing and experiencing. I think such an impossibility entail the psychophysical identity is justifiable only by checking correlation or correspondences (Lorenz 1996, p. 171) between the mental and the brain states series. Yet this modality of checking psychophysical identity is quite inadequate according to Place and Smart's classical identity theory.¹⁹ Mere correspondences are consistent with dualism too. But, once the impossibility to bridge mental and brain states is stated, I think that checking correspondences is the only way to support identity theory.

In the identification and demonstration of such definite correspondences between physical and psychological manifestations of the same organic phenomenon, we can see the most promising method for approaching the mind-body problem through inductive research (Lorenz 1996, p. 171).

5. *Bypassing the gap*

In some passages Lorenz – some among these passages are already quoted above – advances hypothesis the mind-body research could face an insurmountable boundary. It should be quite obvious, in fact, to draw from the «lack [of] any possibility for constructing a bridge between» (Lorenz 1996, p. 167) knowing and experiencing brain/mental phenomena a sceptical stance about the chances to solve the mind-body problem. According to some philosophers of mind, the mind-body problem is just destined to remain unsolved. Thus the explicative gap could not be filled:

We have been trying for a long time to solve the mind-body problem. It has stubbornly resisted our best efforts. The mystery persists. I think the time has come to admit candidly that we cannot resolve the mystery (McGinn 1989, p. 349).

Yet, if the gap question is faced by considering the perspective offered by Lorenz, then it would not be a mystery. The gap might result not from a *tout-court* explicative gap but from the difference between two ways of knowing, the theoretical and the experiential one. According to Lorenz, «mind» and «body» are incommensurable when we consider the ways we know them. However, this is not the case when we consider their ontological features.

¹⁹ Cf. above note 7.

Although we *lack* any kind of *receptor organ* for the relationship between the neurophysiological and psychological sides of one given process, we are in no doubt about the real existence of such a relationship. There is no doubt about the fundamental extrasubjective identity of the thing that can only be grasped by the two unconnected receptors of our world-image apparatus as a phenomenon, or more precisely as two different, incommensurable phenomena. (Lorenz 1996, p. 168).²⁰

The difference between knowing and experiencing is not a reason to cast doubt about the chances to solve the mind-body problem.

Over the course of recent decades, the natural sciences have become increasingly more careful about pronouncing a definitive, dogmatic «*ignorabimus*». They have learned from Max Planck's revolutionary findings that the limitations of human a priori forms of thought and intuition do not always represent the boundaries of inductive scientific research (Lorenz 1996, p. 174).

Our perceptive boundaries do not coincide with our theoretical boundaries. If perceiving mental states *qua* brain states is a feature of our perceptive apparatus, then the challenge reductionism must face is to bypass the perceptive boundaries in order to aim to a theoretical explication of psychophysical identity. The challenge is not won before fighting; however it is neither lost: as the number of scientific theories (from relativity to quantum mechanics) overcoming our perceptive boundaries shows.

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²⁰ Cf. also p. 175, note: «Like a cross-eyed person, we therefore see the inseparable unity of the organic entity as a *double* image. We see mind and body, while in extrasubjective reality there is, in fact, just a single thing existing on in its own right».

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