

On Spirit as a Part of Nature

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1.

The theme of my paper is the relationship between nature and spirit – the term “spirit” being taken as an equivalent of the German term “Geist.” To speak about “spirit” instead of “mind” has the advantage, that with Hegel we can distinguish between “objective” and “subjective” spirit and thereby connect two different problematics with each other: first of all, the problematic already discussed by Kant as an “antinomy” of determinism vs. freedom, and secondly, the problematic of the relationship between the natural sciences and the cultural sciences (“Geisteswissenschaften”). The German term “Geisteswissenschaften” carries the suggestion that the manifestations of “Geist,” that is of “objective spirit,” are the objects of these sciences, in contrast to nature as the object of the natural sciences. “Geist” in the sense of objective spirit signifies something specific to the human world: history, literature, art, the plurality of languages and cultures and even the natural sciences as a part of the human world. All these manifestations of objective spirit are constitutive of a sphere of empirical reality that requires methods of research which are characteristically different from those of the natural sciences. This is because the cultural scientists are related to their field of research in a way that is different from the way the natural scientists are related to theirs. The cultural scientist is not only – as the natural scientist also is – part of his field of research, but she is part of it as a *participant* in the very normatively structured cultural field which is the object of her study; she is related to it as a speaker and actor as well as an interpreter of historical and cultural phenomena, of literature and art.

Let me illustrate the difference between the two different spheres of reality which are the object of the natural and the cultural sciences respectively by way of an example. A painting, as for instance Picasso’s famous painting *Guernica*, is, in a way, part of both these different spheres of reality. As a work of art it is an object of aesthetic experience and, as such, it is an object of a critical discourse on art. Works of art are also the objects of a form of scientific study (“Kunstwissenschaft”), which may explore the painting with respect to its relationships to other works of art, to the occasions of its being created, or the way it has been influenced by other paintings or its place in the work of Picasso, etc. This is not to mention biographical, sociological or psychoanalytical studies which in one way or another may shed light on the origin or the content of this painting. However, the same painting is also a material object which may become the object of study from a natural scientific point of view. Already when it is weighed or its spacial dimensions are measured – which may be important for transporting it from one place to another – it is taken as a mere material object. It could also become the object of a radiological research, which may be important for determining the date of its creation or its authenticity. In one sense of the word, it is the same object in both cases, whether taken as a painting or as a mere material object; in another sense, however, there are two entirely different objects, a work of art, on the one hand, and a material object, on the other. As a work of art, the painting belongs to the sphere of “objective spirit.” Taken as a material object, it belongs to that sphere of reality, nature, which is the object of natural science.

What this example shows is, that the two spheres of empirical reality which I have distinguished – that of objective spirit and that of nature – are as different as they are also intertwined with each other. The painting as an object of art criticism as well as of the cultural sciences could not exist without its “embodiment” in a material substratum which is a possible object of natural science. However, *as* an object of natural science it *loses* all those properties which make it a work of art; or, to put it another way, to make it an object of natural scientific research means to *ignore* all those properties which are constitutive of its being a work of art. The natural scientist does not perceive the object *as* a work of art, but only as a material object (which it *also* is). This may be taken as a first hint regarding the *intertwinement* of nature and spirit; for what I have said about the painting as a work of art is valid in a general sense: what I have called “Geist” (“objective spirit”) as the object of the cultural sciences, always has a material aspect which is accessible to an objectification by natural science. Even language, understood in the broadest sense as the “medium” of spirit, has a material aspect, whether taken as spoken or as written language, and is therefore intertwined with nature.

So far I have talked about “objective spirit” as that sphere of empirical reality which is the object of the cultural sciences. Evidently, however, this sphere of objective spirit rests on the manifestations of “subjective spirit” or “mind,” that is the human faculties of thought, action, deliberation, understanding and judgement. Now what I have said about objective spirit is also true, although in a different sense, about subjective spirit, that is about “mind” as that apparently *immaterial* sphere of thinking, wishing, feeling, deliberating or the self-consciousness of individuals. For even these manifestations of “subjective spirit” have a material substratum. Not only are they largely bound to the use of language or are mediated by such use, they are rather dependent on the material substratum of brain processes, which are, as it were, their material counterparts. The human mind is the result of a process of natural evolution, not least the evolution of the brain which alone has made possible all those manifestations of objective and subjective spirit which I have mentioned. Therefore, we can again speak of an “intertwinement” of nature and spirit.

However, as I have already indicated, for the manifestations of subjective spirit this is not true in the same sense as it is for the forms of objective spirit. While the material substratum of works of art is, as it were, open to the eye – only a change of perspective is necessary to see a work of art as merely a material object – the material substratum of the apparently immaterial manifestations of subjective spirit (mind) is *not* open to the eye. It is only because of this that philosophers could have conceived the sphere of subjective spirit as an immaterial sphere beyond nature. Kant, for instance, conceived the transcendental “I” and its synthesizing “operations” as something beyond the sphere of “appearances,” which for him, ultimately, was the sphere of scientifically objectifiable nature. And in a way he was even right in doing this, since in nature as objectified by natural science, no “I” (Ego) as a subject of empirical and moral knowledge can be found. But of course, even the “I” and the manifestations of subjective spirit are part of the *empirical* world. The secret of the transcendental “I” is, that it is not accessible to a natural scientific objectification, because it belongs to a *different* – albeit also empirical – sphere of reality than material objects and processes which are the object of natural science. It belongs to the world of subjective and objective spirit, that is to the normatively structured lifeworld of human agents. As such it is an essentially *embodied* “I,” dependent on a body as a possible object of natural scientific research and, at the same, as the natural basis of those manifestations of subjective and objective spirit which, as I have pointed out, become “invisible” from the perspective of a

strict natural science – precisely because the natural scientific objectification of the world can be characterized by a systematic blending out of all those aspects which are constitutive for the spheres of subjective and objective spirit. Actions, intentions, meanings, works of art, institutions, social conflicts or historical processes demand a vocabulary for their description which cannot have a place in a science aiming at the discovery of nomological relationships in the world of material processes. Consequently, a natural scientific investigation into the material substratum of the manifestations of subjective and objective spirit can never “integrate” the world of spirit into that of nature. Or so it appears *prima facie*.

2.

However, neuroscientists today often claim that a *reduction* of mental processes to brain processes is in principle possible. What is meant by this claim is that brain processes are not only the material substratum of mental “acts” or “events” like thoughts, feelings, memories or deliberations, but that those acts or events, seen from an “objective” point of view, *are* (identical with) brains processes, which then are conceived as being the truly (“objectively”) real *behind* the merely subjective reality of mental acts and processes. This, of course, has immediate consequences for the idea of a “freedom of the will” which, under such presupposition, must appear as being an illusion. In ordinary language we understand each other as acting and deliberating agents, who are responsible for their actions and who are “free” insofar, as they have the capacity to determine their will and their actions by reasons; agents, who are accountable to each other and whose actions are not only propelled by immediate desires or motives, but who can reflectively turn back on such desires and motives and act against them, determining their will by higher order reasons and motives as well as by moral ones. To speak of a free will means to speak of a capacity of *self*-determination by reasons, reasons which are not only expressive of immediate desires or motives, but which, on the one hand, are expressive of a longer-term, future oriented perspective, and which, on the other, reflect the demands of an intersubjective, social “space of reasons.”

Of course, it is no accident that – as neuroscientists tend to emphasize – in the domain of brain processes, neither a “self” nor a difference between “free” and “unfree” actions or decisions can be found. The object of natural science – and neuroscience *is* a natural science – is the material world as a world of nomological relationships between observable and measurable phenomena. A causal determinism is, as it were, built into the methodological approach of a natural scientific objectification of the world. As far as this causal determinism is problematized within natural science itself, for instance by the discovery of zones of indeterminacy at the level of elementary particles, *this* questioning of causal determinism is irrelevant with respect to the problem of free will. Freedom of the will has nothing to do with indeterminism; a free will is rather a *determined* will, however determined not by natural causality but by the causality of reasons. Reasons, however, are always reasons *for* somebody, and it is precisely because of this that freedom of the will can be understood as the freedom of *self*-determination. Speaking’ about self-determined actions uses a vocabulary that is not only different from the one which is used when speaking about neuronal processes, the two vocabularies are rather not translatable into each other. In the second case, we speak about causally determined neuronal processes, in the first case about phenomena – actions, intentions, deliberations and decisions – which per definition can have no place in the description of material processes. If, therefore, a neuroscientist claims that the *brain*

decides and not the human agent, he simply confounds these two vocabularies with each other: on the level of brain processes decisions cannot occur for *grammatical* reasons. The word “decision” belongs to a language game which is outside the reach of natural science – it belongs to the language game in which we are involved as speaking and acting within a normatively structured social space of reasons.

To be sure, this sort of argument does not quite do justice to the claims of the neuroscientist. For what he claims is, that there are empirical *correlations* between mental acts and events, on the one hand, and brain processes, on the other. I shall not discuss any of the experimental settings, through which such correlations have been established – empirical correlations between elementary perceptions, decisions or feelings with specific neuronal processes or patterns of neuronal “firing.” One might say that through such experiments, an explanatory connection is established between neuronal and mental processes and, therefore, a sort of *bridge* between the vocabularies of the mental and the physical. It seems obvious that only if such a bridge can be built, the project of a *reduction* of mental to neuronal phenomena and processes could be a promising one. However, everything depends on what sort of bridge this could be. What I want to argue is that it cannot be the *right* kind of bridge to support the reductionist claims of the neuroscientist.

Actually, this is what Donald Davidson has shown. To be more precise, what Davidson has shown is that in principle no *nomological* relationship between mental and neurophysiological phenomena or processes can be established because of the incompatible grammatical commitments involved in the respective vocabularies we use to describe and explain mental and physical phenomena. As Davidson says, “there can be no strict psychophysical laws because of the disparate commitments of the mental and physical scheme. It is a feature of physical reality that physical change can be explained by laws that connect it with other changes and conditions physically described. It is a feature of the mental that the attribution of mental phenomena must be responsible to the background of reasons, beliefs, and intentions of the individual. There cannot be tight connections between the realms if each is to retain allegiance to its proper source of evidence. . . We must conclude, then, that nomological slack between the mental and the physical is essential as long as we conceive of man as a rational animal.”¹ Davidson does not deny that each mental phenomenon has a neurophysiological correlate, he also does not deny that empirical correlations between mental and neurophysiological phenomena may be established; what he denies is rather, that a *nomological* relationship between the mental and the physical can be discovered. As far as we can say that mental events are *identical* with neurophysiological ones, this can only be meant in the sense of a token-token identity, which is but another expression of the fact that mental phenomena cannot be causally *reduced* to their neurophysiological correlate. The “bridge” between the two realms cannot be a nomological one because of the “disparate commitments” involved in the vocabularies used to describe and explain phenomena in the two respective “realms.” If this is true, however, every attempt to show with neurophysiological arguments that the freedom of will is an illusion, is doomed to failure because it rests on confounding two different vocabularies with each other that have a different and not mutually substitutable place in the world of human praxis. The reductionist claim of neuroscience therefore rests on a “categorical mistake.”

The question remains, of course, *how* the two vocabularies or “language games” are related to each other. What I have tried to show is that a reduction of what I have called the phenomenon of free will to causally determined physical processes is impossible in principle. There are philosophers, however, who defend the “internal” perspective of the free agent – as Tugendhat has called it – and therefore the irreducibility and non-illusionary character of

the presumption of a free will, and yet who think that this presumption is *compatible* with the assumption of an all-pervading causal determinism. Accordingly, the internal perspective of human agents, according to which they are able to determine their will by reasons – although irreducible to causally determined physical processes and not illusory – would still be compatible with a general causal determinism. It is this idea of a compatibility of free will with causal determinism, which I shall take as an occasion to look at our problem once more from a different perspective.

3.

So far I have tried to show, that the descriptive vocabulary which we use when talking about persons, their intentions, actions, reasons and decisions is not only different from, but untranslatable into the descriptive vocabulary used by neuroscientists when they describe and explain brain processes as causally determined physical processes. Instead of speaking about two different descriptive vocabularies we can also speak about two different language games, corresponding to two different perspectives from which we “look at” empirical reality. Habermas has characterized these two perspectives as the perspective of *participants* in a communicatively structured lifeworld, on the one hand, and as that of *observers* of an “objective” world, a world of objective facts and causally determined processes, on the other. Both of these perspectives are anchored in the structures of the human lifeworld as it is mediated by language. Habermas has tried to show what this means by reflecting on the role of personal pronouns in ordinary language. Via the first and second person, speakers and actors take each other *as* speakers and actors, who in a normatively structured, intersubjective space of reasons communicate with each other about something in the world, speakers and actors who demand reasons from each other for their claims and actions and who hold each other responsible for their actions. It is only on the background of this “performative” perspective through which speakers and actors relate to each other that the “third person” perspective of an observer becomes possible, one that relates to the world as the totality of objective facts.

What Habermas wants to emphasize is that natural science itself is a form of human praxis, and that therefore the observer’s role of the natural scientist is grounded in his perspective as a participant in an intersubjective project of scientific research; it is essential for scientific research that scientists communicate with each other about empirical results, about methods and theories, and that they demand reasons from each other concerning empirical and theoretical claims; and this means, that the natural scientific objectification of the world presupposes the participant’s perspective of the scientists as its condition of possibility. “The objectivity of the world,” says Habermas, “constitutes itself for an observer only in the context of an intersubjective communication about his cognitive grasp of what happens in the objective world. Only the intersubjective examination of subjective evidences makes a progressive objectification of nature possible. It is for this reason that the processes of intersubjective communication cannot themselves be conceived of as a part of the objective world, that they cannot completely be redescribed as something happening in the objective world, and therefore cannot be conceptually integrated into the objectifying perspective of the natural scientist.”² If, however, the participant’s perspective is not reducible to an observer’s perspective, Habermas concludes, freedom and determinism cannot be compatible.

Although I agree with Habermas’ conclusion, I do not quite agree with his argument. That is, I do not believe that a reflection on the role of personal pronouns can alone carry the burden of proof that Habermas thinks it can. In particular I think that the role of the third

person should not be equated with that of the natural scientific observer,³ since – as Audun Ofsti has shown – this role is an *internal* correlate of the participant's perspective itself. A change of roles from that of the participant (first and second person) to an "observer" (third person) after all takes place already when, for instance, my utterance "I promise you to come tomorrow" is "transformed" by a third person into the utterance "he has promised her to come the next day." Ofsti has correctly emphasized that this transformability of the (performative) first person's perspective into the "observer's perspective" of a third person is an essential aspect of that "language game of responsible authorship" which Habermas wants to distinguish from that of natural science.

If we take the perspective of the observer in this sense, it is basically that of a *participant* observer, for whom her roles as a possible first or second person remains constitutive of the *sort of facts* she describes as well as of her relation to them as that of somebody who is involved with others in a social space or reasons. The "observer's" perspective, taken in this sense, is the perspective of somebody who makes a claim concerning a fact belonging to that very language game of responsible authorship of which she is a participant. This language game, however, in which the perspectives of participant and observer are always already intertwined, is part of a comprehensive language game, through which a world is disclosed, which does not only contain utterances, actions, and decisions, but also institutions, books, works of art, buildings, tools, marriages, votings, parliaments, wars and revolutions – an empirical reality *sui generis*, which as a sphere of empirical facts can only be described from a participant observer's perspective, for instance that of a sociologist or historian. Here the participant's perspective is not only the *precondition* of a possible observer's perspective, as it is with the observer's perspective of the natural scientist. The participant's perspective rather remains, as it were, intrinsic to the observer's perspective, because the very field of "observation" is, in this case, only accessible from a participant's perspective. Even the objectifying perspective of the social scientist who explores causal or systemic mechanisms which are operative behind the back of the agents is still bound to the perspective of a participant of the social and historical life process. It should therefore not be confounded with the objectifying perspective of the natural scientist, which Ofsti has characterized as that of an "absolute third person," since this perspective rests on a blending out of everything which is constitutive of what makes the social and historical world what it is *as* a social and historical world.

The observer's perspective of the third person, therefore, cannot be equated with the perspective of the natural scientist, from which the world appears as the totality of nomological relationships between observable and measurable phenomena. The way this latter perspective is founded in the praxis of the human lifeworld should therefore not be conceived of in the way Habermas seems to suggest, but rather in a different way: it is founded (as Habermas himself has argued in different contexts) upon forms of instrumental action and of an instrumental dealing with objects and situations, which are *also* an essential part of the human lifeworld. The concept of natural causality, as von Wright has argued, is based on the possibilities of an instrumental action upon nature and the sort of knowledge that goes with it, a knowledge of "if – then" relationships: if I do x, y will happen, or if I hadn't done x, y wouldn't have happened. Natural science begins with a collection of empirical or, in particular, causal regularities as they have been discovered in the context of instrumental action. Only modern natural science has transformed as well as broadened this empirical knowledge into a knowledge of natural laws, that is a knowledge concerning nomological relationships between observable and measurable phenomena. Modern natural science "projects," as Heidegger would say, the world as an ensemble of nomological

relationships between observable and measurable material phenomena. If the progress of natural science has extended our knowledge of “if – then” relationships in an unmeasurable way, this is only because the general laws of physical science, according to their logical grammar, allow for the derivation of innumerable “if – then” relationships for specific practical contexts.

In the context of the natural sciences the neurosciences occupy a singular position, because they cannot confine themselves to an investigation of causally determined natural processes – those within the brain. It is the point of their project to build a bridge between neurophysiological processes, on the one hand, and mental processes, as they appear from the perspective of speakers and actors, on the other. And, of course, there cannot be a doubt that they have made important discoveries concerning, for instance the indispensable function of certain areas of the brain for mental capacities as sensory perception, speech, memory etc., or concerning the possibilities of brain surgery for restoring such capacities; and certainly there will be more of such knowledge to be acquired by neuroscience. However, it is precisely *because* neuroscience is committed to exploring relationships between the mental and the physical that it cannot integrate the phenomena it is dealing with into a comprehensive scheme of nomological relationships *between* them. This is but another way of saying that the two vocabularies, or “language games,” I have been talking about cannot be “translated” into each other.

4.

Current forms of a reductive naturalism, of which neuroscientific reductionism is but a specific version, and whose underlying conviction is, to put it in the words of Wilfrid Sellars, that natural science “is the measure of what is that it is, and of what is not that it is not,” obviously could appeal to the fact that natural science reaches back beyond the historical world of human beings to the beginning of the universe and thereby has definitely destroyed the anthropocentric worldviews of former generations, initiating a process of enlightenment concerning the self-conception of men. At least since Darwin the human life world has been revealed to be the product of a natural evolution and therefore, so it appears, as only a new, although highly complex configuration of those material processes which underly the evolution of the universe as a whole. Seen from this perspective, the spheres of subjective and objective spirit must appear as late and, as it were, “provincial” emanations of a natural history which, as emergent phenomena in the process of evolution, must obey the same general laws as nature in general.

One might even sharpen this argument: if the material processes underlying everything that happens in the world do obey general deterministic or probabilistic laws, it makes no sense to assume that these laws are no longer operative at the higher stages of evolution. And this is probably true. To concede it, however, does not mean to concede that whatever happens in the world must be causally determined according to general laws. If, for instance, the ontogenetic development of the brain is, as neuroscientists are willing to concede, co-determined by its social and cultural environment, then brain processes cannot be understood as “autonomous” natural processes. It is necessary for their “interaction” with external, social and cultural determinants to be taken into account – determinants which, however, as I have tried to show, cannot be brought into a nomological relationship with processes within the brain. Therefore, even if it is conceded that nothing that happens in the world can *violate* the general laws of physics, it does not follow that everything that happens in the world is causally, ie. nomologically determined. What I have tried to show is rather, (1) that the thesis

of universal determinism cannot be empirically justified *in principle* and therefore becomes a *metaphysical* thesis, and (2) that neuroscientific determinism rests on a categorical mistake. But if this is true, the thesis of a compatibility of freedom and determinism falls flat as well, even if it is conceded that we do not know or perhaps can never know whether determinism is true. As Martin Seel has shown,⁴ the modesty of such an *ignoramus* still rests on the same category mistake as a strong thesis of determinism.

5.

And yet, if it is conceded that the human lifeworld is a late product of natural evolution, an evolution which in the distant past has led to the emergence of simple organisms and which – without the intervention of an external agency – in the more recent past has led to the emergence of the human species, then it must be also conceded that the sphere of spirit (Geist) can have no place *beyond* nature. The question, of course, what does this mean and how it is to be understood? What I have tried to show is that everything that belongs to the sphere of spirit has a material aspect which may become an object of natural scientific objectification. At the same time, I have argued that the sphere of spirit has its own “ontological” dignity and that it cannot be reduced to the sphere of objectified nature. Nevertheless it is certainly true that as speaking and acting creatures we are still, as Adorno has put it, “a piece of nature,” and that means again that spirit cannot be something *beyond* nature. However, the concept of nature as I have used it repeatedly in the last sentences, is ambiguous. The nature which we, as acting and deliberating creatures, are *aware of* as our own nature – the nature Adorno speaks of – is not the nature of scientifically objectified brain processes, but the living nature of our body with its neediness, its impulses, its potentials and its vulnerability.

Our experiences of a free will, as well as of its limitations, are basically tied to experiences with our bodily nature. We arrive at the world as helpless beings, who only through a process of socialization become speaking and acting individuals who communicate with each other in a social space of reasons, recognizing each other *as* “rational beings” who are accountable for their actions and who are identical with themselves over time. Our bodily nature is the basis and the precondition of what we are *as* rational beings and we are constantly aware of this condition. However, our living nature, being the condition of the experience of our will as free, is, at the same time, the condition of the experience of our will as unfree. That is to say, we can make a distinction between a free and an unfree will *within* the language game of responsible authorship if we relate it to experiences which we can make from the “embodied” perspective of participants in an intersubjective field of human praxis. For insofar as we understand our freedom as the capacity to take a reflective distance to our immediate desires and motives and to determine our will not only according to longer term desires and motives, but also according to ethical and moral reasons, we can also – whether as agents or as observers – make the experience of the will as being *unfree*. Fear, passion, rage, sexual obsession, or drug addiction may prevent us to do what we think would be the right thing to do; unconscious motives may determine our behaviour behind our back; and finally, even the dispositions, norms and value standards we have internalized as a “habitus” (Bourdieu) in a process of socialization may limit the scope of arguments and deliberations which are accessible to us.

However, as far as these limitations of a free will can become an object of experience from the perspective of participants in a context of interaction, i.e. as far as we can become aware of them, there is also a chance to transcend them. Occasionally we do overcome our fear, rage or addiction; unconscious motives may lose their causal force through becoming

revealed in a psychoanalytic process; and equally internalized norms, schemes of perception and evaluation may become the object of reflective distancing – or, alternatively, of a reflective endorsement. Accordingly, Freud's postulate "Where id was, ego shall be" might be completed by saying "Where super-ego was, ego shall be."

The example of psychoanalysis also shows something about the possible role of an "objectifying" observer in the communicative contexts of the life world. Above, I have pointed to the interwinement of the participant's and the observer's perspective in contexts of the life world, but only inasmuch as the perspective of the observer is merely a correlate of the participants's perspective. In the case of psychoanalysis, however, the observer's perspective comes into play in a different way, namely as an "objectifying" perspective, from which the behaviour of a patient appears as causally determined by unconscious motives, desires or traumata. What corresponds to this objectifying perspective is a temporary suspension of a morally evaluating attitude of the psychoanalyst towards the behaviour of the patient, an attitude that otherwise is constitutive of ordinary contexts of communicative interaction. However, this objectifying perspective of the psychoanalyst is motivated by the aim to *dissolve* the causal determinants which are operative in the behaviour of the patient behind his back. A somewhat different, although a comparable role, has an objectifying perspective in the social sciences whenever they explore the causal genesis of a habitualized social behaviour in cases, where the "habitus" appears as a limitation of possible self-determined action. In all these cases, the objectifying perspective – of the psychoanalyst or the social scientist – should not be confounded with that of the natural scientist. This is because in the former case – but not the latter – it is related to the aim of *widening* the scope of self-determined action and ultimately presupposes the language game of responsible authorship, which, as it were, is still operative as a background, a background to which even the phenomena of an *unfree* will are related.

"The contradiction of freedom and determinism," Adorno once said, "is one of the self-experiences of subjects as being free at one time and unfree at another."⁵ It is only through taking the problem of a free will as an *empirical* problem in this sense – that is in a sense which is internally related to the language game of actions and intentions – that a view is opened up, not only upon the different degrees in which agents are held accountable for their actions – for instance in the context of criminal law – but also upon a field of empirical research in psychology and social science through which zones of an *unfree* will may be brought to light. And it is precisely here that the neurosciences also do play a legitimate role. If neuronal processes are the material condition of actions being determined by reasons, a malfunctioning of these processes, as for instance an injury of the brain, may be the cause for the loss of some of those capacities which are a necessary condition of acting in a self-determined way. Accordingly, the progress of neuroscience does open new perspectives concerning the natural basis of our mental faculties. However, as far as neuroscience is concerned with the natural *conditions of possibility* of self-determined action it cannot *subvert* the life world perspective from which we take each other as agents responsible for their actions. This perspective rather is the necessary background on which even the phenomena of an unfree will, and also that of a *weakness* of the will, can become an object of experience as well as a theme of philosophy, empirical science and, not least, of literature.

6.

Our experience with our living nature, then, is not an experience with nature as it is being objectified by natural science, even if the human body – not only in neuroscience, but also in

medicine – has progressively become an object of natural science, and if nobody today would like to miss the cognitive achievements and the therapeutic possibilities of modern medicine. I think, however, that there are reasons to assume, that the approach of a strict nomological natural science, whose paradigm is mathematical physics, has its specific limitations already when it comes to the phenomena of living nature. A limitation not regarding the possible investigation of the material processes underlying the phenomena of living nature, but a limitation concerning an adequate *description* of those phenomena, and therefore also of their explanation. To be sure, in the biological sciences physical and chemical knowledge has led to an enormous progress concerning the understanding of the material processes underlying the life of organisms and their self-reproduction.

The question, however, is whether physics and chemistry alone can provide the categories which are necessary for a fully adequate *description* and *explanation* of the phenomena of living nature as we know and can observe them. Precisely from the point of view of evolutionary theory, we are confronted with the problem of *emergent* properties, entities and modes of being, for whose description the categories of physics or chemistry are insufficient and which cannot be *reduced* to these categories. This is in particular true for the living nature of the more highly organized animals, to whom – in a more or less rudimentary sense – we already attribute properties, dispositions and forms of behaviour which in some sense are still ours. Although in our case, the case of the human animal, they have been transformed through the new evolutionary *niveau* of linguistic communication and have thereby been imbued with a higher degree of freedom. Think, for instance, of the instinctual nature of animals, their sexuality, their sensory capacities, their receptivity to pain, their rudimentary forms of communication and their elementary forms of instrumental behaviour. It appears that for a description of the behaviour of more highly organized animals we are dependent on a vocabulary which has its origins in the experience of ourselves as a part of living nature, that is to say in our “participant’s” perspective as a part of living nature.

Jürgen Habermas has made a similar point with respect to the theory of evolution. “Already the synthetic theory of evolution,” Habermas says, “has to operate with non-physical concepts like self-preservation, fitness and adaptation which, on the one hand, have their origin in the self-experience of beings, who know what it means to be a living body, and which, on the other, have their origin in a cultural knowledge about cultivating plants as well as fostering and breeding animals.”⁶ It seems that we cannot reconstruct the history of nature, part of which is the emergence of human forms of life and of the spheres of subjective and objective spirit, in terms of a nomological physical theory, precisely because to describe what is essentially *new* in the process of evolution we need categories beyond those of physics and not reducible to them. Each attempt of such a reduction must lose those phenomena out of sight which are characteristic of the higher forms of living nature. To be sure, it may appear as paradoxical to claim that an intelligible account of the history of nature might ultimately only be possible from the participant’s perspective of those beings, in which living nature has come to a consciousness of itself. But this claim can appear as paradoxical only under the dogmatic presupposition that nature as it is objectified by natural science – that is nature as the totality of nomological relationships between observable and measurable phenomena is the ultimate measure of what has empirical reality and what can function as an explanatory basis for all that exists and that happens in the world. But if this is not true, then the presupposition of an all-pervading causal-nomological determinism becomes problematic already when it comes to living nature – and this is not only because random events like those of mutation play such an important role in the process of evolution.

What this means might become clearer if we reflect for a moment on the very concept of causation. Above, I have mentioned causal forces which limit the freedom of the will; such causal forces – and probably also the causal efficacy of instincts which determine the behaviour of animals – cannot, I believe, be understood in accordance with the nomological concept of causality suggested by modern physics (which in fact, as should be remembered, has *substituted* the ordinary concept of causality by the concept of natural law). That the concept of causality cannot be *reduced* to that of a nomological determination of events and processes has been shown in particular by Curt John Ducasse. What we mean by a causal relationship between two events A and B in ordinary circumstances is, that the occurrence of A was the necessary and sufficient condition for the occurrence of B. Understood in this way, it is not Humean regularities which have brought us to think of causal relationships, rather it is the causal interpretation of singular, observable sequences of events which has led to a knowledge of causal regularities. That is to say, we discover causal relationships primarily as observable relationships between different events. In particular, we understand our action upon the world as being causally efficacious: I drop a vase and it breaks to pieces, I scratch a match and it starts to burn, somebody hits me on the head and I fall down upon the floor. According to this pattern, however, we also interpret a merely observed sequence of events as a causal one: the vase has been broken to pieces *because* it fell to the floor, my hand pains *because* I put it into the fire, there are footprints on the soil *because* somebody has walked there – in all such cases we speak of causal relationships between observable events, and only on the basis of experiences like this a knowledge about causal regularities can emerge.

In an analogous way, the causality of unconscious motives has been discovered by Freud – if only we extend the concept of “observation” in an adequate way. That is to say, even in this particular field, the observation of a singular case is the basis for the generalizations of psychoanalytic theory. In some of the cases, I have mentioned we do presuppose today that the corresponding sequence of events in principle could be redescribed or explained as a nomologically determined sequence of states of a physical system – which is precisely the perspective from which mathematical physics looks upon the world. In other cases, however, such a presupposition need not play a role, which means, that in these cases we do *not* take the causal explanation of an event as a primitive precursor of a nomological explanation in terms of physics.

As to the definition of causality by theoretical physics, Ducasse remarks, “that what is so defined is, *ex hypothesi*, physical causation, and hence the theoretical physicist’s definition of causation has no direct relevance, if any relevance at all, to cases of causation where the cause, or the effect, or both, are *mental* not physical events. . . Causation is therefore not to be confused with causal law, as so often is done.”⁷ Not every causal explanation, therefore, can be understood as being implicitly a *nomological* explanation. Whether the relationship between cause and effect can be presented, by way of a secondary “rationalization,” as it were, as a nomological relationship between different states of a physical system, depends on the *kind* of causes and effects. Therefore, the presupposition that every causal relation can be represented as a nomological relationship between states of a physical system is only another expression of a metaphysical hypostazation of the perspective of natural science.

7.

But even if we now reinterpret the idea of a universal determinism in the sense of a broadened concept of causality as I have proposed it, taking for instance *reasons* as *causes*, the idea of determinism would still be untenable, since what occurs already on earlier stages of

the evolution – the emergence of something new – is repeated on the evolutionary level of the human mind in an even more perspicuous sense. The very sphere of the human spirit, as it is mediated by the use of language, is the sphere of a continuous genesis of something new. Scientific theories, works of art, social and political institutions as well as new vocabularies, by which we describe the world and ourselves, are productions of the human spirit through which something new appears in the world. And although we may come to understand their *necessary* conditions in terms of prior knowledge, social configurations, a specific constellation of problems, psychological dispositions or biographical preconditions, we cannot causally *reduce* them to such necessary conditions.

That something like this does happen again and again, shows that there is something to the freedom of the human mind which is not exhausted by the freedom of the will; rather, the freedom of the will presupposes this other freedom of the mind, which again is dependent on the use of language. This freedom of the mind manifests itself not least in the sphere of art. As much as we may be able to trace the genesis of artworks to their place in a history of aesthetic problems and problem-solutions, to their social conditions, to underlying psychic dispositions or biographical influences, the idea of a causal explanation of their coming into existence seems absurd. Freud knew this, for although he explored the traces of psychic dispositions in the creation of artworks, he definitely rejected the idea of their being causally reducible to such necessary conditions of their genesis.

It is language itself, as its functioning has been analysed by Wittgenstein and Derrida, which already contains this potential of a causally unexplainable self-transcendence, the potential of the new and unpredictable through which the world is changed. At this point it becomes clear, that to speak of an open future does not only mean that we cannot know what the future will be like because we cannot know all the causal determinants of what happens in the world. It rather means that the future, *our* future as historical beings – although limited for each of us because of our fragility and mortality as natural beings and because of the social regimes of normalcy which have invaded our body – is open in its *ontological* structure, open for the unforeseeable new even when at times a social constellation may appear as hopelessly determined or when the modern world may appear, as it did for Adorno and Horkheimer, as a closed system of delusion. Even Auschwitz and other barbarisms of our time are not a proof to the contrary, since the very conditions of a free will can also lead to something radically evil. (After all, we do hold the Nazi criminals responsible for their deeds.)

What I have said above about nature as a limit as much as a condition of possibility of the freedom of the will, is true also with respect to the freedom of spirit as the correlate of our free will. Nature, as it is intrinsic to spirit, manifests itself as a *limitation* of freedom in our psychic and bodily vulnerability, in illness and death, as well as in the fact that the social conditioning of our body not only opens up, but also limits individual and social horizons of possibility. At the same time, nature, as an *enabling* condition, is effective even in those creative achievements of the human spirit, through which again and again something new comes into existence. It is particular in the work of art that zones of the unconscious, that imagination, affectivity and the mimetic faculty as aspects of our living nature become productive agencies. A pure spirit could not create works of art nor even have a will at all.

The openness of the future manifests itself also in the praxis of the cultural sciences (Geisteswissenschaften): for insofar as these sciences, being concerned with history, literature or the arts, are *interpreting* sciences, they always come up with *new* interpretations. Through their interpretation of the historical world, of cultural traditions or of literary and artistic documents, they play a role in our – affirmative or critical – appropriation of the past, an appropriation of the past which has its particular significance because of its relationship to

an open future. In addition, as *interpreting* sciences the cultural sciences are involved in problems of truth in a way that is different from that of the natural sciences. Debates or quarrels concerning truth, justice, moral or aesthetic authenticity and basic existential or political orientations are inscribed into the very object field of these sciences. As interpreting sciences they are willy-nilly involved in these debates, even if they try to keep out of them by taking an “objective” stance. It is only for this reason that they can contribute to our knowledge of the human world, to our practical orientation concerning cultural and political traditions and thereby to our self-understanding at the divide between past and future. Nowhere has this become as clear as in German history in the 20th century, a period in which the cultural sciences (Geisteswissenschaften) have been moving between the extremes of a conformist affirmation of existing power relations, on the one hand, and a critical appropriation of the tradition, opening up new orientations and new perspectives with regard to a re-opened future, on the other. After the conformism of a considerable part of the humanities during the Nazi-period, it was not least the achievement of emigrants like Adorno to open up a new perspective on the German traditions in philosophy, literature and music which had been corrupted by the Nazis, and to re-connect them to the European process of Enlightenment – corresponding to the postulate of Walter Benjamin, that “in each epoch the tradition must be rescued from that conformism which threatens to overpower it.”⁸ This postulate, I believe, remains still valid at times like ours when a progressive political and cultural disorientation and the postmodernist arbitrariness of mass culture combine with the conformism of a technocratic-economistic ideology of efficiency in the sphere of higher learning and scientific research, which threatens to deprive the cultural sciences of their breathing space, that is of their conditions of productivity.

It is at this point that I want to come back once more to the program of a reductive naturalism, which in the foregoing I have criticized as a false philosophical worldview. But even if it is false, it could become *effective* – the enthusiasm by which it is sometimes welcomed in the mass media shows, that it is not quite ineffective. But then it could, after all, have fatal consequences as an ideology of a psychic and social-technological practice of manipulation with deep-going and destructive consequences for democratic societies and for human freedom. My remarks on the freedom of spirit and the openness of the future should therefore not be misunderstood. This freedom and this openness are as much a reality as they are always threatened, at least as far as the *degree* of this freedom and of this openness is concerned, threatened not by the deterministic causality of natural processes, but by the causality of social developments which are destructive of the very conditions of freedom. However, this freedom and this openness of the future cannot be completely extinguished as long as human beings have not really *become* the sort of beings which reductive naturalism conceives them to *be* already. But had they become such beings, this would be – for us still inconceivable – the end of the historical world, as we know it.

NOTES

1. Donald Davidson, “Mental Events,” *Essays on Actions & Events* (New York: Oxford University Press 1980), 222 f.

2. Jürgen Habermas, “Freiheit und Determinismus,” *Deutsche Zeitschrift für Philosophie* 52 (2004): 871–890, 883.

3. Habermas, of course, is quite aware of that wherever he speaks about the lifeworld or the social sciences. In “Das Sprachspiel der verantwortlichen Urheberschaft und das Problem der Willensfreiheit. Wie lässt sich der epistemische Dualismus mit einem ontologischen Monismus versöhnen?” *Deutsche*

Zeitschrift für Philosophie 54, no 5 (2006): 693 he argues correspondingly: “Diese aus performativen Zusammenhängen bekannten Eigenschaften werden Personen auch dann zugeschrieben, wenn sie selbst, zusammen mit ihren Praktiken und lebensweltlichen Kontexten, als ‚etwas in der Welt Vorkommendes‘ beobachtet und beschrieben werden.” Accordingly, my critique only concerns an *ambiguity* in his conception of an “objective world” as being related to the perspective of a “third person.”

4. Martin Seel, “Teilnahme und Beobachtung, Zu den Grundlagen der Freiheit,” *Paradoxien der Erfüllung* (Frankfurt am Main 2006), 146 f.

5. Theodor W. Adorno, *Negative Dialektik. Gesammelte Schriften*, Vol. 6 (Frankfurt am Main 1973), 294 (my translation).

6. Jürgen Habermas, “Das Sprachspiel der verantwortlichen Urheberschaft und das Problem der Willensfreiheit,” 701.

7. Curt John Ducasse, *Causation and the Types of Necessity* (New York: Dover Publications, 1969), 150, 152.

8. Walter Benjamin, “Über den Begriff der Geschichte” *Gesammelte Schriften* 1.2, (Frankfurt am Main 1972), 695.

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