

THE LIBERTARIAN IMPERATIVE AND ITS IMPLICATIONS FOR CONSCIOUSNESS STUDIES

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Abstract: The prevailing trend of deeming subjective experiences causally idle obfuscates consciousness research as epiphenomenal entities cannot be studied. The most flexible way for conscious experiences to be efficacious is for them to serve as a basis for free action. Regrettably, no objective evidence testifies for this possibility and subjective feelings of having free will are judged deceptive. In this paper I shall explain that if we uncompromisingly seek the truth we must for purely logical reasons, irrespective of theoretical ideas and empirical data about the origin of our activity, follow the *Libertarian Imperative* — the demand to try always to act in accord with the belief that one exercises the *incompatibilist* free volition. It follows that one of the most fundamental tasks of consciousness studies is to try to establish how — by the evoking of which physical events, and by the violating of which physical laws — the free-will consciousness commands brain dynamics.

Our epistemic situation is agonising. On one hand, scientific observations strongly suggest that the world is thoroughly physical — a huge system that ultimately consists of relatively simple fundamental physical entities which obey deterministic or probabilistic laws of dynamics. On the other hand, we are subjectively aware of undergoing phenomenal experiences and of being free originaive agents. But phenomenal consciousness and genuine, incompatibilist free volition have no place in the physicalistic world picture, and, given the immense theoretical and technical achievements of modern materialistic sciences, there is a tremendous psychological pressure to deny their existence. It is no wonder that the scholarly community has almost entirely succumbed to this pressure. Fortunately, the darkest years of dominance by radical materialism are over and the issue of consciousness has begun to attract the attention it deserves.

The Tangled Rehabilitation of Consciousness

Discarding the belief in panphysical ontology

Although hardly anybody denies the existence of consciousness these days, many philosophers try to explain it away by redefining it in purely physicalistic formal-structural terms (see Churchland, 1995; Dennett, 1991; Hardcastle, 1995). However, there is an insuperable obstacle to these aspirations: the phenomenal qualitative character or *qualia* of conscious experiences. The attempts to treat qualia in the language of orthodox physics are utterly unconvincing and doomed to failure because qualia — including the most general quale *experientialness* or *something-it-is-like-to-be-ness* which is inherent to every phenomenon of consciousness — and the formal-structural concepts of physics — whether about simple or extremely complicated systems and processes — belong to entirely different categories. For that reason ever

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more philosophers admit that the phenomenon which has been traditionally called consciousness and is now often called phenomenal consciousness does not fit into the strictly physicalistic world scheme (see, e.g., Searle, 1992; Chalmers, 1995, 1996). They suppose that phenomenal consciousness is either like some sort of ‘field’ — the field of phenomenal experience — which exists over and above the physical fields and particles, or it is the intrinsic qualitative essence of physical entities themselves, as panpsychists have always suggested. Both these positions amount to the abandoning of the belief that the world is ontologically thoroughly physical in the traditional sense.

Clinging to the belief in panphysical causality

Regrettably, the rehabilitation of consciousness has become tangled as the majority of scholars who acknowledge the existence of phenomenal experiences try to save the basic doctrines of the materialist world concept. They hold that the nonphysical constituents and properties of reality don’t give rise to any deviations from the physically lawful dynamics of the world. By assuming that the physical domain is causally autonomous, the causal behaviour of the physical world is theoretically safeguarded from any ‘marring’ impact from the extraphysical. Moreover, the physical domain is considered to be not only causally autonomous but also causally sufficient: it is held that the physical determines not only its own dynamics but also the entire existence of the nonphysical. Though the world is allowed to be ontologically heterogeneous, its causal thread is believed to be homogeneous — completely physical.

The concept of epiphenomenal consciousness

The view that the nonphysical exists but is determined by the physical implies that consciousness is causally impotent. This thesis of the epiphenomenality of consciousness is explicitly advocated, e.g., by Frank Jackson (1982), David Lewis (1995) and David Chalmers (1995, 1996).

The concept of epiphenomenal consciousness is not problematic in the case when consciousness is some kind of ‘field of experience’ distinct from physical reality. The situation is more complicated when the phenomenal experience is the intrinsic content of the physical reality itself. In this case we are not justified in claiming that the phenomenal content lacks any causal efficacy: the content of physical entities determines their interaction and dynamics. However, given the character of phenomenal qualia as we know them, and the character of the laws of dynamics that are regarded as physical, we can legitimately claim that the ‘physical’ qualia are causally idle (Uus, 1994, pp. 115–9). Any impact the qualitative content of physical entities can have upon the behaviour of some physical system must be entirely evident in the form of basic equations of dynamics of these entities. That the highly complex qualia must be causally inefficient when they are the noumenal essence of the basic components of physical reality is apparent from the fact that on the basis of the fundamental laws of physics it is impossible to figure out which kind these qualia are. Hence, the concept of epiphenomenal consciousness is intelligible also in the case when the phenomenal experiences are the essence of the physical reality itself.

The fact-based science of epiphenomenal consciousness is logically impossible

The epiphenomenalist theories of consciousness have been criticised by several authors (see Beloff, 1994; Elitzur, 1995; Hodgson, 1994b, 1996a,b; Lowe, 1995; Warner, 1996), most forcefully by Daniel Dennett (1991, pp. 398–406). The fatal defect of theories of epiphenomena is that they cut themselves off from any empirical basis.

It is logically possible that our subjective experiences are causally inert. There is also nothing counterlogical in advancing a *theory* that we actually have certain epiphenomenal experiences. It can even be agreed that everyone of us knows that this theory is correct, because everyone of us is necessarily aware of one's own experiences (Lowe, 1996, p. 190). But it is illogical to claim that this kind of consciousness can serve as an *empirical basis* for our theoretical speculations about it, or that we can make reports of *evidential value* about the content of such a consciousness. A defender of epiphenomenal consciousness is justified to contend, as Chalmers (1996, p. 198) does:

I *know* I am conscious, and the knowledge is based solely on my immediate experience. To say that the knowledge makes no difference to my psychological functioning is not to say the experience makes no difference to *me*.

But, on pain of self-contradiction, he cannot assure us that he asserts he knows he is conscious *because* he knows he is conscious. He has to concede that according to his own views his statement has been produced by his psychological (neurophysiological) functioning no matter whether he in fact *knows* he is conscious.

The fact-based theories of epiphenomena are impossible for logical reasons.

The modern philosophy of consciousness in stalemate

The belief in the autonomy of the physical world spoils the endeavours to rehabilitate phenomenal consciousness. If a champion of phenomenal experiences believes in the causal sufficiency of physics, he must hold that the experiences are causally idle, and in doing so, he exposes himself to ridicule by his physicalist adversaries and strips the problem of phenomenal consciousness of any scientific import. If one argues like Chalmers (1995) that there is the really hard problem of experiences but that explaining (i) the access to one's own internal states, (ii) the production of reports about mental events, and (iii) the deliberate control of behaviour are all easy problems concerning only the neurophysiological mechanisms and processes, one falls an easy prey to his physicalist opponents who use an indefeasible logical argument to force him to admit that (i) the 'really hard problem' is, in fact, merely one of the 'easy' problems, since the reason why the intellectual wrestling with the 'hard problem' arises and leads to definite conclusions can be explained 'easily' as being the result of the neurophysiological processes alone, and that therefore (ii) the concept of epiphenomenal experiences presents only as negligible an interest to sciences as a hypothesis about the physical fields which surround material particles but exert no impact on anything.

A majority of the proponents of phenomenal consciousness hold to the view that the nonphysical is causally idle, and for that reason most of the modern theories of phenomenal consciousness are demolished by materialists before they really get off the ground. The philosophy of consciousness is in a stalemate.

Can There Be a Science of Phenomenal Consciousness?

Dennett's Dictum

From what has been said above it should be clear that any fact-based theory of phenomenal consciousness is incompatible with the doctrine of the causal closure of the physical universe as we know it. *The empirically grounded science of phenomenal consciousness is possible only if the physical world as conceptualised by modern materialistic philosophy is causally open.* I shall call this proposition *Dennett's Dictum*, because Daniel Dennett is the most outspoken and effective propagator of this principle, and sticks to it rigorously: by believing in the causal autonomy of physics, he denies resolutely that there can really be any phenomenology, any intrinsic qualia of experiences.

Dennett's Dictum must be regarded as the cornerstone of any logically sound philosophy of phenomenal consciousness.

A painful option: phenomenal consciousness vs. modern world view

Because of Dennett's Dictum, the problem of experiences is far more serious than is generally realised. Those who assume that the fact-based science of phenomenal consciousness is possible are usually not aware that this assumption requires abandoning the modern scientific world view by denying the causal completeness of physics.

We face the painful dilemma: either the contemporary scientific world concept is correct and there can be no empirically based theories of phenomenal consciousness, or there can be such theories but then the basic nature of the world is utterly misdescribed by modern science. The decision to forsake the well established and intelligible world view would be so radical that we cannot afford to be thoughtless here. It is wise to discard the materialist world picture only if there are *very* serious reasons to do so.

Are there plausible alternatives to the physically determined world?

Experiences can be causally efficacious in two very different ways. One possibility is that phenomenal experiences are like some kind of field which is in mutual interaction with the physical world so that together they form a combined physical-mental reality with dynamics that obey a definite set of natural laws (Libet, 1994; Smythies, 1994). Such a composite physical-mental world is of the same basic kind as the purely material one in the sense that it is entirely law-governed. The other, much more extravagant, possibility for phenomenal experiences to be causally effective is for them to serve as a basis for free-will activity.

The first option — that the world is a law-governed composite physical-mental system — is logically unproblematic, but we do not have any factual evidence in support of it. Amazingly, there *is* sufficient ground for preferring the second option — the view that we and other conscious creatures are free agents — to materialism, even though the concept of free volition is supernatural, hard to comprehend, and logically problematic. I shall show in this paper that for simple logical reasons we are justified in trying always to follow the thesis of being free agents, and hold that a fact-based science of phenomenal consciousness is possible.

The Problem of Free Will

The libertarian and compatibilist concepts of the freedom of will

The term ‘freedom of will’ is used to denominate two quite different properties.

Traditionally — and this is still the commonsense custom — the property of the will called its *freedom* has been interpreted as the ability to select one actuality from several possibilities, as the ability, for anything one tries to do, always to have tried to do otherwise. Free will in this strong sense is incompatible with causal determinism, for the latter rules out the possibility of a person’s trying to do other than what he does try. Such incompatibilist, libertarian free volition transcends natural causality.

The other, modern tendency is to designate by ‘freedom of will’ the creature’s property to function autonomously, to be free of *outside* coercion and constraint. The freedom thus defined is compatible with the complete causal necessitation of behaviour. A decision is free in this compatibilist sense simply because it is one’s *own* decision, no matter how rigidly determined by one’s own internal state.

To avoid terminological equivocation, I shall refer to the property *free in the libertarian sense* by the term ‘Free-Will’, and to the property *free in the compatibilist sense* by the term ‘Self-Willed’.

We are, undoubtedly, quite autonomous Self-Willed beings. However, not the physicalist-compatibilist Self-Will but the libertarian Free Will can render phenomenal consciousness causally efficacious. Are we, then, *Free* agents?

On scientists’ attitudes to the problem of Free Will

In the Middle Ages European intellectual life was subordinated to religious ideology which concentrated upon the Free-Will aspects of existence and denied the importance of studying lawful regularities present in the world. With the rise of modern science when more and more laws holding in nature were discovered, and, partly as an overreaction to religious dogmatism, the ‘scientific’ dogma of nomism — the view that the behaviour of the world is *thoroughly* law-governed — began to gain popularity. Already many scholars of the early modern scientific era, among them Spinoza, Hobbes, Leibniz and Kant, accepted this view, and in recent times the doctrine of the universal ruling of natural causality has won support by overwhelming majority of scientists. This has led to the denial of the Freedom of Will. Let us mention, for example, Albert Einstein’s firm antilibertarian convictions. In modern times only very few scientists have dared to defend the explicitly libertarian views. True, among those few have been such world-famous scholars as Sir Arthur Eddington, Sir Charles Sherrington and Sir John Eccles.

Some scientists, finding it implausible to deny our being Free agents responsible for our conduct, but believing at the same time that the dynamics of the physical world are entirely regular, have suggested that even a truly Free-Will activity may be compatible with the universality of lawful dynamics.

One of ideas aimed at justifying this suggestion has been proposed by Erwin Schrödinger (1977). He sought to avoid a contradiction between the (allegedly) universal obtaining of the laws of nature and incontrovertible direct experience that one oneself commands one’s motions, feeling full responsibility for them, by assuming that every conscious mind controls the motion of the atoms according to the laws

of nature. However, if this thesis were true, then whatever claims that we are aware of nonphysical aspects of our existence — including the claim that we, following our Free decision, direct the motion of the atoms according to the laws of nature — would be of no evidential import, because everything that we as material beings would in this case do would have been done by us in exactly the same way also if we were purely physical deterministically functioning creatures lacking phenomenal consciousness and Free Will. Our producing assertions that we are introspectively aware of possessing Free Will could be explained then as a result of lawful functioning of our material bodies regardless of whether this lawful functioning is deterministic or Freely evoked.

The other idea about how Free Will can be compatible with universally lawful dynamics is more sophisticated. It is argued (see, e.g., Hodgson, 1991, 1994a,b, 1996a,b) that the Will can exercise its Freedom by selecting between alternatives which quantum indeterminacy leaves open, preserving at the same time the physically lawful statistics of sets of quantum events, so that, when described from a physical perspective alone, Free Will looks like chance. However, in this case a Free agent cannot command its behaviour Freely according to its best discretion, but must merely play a role of a generator of random events. The issuing of claims that one knows of having Free Will would then be explainable as resulting from a combination of one's lawful and blindly random functioning, irrespective of whether such functioning is caused by the physical determinism and randomness, or by one's Free Volition. If the Will directed quantum chance in its own aims, the lawful statistics of quantum events would be violated — if not the low-order, then certainly the higher-order probability distribution functions: the correlations of outcomes of individual quantum events with the brain's global state as it is represented in the content of consciousness evoked by the brain.

The Free-Will behaviour I have in view when formulating a libertarian imperative is the *truly* Free-Will behaviour which is not compatible with any kind of physically lawful functioning of our bodies (brains). Our having of such Free Will is resolutely denied by modern science.

The scientific and the logical argument against Free Will

Modern science assumes that the causal powers of mind consist in the causal powers of its physical realisers. In all well-studied cases the dynamics of physical reality have turned out to be deterministically or statistically strictly regular, and it has been concluded that the laws of physics hold without exception. A typical contemporary scientist maintains that there is not the slightest reason to doubt that brains are anything other than machines with enormous numbers of parts that work in perfect accord with physical laws, and that the principle of 'could have done otherwise' should be dismissed as nothing better than a long-lived philosophical illusion. There is claimed to be no such thing as Free Will, for it conflicts with the principle of the causal closure of the physical world.

The possibility of Free Will is denied also on logical grounds. It is argued that a Free act as an undertaking that has no sufficient causal condition is arbitrary, and hence a random event one was not free to choose to occur. There are said to be only two possibilities: either choices are determined or else they are random. The concept of Free agency is regarded as incoherent or, at best, irremediably mysterious.

The arguments against Free Will are not decisive

That the brain functioning is purely physically determined is not a scientifically established fact. It is merely *assumed* that the brain, like other physical systems, is not interrelated with properties of nonphysical origin, and hence cannot behave in a way dictated by Free Volition. But we know that the brain, unlike (supposedly) simpler physical systems, *is* associated with one kind of nonphysical properties — with experiential qualia. Why, then, is it implausible to think that the brain, unlike simpler physical systems, might be associated with one more nonphysical property — with Free-Willness of activity — that so well fits in with phenomenal qualia the hedonic aspects of which form the basis of ethics? The scientific argument against Free Will is not conclusive.

The logical argument against Free Will can also be questioned. That every event is either causally determined or random, is not the innocent logical truth it appears to be. The innocent logical truth is that every event is either causally determined or not causally determined (Wiggins, 1973). The standard objection to libertarianism fails to show that undetermined action would be random action.

The phenomenological evidence that we are Free agents

Every individual who has Free Will — Free-Will individual, for short — has incontestable phenomenological evidence of his power to try to do otherwise, to choose between genuine alternatives — a *feeling* of freedom. The experience of volitional efforts is not merely different from other experiences (like pain, warmth, fatigue, etc.), but it has a definite *qualitative content* from which it is self-evident that these efforts are free in the sense that one could have withheld from exerting them. It is just for this reason that common sense finds it absurd to complain that one's volitional efforts don't pass. Because of the direct phenomenological evidence of the Freedom of one's own Will, one's being a Free agent is an incontrovertible empirical fact, not merely a speculative hypothesis.

The unjustified denial of the phenomenological evidence for Free Will

Regrettably, it is not at all ridiculous in the present-day philosophical atmosphere to argue as Dennett (1984, p. 136) does that

those who claim to know that they have performed acts such that they could have done otherwise in exactly those circumstances must admit that they proclaim this presumably empirical fact without benefit of the slightest shred of evidence, and without the faintest hope of ever obtaining any such evidence.

It is contended that the libertarian Free Will is an illusion, just a deceptive feeling that cannot be taken seriously.

There are two reasons why people of modern education don't regard as genuine the information contained in the qualitative content of the feeling of freedom (see Uus, 1994). First, the experiences of volitional efforts are not publicly ascertainable and their qualitative content is not interpersonally communicable, i.e. they belong to *private* reality, and people are trained to deem everything subjective utterly dubious. Secondly, the intellectual abilities of phenomenal intuiting one needs for analysing the qualitative content of experiences are unnecessary for contemporary, objectivistic science-making and are, therefore, ignored or even derided.

Is there any better way for reasoning about the Free Will problem?

Although the phenomenological evidence for Free Will is usually rejected on dogmatic grounds as conflicting with the belief in the universal ruling of natural causality, even many libertarians tend to think as if it could not be seriously maintained that we can know by introspection that we have Free Will. It should be admitted that the acts of comprehending the phenomenological evidence for Free Will as high-category mental processes can, indeed, be much more easily distrusted than could simpler intellectual procedures. It would be therefore highly advantageous if it were possible to reason about Free Will on the basis of much simpler concepts than phenomenal qualia. There *is* such a possibility.

The Libertarian Imperative

An ignored approach to the Free Will problem

Two aspects of the Free Will problem are discussed intensively by philosophers: the conceptual aspect — what Free Will *means* and whether it is compatible with determinism — and the epistemic aspect — how we can get to *know* the truth about the presence of Free Will in the world. But a third important aspect of this problem is neglected: the praxeological aspect — according to which belief about possessing Free Will one should *behave*. True, in the majority of cases praxeology is based directly on epistemic achievements: a claim that things are thus-and-so is accepted as a grounding for reasonable activity only if there are empirical data and/or theoretical considerations in favour of the proposition that things *actually are* thus-and-so. However, in certain peculiar cases praxeology acquires priority over epistemology. In such a case a proposition can be accepted as a basis for sound behaviour solely because of the situation's specific logical structure *regardless of any knowledge as to whether this proposition is true or false*. The ideal limit of all such cases is the unique situation of being faced with the problem of *one's own* Freedom of Will. The Free Will problem has a *nonepistemic* praxeological solution for the reason that we can exercise our possible Freedom of Choice even while ignorant of whether we have it.

Formulating the Libertarian Imperative

The presupposition. The Libertarian Imperative is an answer to the question 'Upon which belief about having Free Will must a reasonable activity be based?' and is thus a normative requirement that is reasonable or unreasonable relative to general aims of behaviour. In formulating the Libertarian Imperative I assume that the supreme principle of the person's conduct is absolute honesty so that any intentional lying, even by noble motives, is excluded.

The formulation. By definition, the Libertarian Imperative is the requirement:

*One must always try to act in accord with the
thesis that one has the libertarian Free Will.*

Comments. (i) The Imperative says nothing about whether one *is* a Free-Will being. (ii) The Imperative must be followed even if one *knows* that one's behaviour has always been deterministic. (iii) For all activity, except the justification of the Imperative itself, obeying the Imperative is equivalent to holding that one *knows*

that one has the libertarian Free Will. (iv) The main motive for advancement of the Libertarian Imperative is that the claim ‘We must try to behave as if we knew that we have Free Will’ can be justified by resorting to much simpler concepts than in justifying the claim ‘We know that we have Free Will’.

The Justification of the Libertarian Imperative

In order to understand the explanation why the Libertarian Imperative must be observed one has to master only two simple concepts: one of the basic concepts used by science — the meaning of ‘lawful dynamics’ — and one of the basic commonsense concepts — the meaning of ‘to try’ in everyday practical sense.

The concept of lawful dynamics

What is lawful dynamics is easy to understand in general, but the variety of it that has most to do with the determinism–libertarianism issue — the deterministic choice-making between alternatives — is occasioning much confusion. It is argued that determinism does not preclude the making of choices, but it is often not realised that the deterministic choice is fundamentally different from the Free-Will choice. The Free-Will choice is free in the sense that one could have selected a distinct alternative from that which one actually selected. Quite otherwise, the deterministic ‘choice’ is not a choice between genuine alternatives. This point is expressed with extreme clarity by Marvin Minsky (1986, p. 306):

According to the modern scientific view, there is simply no room at all for “freedom of the human will.” ... Everything, including that which happens in our brains, depends on these and only on these:

A set of fixed, deterministic laws. A purely random set of accidents.

... Whatever actions we may “choose,” they cannot make the slightest change in what might otherwise have been – *because those rigid, natural laws already caused the states of mind that caused us to decide that way.* And if that choice was in part made by chance – it still leaves nothing for us to decide.

But many philosophers are muddling the issue by trying to produce an impression as if there were no essential difference between deterministic and Free-Will choice. Their aim is to ward off the threat to materialism arising from people’s introspective awareness of their Freedom of Will. People ask: ‘What is *free* about my will if I cannot make choices other than the ones I make’, and are inclined to regard deterministic deliberation as a pale imitation of freedom.

Various tactics are used for selling deterministic choice for a genuine one. Some argue that deterministic decision-making is not blind obeying of the rules, because the latter evolve in the course of the system’s functioning. Others claim (see Ho, 1996) that organisms free themselves from the laws of physics by being coherent wholes whose parts participate in the coordinated action. But however ‘dynamic’ or ‘holistic’ a *deterministic* process may be, at the basic level it is always determined by blind following of fundamental rules — the laws of nature.

A vigorous effort to argue for compatibilism is made by Dennett (1984). His tactics are ingenious. Not believing in libertarian free will, he finds it reasonable to redefine the meanings of words and expressions traditionally used for discussing the free will problem — unavoidable, inevitable, possibility, necessity, open future, can, could have done otherwise, deliberation, free choice, free will, etc. — by assigning

them ‘useful’ content applicable only in the realm of lawful dynamics. Then a talk about our allegedly nomic functioning sounds as a good old talk about Free-Will behaviour and is likely to provoke no protest by unsophisticated common sense. And more importantly, further arguing about Free Will is rendered impossible because you now lack any words for relevant concepts — your tongue is amputated. However, Dennett’s exertions to please common sense while staying faithful to physicalism end, at a closer look, in fiasco. Admitting that we rightly dread such confining circumstances where our options are reduced to one, he offers us two varieties of open future: the epistemic one (being nescient of what will happen) and the probabilistic one (being dynamically partly stochastic). To be free is to be ignorant or at the mercy of blind chance — that is how we can have free will and science too, in Dennett’s opinion.

If one’s behaviour is deterministic, then at *every* moment one has only *one* option of acting, for this is what determinism means. The outcome of one’s deterministic deliberation is fixed both in its process and its ultimate product, and thus one cannot prevent its occurrence. This truth is particularly clearly explained by Peter van Inwagen (1983).

If one’s behaviour is partly probabilistic, then one produces also purely random acts. In principle, one can, without violating the probabilistic law of dynamics, behave in very many different ways, provided, however, that the actual behavioural pattern produced would have a blind-chance character satisfying this law.

Consequently, if one’s decision-making and other behavioural acts are law-governed, one cannot prevent their regular or purely random occurrence.

The commonsense meaning of trying

To understand what ‘to try’ means in an everyday pretheoretic sense is to understand what one must do to obey such orders as: Try to raise your hand; Try to utter ‘Physicalism is fallacious’; Try to imagine a circle; etc. This presupposes possessing practical abilities familiar to everybody to evoke various volitional efforts. This does *not* presuppose having any knowledge about the brain processes (or soul processes if such exist) involved in voluntary acts of trying.

Why the Libertarian Imperative should be obeyed

The reason why we should always try to act as if we knew that we are Free agents even if we actually don’t know this, is rather simple. I think most people are aware of that reason subconsciously. Such awareness is implicitly evident in claims like: ‘Any discussion is meaningless if there are no freely willing agents’, ‘Be kind to the determinists for they have had no choice about what they think and write’, etc. I shall explicate this reason as clearly as I can.

People usually think that it is sensible to try to act in accord with the thesis *A* only if we know, or have at least some ground to suppose, that *A* is true. It seems unbelievable that there can be cases when it is unconditionally reasonable to act on the basis of the assumption *A*, while having no reason for holding that *A* rather than *not-A* is true. But there are such cases. Here is a simple example.

Suppose an expedition has been sent to an alien planet with a task to explore its ionosphere. By accident, all measuring equipment gets crushed in landing. However, in spite of having learned absolutely nothing about the physical characteristics of the

planet's ionosphere, the research team is, nevertheless, justified to try to forward to the Earth the reports of the following type about these characteristics: 'The planet's ionosphere transmits radio waves of the frequency used in sending this message'. The issuing of such messages is justified because they don't reach the addressee if false. The attempts to send such messages can make things in the world only better (if the messages are true) in the sense of how much true knowledge its inhabitants possess, but not worse (if the messages are false).

The reason why in specific cases it is unquestionably sound to perform certain acts in accordance with a premise of which we don't know if it is right or wrong, is purely logical: if the actual states of affairs are in these cases such that our premise is wrong, these same states of affairs prevent our acts from being efficacious. The most elegant situation where this kind of impeccable soundness-maximising tactics of behaviour are possible is that of being faced with the problem of one's own Freedom of the Will.

Our volitional efforts are either nomic processes obeying at some fundamental level definite deterministic or probabilistic laws of dynamics, or they are non-nomic, Free acts exempt at any fundamental level of description from the laws of nature. If our volitional activity is nomic, then: (i) if we maintain that our activity is nomic, we are right; and (ii) if we maintain that our activity is Free-Volitional, we are wrong, *but we are wrong unavoidably*, because we cannot then prevent the regular or purely random law-governed occurrence of our mental and behavioural acts. If our volitional activity is Free-Volitional, then: (i) if we maintain that our activity is Free-Volitional, we are right; and (ii) if we maintain that our activity is nomic, we are wrong, *yet we are wrong not unavoidably*, because as Free agents we could have behaved otherwise, i.e. could have maintained that our volitional activity is Free-Volitional.

Consequently, in order to behave in the most reasonable way possible (provided we seek the truth) in respect to the Free Will problem, we must attempt to act always in conformity with the thesis that we are Free-Will beings, for if we actually are Free-Will beings, our such attempts cohere with the truth, and if we actually are not Free-Will beings, whatever attempts by us are not the kind of acts that can make things in the world either better or worse than they would otherwise be, because then these attempts themselves belong to nature's causal network and their lawful occurrence, either deterministic or random, cannot be avoided. It is reasonable to try to behave as a libertarian.

Indefeasibility of the Libertarian Imperative

The strongest attack against the Libertarian Imperative can be worded as follows:

It is logically possible that it would be established some day that brain functioning is strictly deterministic. Any sound person would then abandon the Libertarian Imperative and would regret ever having obeyed it. Hence, the Imperative is not an *unconditionally* obligatory principle of behaviour.

This offensive, however, misses the point. Even if I were absolutely sure that my brain functioning is deterministic, I would, nevertheless, try to argue that it is not. If I succeed in doing so, I will be utterly wrong, of course, but neuroscientists will console me by explaining that I could not have done otherwise unless the determin-

istic laws of brain dynamics were violated in my brain.

This attack would be to the point if the thesis ‘It is always reasonable to try to behave as a libertarian’ were interpreted as follows: Of all *logically* possible states in which a person of a given kind might be, it is epistemically more advantageous for him to be in a state of trying to behave, or behaving, according to the belief of having Free Will. It is undoubtedly epistemically disadvantageous to be a libertarian when one’s functioning is deterministic in fact. The libertarian thesis should be understood as follows: *Given that one is the way one actually is*, if one behaves or will behave as a libertarian, one’s such behaviour is epistemically ‘more advantageous’ than other *actually* possible ways of behaviour even when one’s functioning is in fact deterministic, because in the latter case there simply are no other nomically possible alternatives to one’s actual behaviour. The libertarian thesis thus construed is infeasible.

The Specific Features of the Libertarian Imperative

The justification of the Libertarian Imperative is easily comprehensible

The logic of justification of the Libertarian Imperative is easily understandable because what is justified in the first place is not one’s attempt to claim that one’s behaviour is Free-Volitional, but one’s trying to deny that one’s behaviour is lawful (unavoidable), and the concept of lawful dynamics is much more easily comprehensible than that of Free-Will activity. The simplicity of justification of the Imperative may even create an impression that it is a cheap sophistry.

The ontological generality of the Libertarian Imperative

The Libertarian Imperative is ontologically general in the sense that it requires the attempting to deny not only the *physical* (materialistic) universal determinateness of one’s behaviour, but also *any other kind* of such determinateness, be it purely spiritual, or forced by some kind of divine power, or whatever.

The Libertarian Imperative is only self-applicable

From the logical form of the justification scheme of the Libertarian Imperative it is evident that it can be applied extremely restrictedly — only for justifying those of one’s own occurrent volitional efforts which are aimed at presenting or investigating *these same efforts* as the exemplars of Free-Volitional acts. The logical basis of the Imperative does *not* justify my trying to regard my other volitional acts, let alone the behaviour of other individuals, as Free-Volitional. This is because the logical power of the Imperative derives from the strictly self-referential character of the problems — such as: Is the claim ‘*This* my claim is a Free-Will act’ justified? — to which it gives solutions.

The epistemic-statement power of the Libertarian Imperative

The Libertarian Imperative is not an epistemic statement: it doesn’t assert that one *knows* that he has Free Will. However, for the reason that the Imperative requires one to try to behave on the basis of the thesis that he possesses Free Will, obeying the Imperative is by its consequences to one’s activity equivalent to the acceptance by him of the belief that he *knows* he has Free Will.

Trying to obey the Libertarian Imperative as an experimental approach to the Free Will problem

The Libertarian Imperative can be viewed as the following call: let us not speculate whether Free Will is theoretically possible; let us also not ask whether we have any empirical evidence in support of or against our possessing of Free Will; let us take, instead, a straightforwardly experimental approach to this problem — let us try to behave as is appropriate to Free agents and see if we succeed in it. Such experimenting is subject to a reliable protection mechanism: if it is foredoomed to failure, it spoils nothing because it can't be then executed at all. If our behaviour is law-governed, we cannot experiment with it because we cannot then act otherwise than we are forced to act according to these laws.

On the Extent of Spread of Free-Will Activity

The Libertarian Imperative justifies only the claim by an activity that it *itself* is Free-Volitional. Any suggestions about the wider domain of the Free-Will behaviour cannot be purely logically justified. They can only be scientific-hypothetically motivated as follows.

As I am justified to consider some of my acts Free-Volitional, I am justified to hold that I am a Free-Will being, and therefore it is proper to wonder to what extent my behaviour is Free-Volitional. It is scientifically reasonable to try to establish what kinds of my activity might be commanded by my Free Will. Tentatively, but quite plausibly, I may hypothesize that just those of my acts that are accompanied by experiences of volitional efforts are Free-Volitional, because there are serious reasons to suggest that the qualitative content of my volitional efforts contains direct subjective evidence about their Free-Will character.

As other persons are by their physical buildup and behaviour rather similar to me, it is tenable to think that the activity of all people in general is Free-Volitional to the same extent. It is scientifically highly reasonable to generalise the request of the Imperative by hypothesizing that all human beings are Free agents.

It is also appropriate to suggest that many other biological species, first of all the higher ones, have Free Will, too.

On the Metaphysical Possibility of Free Will

Although the possibility of Free Will is not a precondition for justifying the Libertarian Imperative (as I explained above, obeying the Imperative is reasonable even in the strictly deterministic world), it is, nevertheless, appropriate to wonder whether Freedom of Will is at all conceivable. This question is a pressing one because of the aforementioned plausible-looking logical (metaphysical) argument against the possibility of Free Will.

It is contended that Freedom is not possible in any kind of possible world because our actions which are not necessitated by prior states of the world have no cause and are thus fortuitous, and a fortuitous event is no kind of Free choice. The libertarian view that a choice is Free only if it is not causally determined by preceding events is regarded as obscure and obscurantist, if not incoherent.

How to argue for the metaphysical possibility of Free Will?

I shall combat the metaphysical argument against Free Will from two angles.

First, I stress that the impossibility of devising an easily understandable definition or explanation of what Free Will is is not decisive evidence that the concept of Free Will is incoherent. There are universally accepted concepts that are, likewise, not explicable in a simple way.

Secondly, I show that the concept of natural causation, even if applied to the most simple cases of the physically deterministic causation processes, is rather controversial, and that a relevant analysis reveals that the concept of natural causation is closely reminiscent of the concept of agent-causation used to explain the meaning of Free-Will activity.

Irreducibility of the concept of Free Will

Some aspects of reality and concepts of these aspects are simple and easy to understand. Identity, difference, natural numbers, linear sequence, flat space, regular order, randomness, and the like are relatively simple, low-grade concepts. However, there are also higher-grade concepts such as infinity, time, consciousness, Free-Will activity, omnipotence. It is impossible to downgrade the high-grade concepts to the level of low-grade ones. This impossibility must not be regarded as a mark of incoherence of high-grade concepts. I shall give an example.

It is easy to understand what ‘to be actually the case’ means. The concept of *actual existence* is easily comprehended. But if we try to explain what time is, we have to use, in addition, the concept of *past existence*. Now, everything that belongs to the past does not exist actually, in the same sense as what belongs to the present does. Neither is the past a mere fabrication of fantasy. Some philosophers insist that there can be no third possibility between actual existence and nonexistence, and therefore time cannot have the property commonly regarded as intrinsic to it: that only the present exists actually, while the past does not exist *any more* and the future does not exist *yet*. They argue that time is like space, all its moments/points — those of past, present and future — existing actually, ‘at once’, in exactly the same way. However, there is no reason to think that from the irreducibility of high-grade concepts of past and future existence to the level of lower-grade concepts of actual existence and nonexistence it follows that the traditional intuitively well-comprehensible concept of time is incoherent and therefore only the continua of spatial type can exist.

Likewise, there is no reason to think that from the irreducibility of the high-grade concept of Free-Will behaviour to the level of lower-grade concepts of lawful and stochastic dynamics it follows that the intuitively well-comprehensible commonsense concept of Free Will is incoherent. It is illegitimate to maintain that all basic aspects of reality *must* be categorially trivial. Longing for a categorially simple world must not blind us to the extent that we deny our most subtle intellectual capacities — our abilities to comprehend the content of high-grade concepts.

The nontrivial character of the concept of natural causation

Those who argue that the concept of Free-Will behaviour is incoherent because the only intelligible varieties of behaviour are allegedly the deterministic and random

ones, think that the concept of causally deterministic dynamics is simple. They have hardly ever been interested in what causality really means and how it is metaphysically possible.

The objective, natural sciences explore only the spatiotemporal formal structure of the world: its abstract form and not its content (see Russell, 1927, p. 163; Carnap, 1969, pp. 19, 28, 107). The task of sciences is to discover the laws of nature — the universal structural regularities present in the world — whereas the problem of whether these laws are sustained, e.g., by the divine will or by the essence of the material substance, is not the business of science but of metaphysics. Given that the laws of nature as they are do hold firmly, the knowledge of how they are sustained has no pragmatic significance whatsoever. To extinguish the metaphysical curiosity, it is suggested to rely upon the principle of parsimony by looking first for the simplest reasons, and to accept therefore the belief that the world's order, including the causal one, is guaranteed by the material substance itself. As the fundamental laws of physics are relatively simple, people consider this belief to be reasonable, yet they never wonder seriously how the causal process might work. Let us ask this question then.

The causal sequence of the simplest type can be conceived as follows. There is some state of affairs S1 at the moment t1. Because of causality, S1 gives rise to the state S2 an instant later, at the moment t2. How can this happen? Will S1 cease to exist at t1 and S2 arise from nothing at t2, so that cause and effect would be temporally separated? Hardly so. Rather, it is reasonable to assume that the causal process is continuous: the state S1 *changes* into the state S2. Admitting that the change is something more than the mere possession of a sequence of different properties at different times, i.e. that the pace of change of a state is itself a definite characteristic of that state, we reach the following conclusion. While the transformation of the state from S1 to S2 is determined purely logically by the state's pace of change, the causality in its substantial sense concerning the physical causal 'activity' of the material substance itself is effective in determining one aspect of the state — its pace of change — by other aspects of that state *at the very same moment*. All fundamental equations of physical dynamics express just this dependence, both sides of the equations referring to the physical situation at one and the same moment. *The substantial causal process consists not in the determination of the present by the past, but in the self-determination of the present independently of preceding conditions.* Sounds like the 'obscure and panicky' metaphysics of libertarianism? If one contends that the libertarian notion of an originaive agent capable of contributing something independently of antecedent causes and conditions is obscure to a discomfoting degree, if not positively mysterious, one has to concede that then the ordinary concept of causation should also be regarded as 'obscure'. It is useful to bear in mind that the most traditional concept of causation is not trivial, and is reminiscent of the libertarian concept of agent-causation according to which the Free agents self-determine their own character partly independently of their antecedent properties, being the prime movers or first causes of their own actions. The libertarian Free activity is not so disparate from the natural causal process as it seems to be at the first glance. Causation may well be compatible not only with the deterministic choice but also with the Free-Will choice.

Private Honesty and Scientific Progress

A claim of being unable to obey the Libertarian Imperative

An antilibertarian may concur that the Libertarian Imperative is indeed a legitimate first principle of truth-seeking behaviour. He may even agree that he is able, in principle, to perform any particular behavioural act necessary for obeying the Imperative, such as uttering various claims in defence of libertarianism, executing different operations in conducting the scientific research aimed at discovering which laws of physics are violated by brain dynamics, etc. Yet he may contend that he is not able to support libertarianism in any systematic manner, because he is a lawfully functioning system currently not ‘programmed’ to behave this way and is therefore immune to the ‘brain-computer virus’ called Libertarian Imperative. Is he right? This question raises the issue of honesty about private matters.

The concepts of public and private honesty

Suppose an ingenious scientist has devised an experiment for demonstrating that one cherished principle of physics does not hold universally. If at some critical moment in the course of the experiment a control button is pressed a novel result ensues, but if the button is not touched nothing noteworthy happens. The scientist invites his opponent to use the device himself to become convinced that the unusual event will indeed take place. But suppose further that his opponent is so unwilling to concede any violation of the accepted orthodoxy that he withholds from pressing the button when required, yet insists that he did and claims that the experiment has failed to provide any new evidence. In the given case one can turn to impartial persons asking them to check whether the button is pushed in fact. But what if such public control is impossible? This is just the case with volitional efforts: only the person himself who is supposed to try to exercise volitional efforts can know if he in fact does so.

For the sake of brevity, I shall call the honesty about matters which are publicly accessible the *public honesty*, and the honesty about matters which are only privately accessible the *private honesty*.

Private honesty as a possible prerequisite of further scientific progress

The results of modern scientific investigations are highly trustworthy because all steps of the objective scientific inquiry (observing, experimenting, theorising, etc.) must be accessible to public inspection — such is the methodological requirement of objective sciences. The honesty with respect to objective scientific matters is exclusively the public honesty subjectible to effective interpersonal control. Private honesty has not been a precondition for the advancement of sciences. However, this may not be the case any more.

If conscious beings possess Free Will then true progress in consciousness research is possible only when we follow — and *then* we definitely *can* follow — the Libertarian Imperative by acting in accordance with the thesis that our brain dynamics are to a substantial degree Free-Volitional, and regarding the exploration of everything related to voluntary behaviour as extremely important. But an earnest endeavour to follow the Imperative presupposes private honesty. Hence, private honesty may be one of the most important prerequisites of further scientific progress.

The Peirastic Rejection of Materialism

There are various empirically grounded arguments which question the validity of materialism (see, e.g., Lowe, 1996; Uus, 1994). The argumentation used in justifying the Libertarian Imperative gives us, in addition, a firm *logical* basis for challenging materialistic ideology.

The Libertarian Imperative requires us to try to reject any philosophy about our nature which claims that we are entirely lawfully functioning creatures. This means that we must also try to regard materialism as fallacious. Such abandoning of materialism, if we succeed in it, would not be epistemic: the Imperative is not based on *knowledge* that our behaviour is not law-governed. Rather, such discarding of materialism may be called *peirastic* (from the Greek word *peirastikos*: involving, or performing, an attempt) because it is based on our ability, if we have it, to *try* to act and act in this way, and is logically justified for the reason that if this our ability is guaranteed by our Free Volition, we would be right in dismissing materialism, and if our abandoning of materialism has taken place in the course of our physically lawful functioning, then we were forced to act just this way in order not to spoil the materialistically lawful character of the world's dynamics.

The Libertarian Imperative urges us to discard the materialistic world view together with all its specific impact upon our scientific research programs.

The Main Implications of the Libertarian Imperative for Consciousness Studies

A distinctive feature of consciousness-evoking brain processes

It is commonly agreed that in normal conditions the consciousness-evoking brain processes have definite impact upon the creature's overt behaviour — the impact mediated by phenomenal experiences which form the basis of voluntary activity. In the case of humans such activity may be, e.g., the production of reports about the occurrence and character of experiences. Only the acts of overt behaviour can serve as basic empirical data for *objective* scientific exploration of consciousness-evoking properties of brain processes. This position cannot be questioned.

However, because we are justified, due to the Libertarian Imperative, to reject the thesis that brains are just very complicated physical organs whose dynamics obey the laws of physics, and accept, instead, the view that the impact of phenomenal experiences upon the creature's overt behaviour is mediated by his Free Will, we can conclude that *a distinctive feature of consciousness-evoking brain processes is that normally they do not cause our behaviour via neural (purely physical) mechanisms*. This is a very important implication of the Libertarian Imperative for cognitive sciences, because it sharply contradicts the basic assumptions of materialistically motivated consciousness and brain research programs.

It is usually taken for granted nowadays that the causal chain *stimulus-evoked brain processes—phenomenal experiences—behavioural reaction to phenomenal experiences* is realised physiologically, by neural networks. It is argued that if a group of neurons does not project to the brain's motor areas responsible for our reporting on what we experience then the activities of these neurons do not contribute to conscious experiences directly. However, resorting to recommendations of the Lib-

ertarian Imperative and their generalisations, we can say that if one holds that the activity of the neurons which do not project to the brain's motor areas cannot be directly responsible for consciousness, then one erroneously excludes from the list of possible consciousness-evoking brain processes also *all* those processes which *are* directly responsible for consciousness, because reactions to phenomenal experiences are effectuated by Free-Will efforts and not by physical causality.

If we remain faithful to materialistic ideology we may fail to make a revolutionary empirical discovery that no neuronal causal link connects consciousness-evoking and behaviour-generating brain events.

The most fundamental brain research problem

One of the main objectives of brain research should be elucidating which brain events the Free-Will efforts evoke: how the Will modifies the activity of neuronal networks in defiance of natural causes. These investigations would be the most fundamentally important of all presently conceivable scientific inquiries, because while hitherto the principal task of natural sciences has been believed to be discovering universal regularities — the laws of nature — in the behaviour of the world, the object of these novel investigations would be a 'supernatural' phenomenon: causal impact of Free-Will efforts upon the dynamics of matter.

The possible interference of immaterial Will with brain dynamics may be an awkwardly rough process: manipulating the brain's functioning may require the expenditure of physical energy, and would then violate the conservation of energy principle. This is how materialists usually fancy the soul-brain interaction (see Dennett, 1991, p. 35). But the Free Will may guide brain dynamics also in a very subtle manner by determining what the laws of nature leave indeterminate: by commanding quantum chance. Since any possible single outcome of a quantum process is not prohibited by the laws of quantum physics, such commanding by the Will of physical processes would not violate any conservation laws. This is how antimaterialists often conceive the mind-brain interaction (see Eddington, 1929; Popper, 1966, 1973; Eccles, 1994; Hodgson, 1991, 1994a,b, 1996a,b). There are also various other possible ways how the Will can interfere with brain dynamics. It is up to experimental research to elucidate how this interference is in fact realised. That we are able to execute our volitionally intended behavioural acts very reliably notwithstanding that the brain works under conditions of rather high hydrodynamical, chemical/biological, and thermal noise, that it is not shielded from disturbing electromagnetic fields, etc. means that the physical effects which are induced by Free-Will efforts and steer the brain's neuronal-level processes cannot be very weak and might thus be relatively easily discovered.

The exploration of Will-elicited brain events is not the duty of neuroscientists alone, but also of investigators from all those fields of research which can contribute productively to the study of that most intriguing of all scientific problems.

We have absolutely nothing to lose but we may gain immensely if we dare to try to discard materialism and profess libertarianism. Our wisdom, probity and courage are crucial for how this challenge is met.

References

- Beloff, J. (1994), 'Minds and machines: A radical dualist perspective', *Journal of Consciousness Studies*, **1** (1), pp. 32–7.
- Carnap, R. (1969), *The Logical Structure of the World* (Berkeley: University of California Press).
- Chalmers, D. (1995), 'Facing up to the problem of consciousness', *Journal of Consciousness Studies*, **2** (3), pp. 200–19.
- Chalmers, D. (1996), *The Conscious Mind* (New York: Oxford University Press).
- Churchland, P. (1995), *The Engine of Reason, The Seat of the Soul* (Cambridge, MA: The MIT Press).
- Dennett, D. (1984), *Elbow Room: The Varieties of Free Will Worth Wanting* (Cambridge, MA: The MIT Press).
- Dennett, D. (1991), *Consciousness Explained* (Boston: Little, Brown & Co.)
- Eccles, J. (1994), *How the Self Controls its Brain* (Berlin: Springer).
- Eddington, A. (1929), *The Nature of the Physical World* (London: Dent).
- Elitzur, A. (1995), 'Consciousness can no more be ignored', *Journal of Consciousness Studies*, **2** (4), pp. 353–8.
- Hardcastle, V. (1995), *Locating Consciousness* (Amsterdam & Philadelphia: John Benjamins).
- Ho, M.W. (1996), 'The biology of free will', *Journal of Consciousness Studies*, **3** (3), pp. 231–44.
- Hodgson, D. (1991), *The Mind Matters* (Oxford: Oxford University Press).
- Hodgson, D. (1994a), 'Neuroscience and folk psychology: An overview', *Journal of Consciousness Studies*, **1** (2), pp. 205–16.
- Hodgson, D. (1994b), 'Why Searle has not rediscovered the mind', *Journal of Consciousness Studies*, **1** (2), pp. 264–74.
- Hodgson, D. (1996a), 'The easy problems ain't so easy', *Journal of Consciousness Studies*, **3** (1), pp. 69–75.
- Hodgson, D. (1996b), 'Nonlocality, local indeterminism, and consciousness', *Ratio*, **IX**, pp. 1–22.
- Jackson, F. (1982), 'Epiphenomenal qualia', *Philosophical Quarterly*, **32**, pp. 127–36.
- Lewis, D. (1995), 'What experience teaches', in *Mind and Cognition*, ed. W.G. Lycan (Oxford: Blackwell).
- Libet, B. (1994), 'A testable field theory of mind–brain interaction', *Journal of Consciousness Studies*, **1** (1), pp. 119–26.
- Lowe, E.J. (1995), 'There are no easy problems of consciousness', *Journal of Consciousness Studies*, **2** (3), pp. 266–71.
- Lowe, E.J. (1996), *Subjects of Experience* (Cambridge: Cambridge University Press).
- Minsky, M. (1986), *The Society of Mind* (New York: Simon & Schuster).
- Popper, K.R. (1966), *Of Clouds and Clocks. An Approach to the Problem of Rationality and the Freedom of Man* (St. Louis: Washington University).
- Popper, K.R. (1973), 'Indeterminism is not enough', *Encounter*, **40**, pp. 20–6.
- Russell, B. (1927), *An Outline of Philosophy* (London: Allen & Unwin).
- Schrödinger, E. (1977), *What is life?* (Cambridge: Cambridge University Press).
- Searle, J. (1992), *The Rediscovery of the Mind* (Cambridge, MA: The MIT Press).
- Smythies, J. (1994), *The Walls of Plato's Cave* (Aldershot: Avebury).
- Uus, U. (1994), *Blindness of Modern Science* (Tartu: Tartu Observatory).
- Van Inwagen, P. (1983), *An Essay on Free Will* (Oxford: Clarendon Press).
- Warner, R. (1996), 'Facing ourselves: Incorrigeability and the mind–body problem', *Journal of Consciousness Studies*, **3** (3), pp. 217–30.
- Wiggins, D. (1973), 'Towards a reasonable libertarianism', in *Essays on Freedom of Action*, ed. T. Honderich (London: Routledge & Kegan Paul).