THE LIBERTARIAN IMPERATIVE AND ITS IMPLICATIONS FOR CONSCIOUSNESS STUDIES

Undo Uus, Tartu Observatory, EE2444, Estonia. Email: uus@obs.ee

Abstract: The prevailing trend of deeming subjective experiences causally idle obfuscates consciousness research: the 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 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 agonizing. On the one hand, scientific observations strongly suggest that the world is thoroughly physical — a huge system of relatively simple fundamental physical entities obeying deterministic or probabilistic laws of dynamics. On the other hand, we are subjectively aware of undergoing phenomenal experiences and of being free originative 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 militant 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 the qualia in the language of orthodox physics are utterly unconvincing and doomed to failure because the qualia 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 more philosophers admit that the phenomenon which has been traditionally called consciousness and is now often called phenomenal consciousness has an intrinsic qualitative content that does not fit into the strictly physicalistic world scheme. They suppose that the phenomenal consciousness is either like some sort of 'field' — the field of experience — which exists over and above the physical reality, 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 do not interfere with the physically determined causal behaviour of the world. By assuming that the physical domain is causally autonomous, the physical world is theoretically safeguarded from any 'marring' impact from the extraphysical: the existence and dynamics of the physical world are supposed to be *exactly* the same as in the case of the purely physical world. Moreover, the physical domain is considered to be not only causally autonomous but also causally sufficient — a 'causal dictator' of all reality. It is held that the physical determines not only its own dynamics but also the entire existence of the nonphysical (Searle, 1990; Chalmers, 1995, 1996). 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 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 evident 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 criticized 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 such-and-such epiphenomenal experiences. It can even be agreed that everyone of us knows, by being aware of one's own experiences, that this theory is correct. 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 issue assertions of evidential value for judging whether these speculations have any bearing on reality. 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 the 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 holds to the view that the nonphysical is causally idle — the view called property dualism to tell it apart from the interactionist or substance dualism — and for that reason most of the modern theories of phenomenal consciousness are demolished by materialists before they get really off the ground. The philosophy of consciousness is in a stalemate.

Can There Be the 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. *The empirically grounded science of phenomenal consciousness is possible only if the physical world 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 uncompromisingly that there can really be any phenomenology, any intrinsic qualia of experiences.

The explicit exposition of Dennett's Dictum is one of the most fundamental achievements of the philosophy of mind. This Dictum must be regarded as the cornerstone of any logically sound philosophy of phenomenal consciousness.

A painful option: phenomenal consciousness vs. the modern scientific world view

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

We face the dilemma: either the contemporary scientific world concept is correct and there can be no fact-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 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 fundamentally 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 or an environment 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. My main goal in this paper is to show 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?

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 realizers. 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 (see Minsky, 1986, p. 288), and that the principle of 'could have done otherwise' should be dismissed as nothing better than a long-lived philosophical illusion (see Dennett, 1984a). 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, has no properties of nonphysical origin, and hence cannot behave Free-Volitionally. 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 so implausible to think that the brain, unlike simpler physical systems, might be associated with one more nonphysical property — Free-Voluntariness — which so well fits in with the phenomenal qualia whose hedonic aspects 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 an 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 that 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 incontroversible 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 (1984b, 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 libertarianist Free Will is an illusion, just a deceptive feeling that cannot be taken seriously.

There are two main reasons why people of contemporary 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 specific intellectual abilities of phenomenal intuiting one needs for analysing the qualitative content of experiences are unnecessary for modern objectivistic science-making and are, therefore, ignored or even derisioned.

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 or that we do not have Free Will (see van Inwagen, 1983, p. 21). 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 *act*. True, in the majority of cases praxeology is based directly on epistemology: a claim that things are so-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* so-and-so. However, in certain peculiar cases praxeology gets detached from epistemology by acquiring priority over it. 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 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. However, these simple concepts should be mastered *correctly*.

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 (or the deterministic decision as a 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 realized 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 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 a philosopher 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 (1984b). 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 little 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 a platitude 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 very simple. I think most people are aware of that reason

subconsciously. Such awareness is evident, though not in a rigorously articulated form, in claims like: 'Any discussion is meaningless if there are no freely willing agents', 'Be kind to the deterministsfor 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 undoubtedly sound to perform certain acts in accordance with a premise we don't know 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-maximizing tactics of behaviour is 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 (from the viewpoint of pursuing 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. Or, to put it differently, it is unconditionally reasonable, provided we seek the truth, to try to behave as a libertarian, for if we attempt to defend the Free Will thesis in the situation that renders this defense futile, i.e. when we are *not* Free-Will creatures, this same situation prevents our attempts from being efficacious 'commanders' in the world, able to divert the course of events off the track along which it proceeds by the force of natural laws.

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 deterministic laws of brain dynamics were violated in my brain.

This attack would be to the point were the Imperative based on a thesis that it is always reasonable to *be* a libertarian: it is undoubtedly irrational to be a libertarian when one is aware of his deterministic functioning. But the Imperative is based on a thesis that it is always reasonable, *given that one is what one actually is*, to *try* to be a libertarian. The Libertarian Imperative thus construed is indefeasible because the following propositions are unassailably true: (i) nomically functioning beings cannot act otherwise than they do; (ii) the pursuing of libertarianism by Free-Will beings is the pursuing of truth; therefore, (iii) given that one is the way one actually is, *trying* to follow the Imperative may make the proportion of truth-concordant to misbeliefs-based behaviour in the world only better than it would otherwise be.

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 mentioned above 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 obscurantic, 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, and in the case of which the attempts to construct such explications have led to fallacious conclusions as if these concepts were logically incoherent.

Secondly, I show that the concept of natural causation, even if applied to the most simple case of the physical causation process, is 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 therefore 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 shall 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 sciences 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 intriguing 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 originative agent capable of contributing something independently of antecedent causes and conditions is obscure to a discomforting 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.

Lack of Private Honesty May Obstruct Scientific Progress

Libertarianism 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 an absolutely 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, in fact, law-governed, we cannot experiment with it because we cannot then act otherwise than we are forced to act according to these laws.

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 defense 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. The premises of the Imperative do not rule out the possibility that he *might* be right. But *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 scientists are offered to use the device themselves to become convinced that the unusual event will indeed take place. But suppose further that most scientists are so unwilling to concede any violation of the accepted orthodoxy that they withhold from pressing the button when required, yet insist that they did and claim 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 buttons are 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*. One can be, in principle, evidentially accused of not being publicly honest in any particular case, but one's deliberate deceit in private matters cannot be exposed by others.

Private honesty as a possible precondition of further scientific progress

There is admirably little fraud in scientific practice. The reason why it has been possible to keep the natural scientists' professional ethical standard exceptionally high is that all steps of the objective scientific inquiry (observing, experimenting, theorizing, 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. As this fact is generally known, people at large are convinced that human moral imperfection cannot bring their scientific pursuits to a mess like their various other endeavours that it has frequently thwarted. 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. But if in this case the scientists, though understanding the reasonability of the Imperative, nevertheless deceptively maintain, due to lack of private honesty, to be unable to try to act, and act, as is proper to Free-Will individuals, the advancement of consciousness studies would be blocked. Moreover, if living beings possess Free Will, the most fundamental direction of scientific research would be the investigation of everything related to voluntary behaviour, so that in this case private honesty is one of the most important preconditions of further scientific progress. If we are Free-Will beings, our scientific self-exploration is as vulnerable to our moral defectiveness as is human performance in many other areas of life.

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. Such justification is analogous to antithetic proofs: in certain cases some thesis can be proved not by showing, in the first place, that it is true, but by showing that its alternative(s) cannot be true. The simplicity of justification of the Imperative may even create an impression that it is a cheap sophistry.

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.

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 supernatural (demonic, divine) power, or whatever.

The epistemic-statement power of the Libertarian Imperative

The Libertarian Imperative is not an epistemic statement: it doesn't assert that we *know* that we have Free Will. However, for the reason that the Imperative requires us to try to behave on the basis of the thesis that we possess Free Will, obeying the Imperative is by its consequences to our activity equivalent to the acceptance by us of the belief that we *know* that we have Free Will.

The Peirastic Rejection of Materialism

The Libertarian Imperative requires us to try to reject *any* philosophy about our nature which claims that we are entirely lawfully functioning creatures. Given the present philosophical situation in the world, the most topical ideological implication of the Imperative is that we must 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 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 is necessitated by our physically lawful functioning, then we are forced to act just this way in order not to spoil the materialistically lawful character of the world's dynamics. The Libertarian Imperative compels us to discard the materialistic world view together with all it's specific impact upon our scientific research programs.

The Implications of the Libertarian Imperative for Consciousness Studies

The generalizings of recommendations of the Libertarian Imperative

The Libertarian Imperative justifies, strictly speaking, only the claim by an activity that it *itself* is Free-Volitional. Any suggestion about the wider domain of the Free-Will behaviour cannot be purely logically justified. It can only be scientific-hypothetically motivated, and this is what I am going to proceed with.

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 generalize the request of the Imperative by hypothesizing that all human beings are Free-Will creatures.

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

The public scientific manifestations of Free-Will activity

The possible intrinsic essence of Free-Will behaviour — such as the qualitative content of volitional efforts — cannot be studied by objective scientific methods. But one very important aspect of Free-Will activity is amenable to public scrutiny: this is the nonlawful character of the physical brain processes underlying our Free-Will behaviour. In the brains of Free-Will beings the basic laws of physics must be violated to a significant degree, and this can be established by objective methods.

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 phenomena of consciousness, and thus also of consciousness-evoking properties of brain processes. This position is sound in every sense and 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, including the presently most famous Crick-Koch project of visual awareness studies.

The ideological bias of Crick's and Koch's studies of visual awareness

Resorting to recommendations of the Libertarian Imperative and their generalizations, I can criticize Francis Crick's and Christof Koch's consciousness studies (see, e.g., Crick and Koch, 1992, 1995a,b; Crick, 1994, 1996) for serious ideological bias.

Crick's and Koch's consciousness research program, aimed at finding out where the neurons responsible for conscious awareness are located in the brain, and in what way they are firing, is, I would dare say, the most fundamentally important of all contemporary scientific endeavours.

This research project is basically empirical. There are our visual sensations of which we are empirically (experientially) directly aware, and which we are able to report. And there are our brain processes which we can also discover empirically. The research task is to establish, by means of finding out correlations between stimuli-evoked brain events, on the one hand, and conscious experiences (or, in case of animals, behavioural acts as effects of these experiences), on the other hand, which brain processes are necessary and sufficient for existence of visual sensations.

Proper scientific attitude does not allow one's theoretical sympathies to interfere with empirical studies. Crick and Koch sin against this principle. They take for granted that the causal chain *stimulus-evoked brain processes—phenomenal experiences—behavioural reaction to phenomenal experiences* is realized physiologically, by neural networks: they assume that phenomenal experiences *are* specific activities of certain sets of interacting neurons. Given the counterintuitive character of this assumption — it is extremely difficult, not to say impossible, to consider the phenomenal qualia to be *just the same things* as the patterns of neural firings (even Crick himself complains of impossibility of comprehending how the blueness of blue can be scientifically explained) — it is highly imprudent to apply this assumption as a basis for experimental research which does not even need it in the first place. Such faithfulness to physicalistic ideology may spoil the research project in question.

Crick and Koch argue (1995a) 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 immediate visual awareness directly, and, relying upon this thesis, they deny that a certain set of neurons, though activated by visual stimuli, can give rise to visual sensations. This thesis is inferred from two propositions: from the commonsense observation that one is able to report one's subjective experiences, and from the materialistic hypothesis that brain functioning is physically explainable. The first proposition cannot be questioned because we know from first-hand experience it to be true but the second proposition is suspicious.

The process of reporting consciousness could be physically explained only if subjective experiences were physical processes. Stipulating this to be the case, I would suggest to Crick and Koch a simple exercise for testing their methodology: take some sophisticated robot and elucidate which processes in its electronic 'brain' *are* which subjective experiences. The architecture of the robot's brain and the way it processes information are known in full detail. Is it then an easy empirical task to find out which information-processing patterns are correlated with which subjective experiences? Not so? But why not if experiences are nothing but specific patterns of physical processes? And *why* is it impossible, as also Crick and Koch admit (1995b), to convey with words and ideas the exact nature of a subjective experience, while everything about the neuronal activity associated with this experience *is* conveyable with words and ideas, *if* subjective experiences are nothing over and above neuronal processes?

In view of the chronic troubles with reconciling the commonsense insight into the nature of consciousness with physicalistic doctrines, it is wise to listen to what the Libertarian Imperative has to say about this problem. Relying on recommendations of the Imperative and their generalizations, one is justified to say the following.

Our voluntary behaviour is Free and cannot therefore be determined by physical causality but must be the result of an impact of nonphysical origin upon our brain. As our reactions to experiences are predominantly voluntary, one of the basic characteristics of experience-evoking brain processes is that they do *not* cause our responses to experiences via neuronal mechanisms. (This conclusion doesn't depend even on whether experiences are brain processes or something else.) Hence, if one holds like Crick and Koch (1995a) 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. If Crick and Koch remain faithful to materialistic ideology they will never reach the goals of their research and fail to make a revolutionary empirical discovery that no neuronal causal link connects consciousness-evoking and behaviour-generating brain events.

The blockade of important discoveries by scientific prejudices is not an unknown phenomenon in the history of science. Take the story of the discovery of nonconservation of parity in microphysical processes (Franklin, 1979). The parity conservation was strongly believed in by the physics community until two physicists proposed in 1956 that it may be violated in the weak interactions. After a couple of months this hypothesis was experimentally corroborated. In retrospect it has been established that certain experiments performed as early as 1928 provided evidence for the parity nonconservation, but at that time there was absolutely no recognition of their significance. The two physicists were 29 and 34 when they proposed the hypothesis worthy of the Nobel Prize. I wonder how young should those neuroscientists be who dare to challenge materialistic doctrines, fearless of losing face for reneging cherished beliefs.

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 the 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. 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. Much help here should come from the technically and intellectually powerful physics community. The problem of causal efficacy of Free Will is intimately tied with the question about the intrinsic essence and fundamental properties of physical reality.

Freedom of the Will and quantum indeterminism

Although empirical investigations and not theoretical speculations can establish how Free Will in fact interferes with the brain's physically lawful dynamics, a very plausible hypothesis about this process is worth mentioning.

Materialists, trying to discredit the concept of Free Will, usually caricature the possible interference of immaterial Will with brain dynamics as an awkwardly rough process. They argue, for example (Dennett, 1991, p. 35), that manipulating the brain's functioning would necessarily require the expenditure of physical energy, and would thus violate the conservation of energy principle. This is not true. The Free-Will behaviour can be realized in the physical medium so elegantly that although on the one hand the laws of physics would be *evidently violated*, on the other hand such behaviour would not be *definitely barred* by the laws of physics. This is the case when the Will exercises its Freedom by selecting between alternatives that quantum indeterminacy leaves open. Arthur Eddington (1929) was the first to point at this possibility. This idea has been defended, among others, by John Eccles and Karl Popper, and is presently most vigorously advocated by David Hodgson (1991, 1994a,b, 1996a,b).

When the Will directs quantum chance in its own aims, the lawful statistics of sets of quantum events would be violated — if not the low-order distribution functions, then certainly the higher-order ones: 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. However, since the nature of statistical laws is different from that of deterministic laws, any possible single outcome of a quantum process is not prohibited by the laws of quantum physics. Even of ensembles of Will-determined selections of quantum events we cannot assert with *absolute* certainty that they violate the probabilistic law as from the strictly formal viewpoint such ensembles may be the *very*-low-probability instances of blind quantum chance.

The hypothesis that Free Will guides brain dynamics in a subtle manner by determining what the laws of nature leave indeterminate should deserve more attention by neuroscientists than various hypotheses which assume the mind to be some kind of non-physical psychic field exerting finite physical force upon the brain's physical constituents. However, one may contend that the commanding by Will of quantum chance is a mystical process and therefore incredible. It is true that our Will doesn't directly determine the outcomes of quantum processes: we are consciously aware that our volitional efforts are not aimed at making such decisions. If our Will indeed operates via choosing between quantum options, there must be something hidden from us which transforms our volitional intentions envisioned in everyday notions into a myriad of quantum-level microselections necessary for effectuating these intentions. In principle, it might be possible to discover this 'something'. In that connection it should be mentioned that the purely physical quantum chance is also a mystical phenomenon, and even such that it is logically impossible to find any deeper explanation to it. According to the concept of quantum chance there is no internal mechanism, no hidden parameters — no reason whatsoever — why a particular event of all possible quantum events occurs: the outcome is occasional simply because of a specific unanalysable fundamental property of physical reality. Yet this probabilistic essence, though unanalysable, somehow interplays with various spatial, temporal and energetic properties of physical processes in determining their concrete statistical characteristics. Isn't that mystical? One should be cautious in regarding everything that seems mystical as incredible: even the primitive metaphysics of the material world is mystical.

An Appeal To Scientists: Not To Hinder Scientific Progress, Discard Materialism, and Profess Libertarianism!

Modern science is loyal to the materialistic world concept that may be, however, in error as it fails to account for phenomenal consciousness. If consciousness is, as common sense tends to hold it to be, a causally efficacious nonphysical entity, then belief in materialistic doctrines blocks the most fundamental directions of scientific research.

Immaterial consciousness could be causally significant by serving as the basis of Free-Will activity. But are we justified in assuming the possession of Free Will? This problem has, fortunately, a simple *praxeological* solution for the reason that we are able to exercise our incompatibilist, libertarian Freedom of Choice, if we have it, even while remaining ignorant as to whether we do have it. We can argue as follows.

Let us not speculate whether Free Will is possible metaphysically. Let us not ask if we have any empirical evidence in support of or against our possessing of Free Will. Let us take an experimental stance and try whether we can behave as is appropriate for Free agents. If we do lack Free Will, such experimenting spoils nothing because we cannot then experiment with our behaviour at all as we then would be unable to act otherwise than determined. If we have Free Will, we will succeed in acting as libertarians and such behaviour is then justified as congruent with the truth.

Regrettably, the enchantment with the successes of physicalistic sciences has created an intellectual atmosphere utterly hostile to nonmaterialistic views, and therefore it is psychologically extremely difficult to be obedient to reason and to try *honestly* to act in the libertarian manner: one has every reason to be afraid of destroying one's scientific reputation, and many may dislike losing face by forsaking their avowed convictions. Realizing that we may have entered an era when the lack of scholarly integrity may impede scientific advancement, I feel obliged to step forward with the following appeal:

Dear Scientists,

In order not to hinder possible major scientific and intellectual advancement of humankind,

let us try earnestly to abandon materialism and advocate libertarianism,

for the reason that our such attempts are justified not only in the case when we in fact possess Free Will, but also in the case when we are law-governed physical beings because then any efforts we manage to exercise are particular manifestations of nature's lawful causal order, and had thus to be necessarily exercised not to break this order,

and for the reason that if we remain faithful to materialistic doctrines we run the great risk — in view that we may actually have the libertarian Free Will — of simulating the intellectual conduct appropriate to physically deterministic intelligent creatures very perfectly, and defending the antilibertarian claims very ingeniously, just owing to our possession of immaterial consciousness and Free Will, thereby spitting into the well we are drinking from, and gravely obstructing the progress of sciences.

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

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