

**THE PHYSICALITY OF MIND  
AND THE  
PROBLEM OF FREE WILL**

by

**Kimberly Brown**

**A thesis submitted in conformity with the requirements  
for the degree of Master of Arts  
Department of Theory and Policy Studies in Education  
Ontario Institute for Studies in Education of the  
University of Toronto**

**©Copyright by Kimberly Brown 2001**



National Library  
of Canada

Acquisitions and  
Bibliographic Services

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

Bibliothèque nationale  
du Canada

Acquisitions et  
services bibliographiques

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file Votre référence*

*Our file Notre référence*

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-58712-6

Canada

**The Physicality of Mind  
and the  
Problem of Free Will**

**Master of Arts  
Department of Theory and Policy Studies in Education  
The Ontario Institute for Studies in Education of  
The University of Toronto  
2001**

**Kimberly Brown**

**Abstract**

It is my thesis that a person who is convinced of possessing unequivocal freedom of will has indeed underestimated the extent to which psychic determinism governs human mental life. Free will of this kind would be conceptually plausible if and only if mind is disengaged from body. I aim to introduce more order and explicitness than at present exists into mind–body analyses and the problem of free will. My aim determines my material, which is primarily concepts and their referents. My method is chiefly metaphilosophical scrutiny and the ordering of concepts. Although I will primarily be concerned with the evolution of ideas regarding mental causality, consideration of the antitheses mind–body, unconscious–conscious, free will–determinism is unavoidable. It will make for easier discussion to begin by contrasting and comparing these concepts with one another. My intent is to mitigate the tensions amongst various conceptions of mind and body within the larger conceptual framework of causality.

# Acknowledgments

I am indebted to Christopher Olsen for introducing me to the subject of this thesis, as much as his intellectual stimulation, guidance, inspiration and conversations about the theories contained within.

Thanks also to David Jopling who, as the other member of my thesis committee, provided several valuable suggestions for its expansion and improvement.

The brain is wider than the sky,  
For, put them side by side,  
The one the other will include  
With ease, and you beside.

The brain is deeper than the sea,  
For, hold them, blue to blue,  
The one the other will absorb,  
As sponges, buckets do.

The brain is just the weight of God,  
For, lift them, pound for pound,  
And they will differ, if they do,  
As syllable from sound.

Emily Dickinson, 1862

# Contents

Abstract	ii
Acknowledgments	iii
Contents	v
Introduction	1
Chapter 1	
Human Nature As A Complex Problem	2
1.1 The Evolution of Ideas – Causation	2
1.2 René Descartes: Psychophysical Dualism	4
1.3 Mind–Body Metascience: the Problem of Definition	11
1.4 Benedictus Spinoza: Psychophysical Parallelism	14
1.5 William James: Evolution-Driven Bio–Philosophical Psychologism	20
Chapter 2	
Hard Determinism and the Rediscovery of the Unconscious	31
2.1 What’s all the fuss about?	34
2.2 The Overdetermined Ontology of Consciousness	39
2.3 Freud’s Epistemic Crisis	40
2.4 Reflex-Arc Approach to Consciousness	49
Chapter 3	
Psychic Determinism and the Problem of Free Will	58
3.1 Categories of Causation: The “Layer” Model	59
3.2 The Theoretical Revolution	62
3.3 The Unconscious and Its Relation to Consciousness: Surface Structure and Deep Structure	67
3.3.1 Philosophy, Dynamic Psychiatry and Neuropsychiatry	77
3.3.2 A Case for Intentional Unconscious Information Processing	82
Conclusion	94
Bibliography	100

# Introduction

The question whether we are free in our thought and actions is highly debatable. It is essential for freedom that there should be motives allowing for different choices between which we choose. It is essential that these choices not be determined. We may call this indetermination or free-will. The purpose of this thesis is to consider whether this exists.

Some may wonder why the problem of free will and determinism has been such a vexing one. It seems as though it is one of those philosophical problems where even trying to articulate it has proved taxing and somewhat ridiculous. What is more, it is a problem where each of the professed solutions—hard determinism, soft determinism (compatibilism) and indeterminism—have given rise to the most intolerable tensions concerning the interface between mind and body. It seems as though each theoretical perspective, as convincing as it seems at the time of interpretation, comes up short and is mistaken on some particular issue or overlooks important data to be included in a comprehensive understanding regarding a complete metaphysics of persons. And yet, despite the fact there is no consensus among philosophers on this question or any prospect of an immediate solution, there have been a multitude of problematic claims, issues and dilemmas concerning free will and determinism since “the dawn of Christian Europe” (Koestler, 1960: 2 [unnumbered page]). This is precisely where our analysis begins and the point at which theoretical argument and ontological confusion loom large.

# Chapter 1

## Human Nature As A Complex Problem

### 1.1 The Evolution of Ideas – Causation

Throughout Western philosophy determinism has played a central, indeed crucial, role in discussions of fundamental issues arising in metaphysics. Nowhere is this more apparent than in the centuries-old controversy over freedom of the will. Thus the key to unlock the free will–determinism dilemma may be found precisely within the cluster of problems and questions revolving around conceptions of causation. Historical doctrines of determinism refer to different kinds of determining conditions, but each implies that every event is caused; every event is determined.

In most versions of the controversy, free will and determinism are considered to be antithetical philosophical concepts. The former suggests that individuals are able to choose and act according to their own will, assuming perhaps all too confidently that ‘will’ is prime mover in the mental and spiritual realm only; whereas the latter implicates universal causation in all its complexities, insofar as all events, including human thought, action, interaction, and reaction, are determined by prior causes. But as we shall see, not all determinists are absolutists and not all free willers are compatibilists. Most generally, determinists considered ‘will’, more or less, as involving the locus of interaction between mental and physical realms assigning hierarchal significance to mechanistic entities. Free



will–determinism claims were specifically contingent upon images of human beings in both the social and the natural sciences, and as such, conceptions varied in both degree and kind. This conflict between the two kinds of explanations led to significant differences in theories of ‘will’. Thus the notion of a causal chain is inextricably implicated in the free will–determinism controversy we are considering.

While conceptions of causation have had a long history it is important to realize the shifts in determinist commitments. And while each doctrine of determinism refers to different kinds of determining conditions, each implies that every event is determined. For example, modern physics departed from strict determinism and, in so doing, overhauled the entire scientific outlook on the world as conceived by science up to the early twentieth century. Quantum mechanics and Heisenberg’s derivative principle of indeterminacy resulted in a probabilistic conception of natural law. Events, at least at certain levels of systems, were no longer regarded as inexorably and absolutely determined; rather, their occurrence is a matter of high or low probability. Hence, the overthrow of strict determinism was a shattering development in modern science. Some of the giants of the field who had themselves contributed to its demise could not abide by it. Albert Einstein, in an oft-quoted plaint, insisted “God does not play dice with the world” (Clark, 1971: 414). But in this he may have been mistaken. Perhaps, indeed, God does play dice, though – and this may be a consolation of sorts – the suspicion is that the dice are loaded. Or, perhaps, there is no God to play dice!

This is not to say physical and psychological events are haphazard or lacking structure. Rather, the older, absolutist doctrines of determinism gave way to a softer

determinism, in which the structure and coherence of mental and physical life assumes a probabilistic rather than absolute, immutable character. And while it is interesting to explore the remarkable range of controversy created by arguments for and against strict determinist cause–effect, billiard-ball hypotheses, it is far beyond the scope of this thesis. Thus for our purposes, we need be concerned only with the philosophical shifts in causal paradigms. And just as modern cosmology started with the Newtonian revolution, modern philosophy starts with Descartes. Conceived as such, it is only reasonable to explore, for the present discussion, the critical importance of Descartes’s theoretical contributions for understanding the nature of causation and the mind–body problem.

## **1.2 René Descartes: Psychophysical Dualism**

There tends to be a core notion of determinism running through most historical doctrines which shows why every kind of determinism – fatalistic, physical, psychological, theological–threatens free will. The principal line of argument for determinism goes something like this: since nothing comes from nothing, and everything that exists has a cause, determinism developed historically as the view that everything that exists is the necessary and inevitable result of antecedent causes and cannot be otherwise than it is. Determinism, as such, may be thought of as a special thesis about the causal structure and interrelated complexity of human nature and world at large. But in complete contrast to the necessary, dependent, deterministic material universe which Descartes, Copernicus and Galileo described, stands the free will of thinking mental substance, as Descartes called it.

The doctrine of free will denies that determinism applies to the actions of human beings. Proponents of the doctrine of free will would claim that human actions, unlike the mechanical motion of the planets or clockwork machinery, are not determined by antecedent physical causes. Rather, human beings as conscious, thinking substances are free in their actions and choices, not causally determined. So if I am insulting to another person; if I decide to become a rocket scientist, criminal or a saint; if I make a contribution to a charitable cause, the doctrine of free will claims that these acts are done out of my own free will, that I am a free agent in doing them, and in all my other deliberate actions as well. And since my will is free, since antecedent causes do not necessitate my actions, I am responsible and in control. In direct contrast, a strict determinist would claim that I am not responsible and that my actions are the inevitable and necessary result of a host of antecedent causes. Soft determinists, alternatively known as compatibilists, argue that, although we are determined to do whatever we in fact do, we can nevertheless still be held responsible because our self makes the decision and performs the action, thus moral responsibility is compatible with determinism. The quarrelsome and explicitly problematic claims articulated above get at the heart of complexities surrounding dualistic and monistic analyses.

For Descartes, it is of course the case that human beings as thinking substances are free in their thinking, affirming, denying, and willing. Freedom of human will, for Descartes, is infinite and unlimited. Descartes's dualism established the opposition between thinking substances as having free will and physical substances as being subject

to causal determination. Thus, the mind–body problem becomes inextricably linked to the free will–determinism controversy.

The impact of Cartesian dualism is profound for several reasons. First and most fundamental is the impact of dualism upon the concept of a human being. It is not only the world which consists of two irreducible, divergent, distinct, opposing substances and their attributes, but it is the individual human being, who now may be seen to be split in two. Cartesian psychophysical dualism severs mind from body. The historical dilemma goes something like this: Am I not a thinking thing, a mind, a consciousness with free will? But am I not also a body, spatially extended, measurable, quantifiable, an organic mechanism which is mechanistically driven and causally determined? (cf. *Sixth Meditation*).

According to Descartes's thesis, the mind and body, *res cogitans* and *res extensa* are utterly, absolutely distinct – one material, the other immaterial, one determined, the other free. (More sophisticated versions of dualism will be addressed later.) It seems as though, at least for now, the universe as it exists consists of two kinds of substances: mental and physical, and this mirrors precisely what is inside of human beings, the same unbridgeable gulf between mind which occupies no space and a body which cannot think. Descartes led us into an extreme impasse between mind and body, insofar as they are so completely different, and yet mind and body are causally interactive in some mysterious way. But his argument runs counter to the thesis of *monism* which holds that mind and body are expressions of one and the same substance. The kind of "interaction" we might postulate within monism would have to be radically different from the kind of mind–body interaction postulated by Descartes. But how is interaction even conceivable within

Descartes's dualism of two such radically different "substances"? The evidence of everyday living demonstrates the reality of causal relations and interconnectedness from that which is mind to that which is body and vice versa. However, according to Cartesian dualism, this is untenable because if Cartesianism is taken to its logical conclusion, there could be no interaction. Thus the actions which one's mind cause in one's body, for Descartes, remained inexplicable. For how could one's mind, which occupies no space, and is not physical, make one's body move. Motion is an attribute only of physical things and can be caused only by billiard-ball or clockwork impact upon other physical things.

Descartes explains in *Meditation VI*:

But nevertheless, on the one hand I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing; and on the other hand I have a distinct idea of body, in so far as this is simply an extended, non-thinking thing. And accordingly, it is certain that I am really distinct from my body, and can exist without it. (1986: 54)

Since criticism is the due of genius, Descartes's thesis gave rise to a domino effect of innumerable interpretative claims. For example, T.Z. Lavine tells us:

Descartes's sharp correspondent Antoine Arnaud, a young theologian who was the first to point to the Cartesian Circle . . . wrote to him that since Descartes has clearly and distinctively perceived himself to be a thinking thing, this leads to the conclusion that man is "entirely spirit, while his body is merely the vehicle of spirit; whence follows the definition of man as a spirit which makes use of a body." In the twentieth century British philosopher Gilbert Ryle similarly attacked Descartes's mind-body dualism representing mind as a "ghost" in a machine. (1984: 126)

Two things may be noted. First of all, Descartes's conception of mind-body had both "catastrophic" (Koestler, 1960: unnumbered p. 2) and profound consequences for conceptions of free will and determinism. First, the catastrophe consisted not so much in splitting up the world into realms of matter and mind, but in the identification of mind

with conscious thinking only. It is plausible to suggest that maybe Descartes was trapped in an extremely fragile political bind which explains his move to appease both scientific and religious commitments. Perhaps his compromise between the powerful new science, with its mechanical, deterministic laws of motion of physical bodies in space, on the one hand, and the powerful Church with its dogmas of a perfect, infinite spiritual being, creator of man, kept the judge, jury and executioner at bay. Descartes's dualism, to be sure, provided a way to ease the bitter enmity between science, on the one hand, and religion on the other. Be this as it may, Cartesian psychophysical dualism granted physical substance its motion according to causal laws, its determinism, and its predictability under the exclusive domain of science. And immune from science, from the laws of physics, from deterministic claims stands mental substance – conscious thinking, remembering and feeling. This substance was considered to be not spatially extended, not causally determined, not quantifiable, not predictable – a substance whose “laws” of operation were defined exclusively by the Church, with no interference from science.

Thus Cartesian psychophysical dualism, on the one hand, gave scientists matter and its mechanical laws of motions; and on the other, theologians received jurisdiction over mental substance and more importantly, control over the souls of human beings. But Descartes's commitment to and defense of metaphysical freedom of the will began to waiver in the *Fourth Meditation*:

. . . the will simply consists in our ability to do or not to do something (that is, to affirm or deny, to pursue or avoid); or rather, it consists simply in the fact that when the intellect puts something forward for affirmation or denial or for pursuit or avoidance, our inclinations are such that we do not feel we are determined by any external force. (1986: 40)

In the above passage Descartes's description of the will is synonymous with conscious subjectivity and voluntary action. However, his choice of words "we do not feel we are determined" leaves the door wide open for full-blown interactionism and the genesis of ideas regarding the illusory feeling of freedom with respect to one's position of subjectivity within space and time. What is more, by the *Sixth Meditation* Descartes tells his reader that the mind and body are more intimately conjoined than are a pilot and his ship:

Nature also teaches me, by these sensations of pain, hunger, thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit. If this were not so, I, who am nothing but a thinking thing, would not feel pain when the body was hurt, but would perceive the damage purely by the intellect, just as a sailor perceives by sight if anything in his ship is broken. Similarly, when the body needed food or drink, I should have an explicit understanding of the fact, instead of having confused sensations of hunger and thirst. For these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body. (1986: 56)

Descartes's psychophysical dualism shifts from being *simply* a dichotomy between mind and body to a somewhat more elaborate and complicated interactionism of mind-brain-body. There seems to be a synthesis of that which is material-organic with conceptions of mental-physical, insofar as causal modes operating on a lower level are necessary though not sufficient for the existence of higher levels. Descartes admits:

My next observation is that the mind is not immediately affected by all parts of the body, but only by the brain, or perhaps just by one small part of the brain, namely the part which is said to contain the 'common' sense. Every time this part of the brain is in a given state, it presents the same signals to the mind, even though the other parts of the body may be in a different condition at the time. (1986: 59-60)

In contrast to his previous dualistic position, Descartes's approach evolves insofar as choosing, acting and thinking are not matters of simple conscious control and brute

volition resulting from finely tuned reasoning abilities, but rather, are a culmination of levels involving both quantitative and qualitative psychoneurobiological interconnected dynamics. It is extremely interesting to note Descartes's usage of "common" sense, which "explicitly integrates the term *conarion* [pineal gland]" into his vocabulary (*Sixth Meditation*, footnote: 59). The conscious individual who thinks (s)he thinks is not the same as the organ which does the thinking. The conscious person is one component only, a series of transitory aspects, of the thinking person. Clearly Descartes's commitment to substance dualism matures. On the one hand, Descartes presents the mind and body as distinct substances insofar as the mind was under the influence of the purview of God (and/or the Church) and matter was governed by causal laws; but as we can see, his position shifts, incorporating the causal structure of brain into his mind-body analysis.

Owen Flanagan, in his *The Science of the Mind*, provides an interesting interpretation of Cartesian psychophysical dualism addressing the apparent confusion within Descartes's theoretical contributions. Flanagan expands on a technical philosophical distinction between tokens and types to explain Descartes's position:

Descartes wants to establish a *type-type dualism*. That is, he wants to establish that mind and body differ in some essential way. He wants to show that mind and body are different kinds of things, different in some ultimate metaphysical way. The overall logic of Descartes' argument involves citing some token-token difference between his mind and his body (which is supposedly shared by your mind and your body) and claiming that the token-token difference is of the right sort to establish a type-type distinction. . . . Descartes concludes that his mind and his body belong to two absolutely different metaphysical kinds. (1984:14)

But this complete distinction runs counter to the facts of interaction between mind and body. Descartes's eventual commitment to interactionism, to be sure, destroyed any



notion of a thinking independent free mind. If, on the other hand, there are two metaphysically distinct substances – i.e., a cognitive immaterial and a noncognitive material – then the idea of a free, causally *indetermined* mind, might make sense.

### 1.3 Mind–Body Metascience: the Problem of Definition

It makes conceptual sense that the notion of a thinking independent free mind came to be associated with that which is conscious and that which is spatially free from material constraint. What is equally important to note is that since the time of Descartes, no other philosophical term is as popular, confusedly devoid of meaning, and subject to misinterpretation as ‘consciousness’. Consciousness gave the individual a sense of independence, power and responsibility; nothing was beyond oneself to learn; one’s conscious mind was primary and free, though perhaps bestowed on one by God. But this power and freedom of the conscious mind is partly illusory, since the individual is more than his immediate awareness. Since Cartesian philosophy had no room for factors of which we are not directly aware and which influence thought and behaviour, the concept of the unconscious had to be re-invented. Lavine succinctly points out:

Although the Cartesian compromise failed, the influence of Descartes remains alive and a potent force; for over three hundred years, since the *Meditations* appeared in 1641, Cartesianism has dominated the intellectual world. To be a philosopher at all you must deal with him. You can agree, or disagree, or find another path—but you must deal with Descartes’s skepticism, his rationalism, his mathematical model of truth, his *Cogito* proof, his subjectivism, his metaphysical dualism of mental and physical substances, and his treatment of the mind-body problem. The mind-body problem has perhaps been the area of Descartes’s greatest influence. The difficulties of his dualism of mental and physical substance led to solutions in the form of theories of psychophysical parallelism, psychophysical interactionism, behaviorism, and phenomenology. (1984: 129)

Descartes's theoretical contributions enable us to understand the tensions inherent within the intricate relation between nonmaterial consciousness and material brain—the reality of two kinds of substances which are very much interrelated and connected. We can now begin to see how free will came to be construed as the corollary of consciousness. When we say that we are free we mean to convey the idea that we *feel* ourselves to be free and that we are in control of what we are doing in our actions, thoughts and situations. What has been obvious since the Cartesian era is the integration of a multiplicity of related evolution-driven bio-psycho-philosophical accounts of a metaphysics of persons. Hence, Descartes's mind–body dualism provides a fundamental philosophical grounding for the evolution of claims regarding the problem of free will.

Descartes was onto something important: questions regarding mind–brain–body, to be sure, but also one's sense of space and time; one's self and one's feeling that one has a certain integrity and perhaps more importantly for moral and religious theorists, a consciousness which persists and has continuity over time because life after death depends not at all on the physical constancy of one's body. It is here that the mind–body problem connects with personal identity, morality and immortality. The free will–determinism dilemma presents such a problem for most of us because it seemingly threatens to undermine the world at large and everything in it including our selves.

What we can say with confidence is that attempts to bring together different but related specialized methodologies regarding conceptions of human nature have often ended up in extremely fragmented vocabularies conceived as being either relevant and useful or irrelevant and absurd according to the particular religious, philosophical and

scientific analysis under consideration. The issue of explanation and description can be interpreted as one of definition. It is true indeed that philosophical theories are unlike scientific ones. Scientific theories, for example, ask questions in circumstances where there usually are agreed-upon methods for answering the questions and where the answers themselves are generally agreed upon, whereas philosophical theories may be considered “proto-theories”, i.e., the forerunners of scientific theory: “they attempt to model the known data in ways that allow those data to be seen from a new perspective, a perspective which promotes the development of genuine scientific theory” (Nelkin, 1996: 3). For our purposes, we may understand the philosophical theories put forth throughout this thesis as “proto-theories”. As such, they are useful precisely in areas where no large-scale scientific theory exists. We can see why scientists, philosophers and to a lesser extent theologians of the 17<sup>th</sup> century approached the problem of free will with such apprehension and enthusiastic vigour. All theoretical contributions were to a certain degree contingent upon each other for advancements in understanding. Linking mind with body was no easy conceptual task, especially when physiologists did not know how to build the bridge from the physical side showing how their pulsating cerebral tissues could cause mentality.

What seems true enough is that throughout recorded philosophical, religious and scientific history, issues which implicate human cognition and human action both outside and inside the confines of awareness have been cloaked in language indicative of the larger metaphysical concepts of free will and determinism. Hence, “philosophical insight” (Nelkin, 1996: 3) leads the mind–body debate onto paths that, in the end, will presumably

culminate in scientific theory. Nowhere is this more apparent than with the theoretical contributions of Benedictus Spinoza who, without a doubt, contributed to the rise of modern psychology.

#### 1.4 Benedictus Spinoza: Psychophysical Parallelism

The problem with talking about physicality is that such talk is generally confused with an appeal to reductionist materialism. Because the explanatory power of reductionist materialism is limited, dualism was and frequently is preferred as the reasonable alternative, although dualism in its own way is just as problematic as reductionist materialism. Spinoza rejects Descartes's position regarding mind-body and puts forth his own solution in the *Ethics* wherein mentalism fuses with materialism in monistic tradition—one substance only. In essence, monist interpretations shatter the independence of two separate realms advancing mind-body analyses into broader conceptions of mental and physical: non-reductionist materialism. Spinoza's conceptual analysis of Cartesian psychophysical dualism paves the way to full-blown neurophilosophical inquiry and in so doing takes conceptions of free will and determinism to new heights of understanding.

Spinoza says of Descartes:

He maintained that the soul or mind is united in a special way with a certain part of the brain called the pineal gland, by means of which the mind senses all movements that occur in the body, as well as external objects, and by the mere act of willing it can move the gland in various ways. He maintained that this gland is suspended in the middle of the brain in such a way that it can be moved by the slightest motion of the animal spirits. . . . He furthermore maintained that every single act of willing is by nature united to a particular motion of the gland. (*Ethics*, 201-202)

He then goes on to castigate Descartes:

Indeed, I am lost in wonder that a philosopher who had strictly resolved to deduce nothing except from self-evident bases and to affirm nothing that he did not clearly and distinctly perceive, who had so often censured the Scholastics for seeking to explain obscurities through occult qualities, should adopt a theory more occult than any occult quality. . . . Again, I should like to know how many degrees of motion mind can impart to that pineal gland of his, and by what force it can hold it suspended. (*Ethics*, 202)

Later he asserts:

Finally, I omit all Descartes' assertions about the will and its freedom, since I have already abundantly demonstrated that they are false. (*Ethics*, 203)

Spinoza dismisses the plausibility of free will and describes in detail the extent to which there are not two processes or two entities but one, seen inwardly as thought, and outwardly as extension: an inextricable unity of both.

This is more clearly understood from Sch. Pr. 7, II, which tells us that mind and body are one and the same thing, conceived now under the attribute of Thought, now under the attribute of Extension. Hence it comes about that the order or linking of things is one, whether Nature be conceived under this or that attribute, and consequently the order of the active and passive states of our body is simultaneous in Nature with the order of active and passive states of the mind. (*Ethics*, III, Proposition 2, Scholium: 104-105)

Mind and body, according to Spinoza, do not act upon each other, because they are not other than each other, they are expressions of one thing. Spinoza's fundamental thesis on the existence of one substance with two recognizable attributes: thinking and extension, pushes Cartesian dualism overboard, thereby removing the problems of interaction between mind and matter. Spinoza introduces his reader to the principle of multiple causality wherein mind and body are manifestations of one and the same substance expressed in two different ways. He says:

Men are deceived in thinking themselves free, a belief that consists only in this, that they are conscious of their actions and ignorant of the causes by which they are determined. Therefore the idea of their freedom is simply the

ignorance of the cause of their actions. As to their saying that human actions depend on the will, these are mere words without any corresponding idea. For none of them knows what the will is and how it moves the body, and those who boast otherwise and make up stories of dwelling-places and habitations of the soul provoke either ridicule or disgust. (*Ethics*, II, Proposition 35: 86)

After trying to melt away the Cartesian distinction between body and mind, Spinoza reduces the problem of free will to a question of qualitative description. For Spinoza the “mind is a definite and determinate mode of thinking (II, Pr.11), and thus (I, Pr. 17, Cor.2) it cannot be the free cause of its actions: that is, it cannot possess an absolute faculty of willing and non-willing. It must be determined to will this or that (I, Pr.28) by a cause, which likewise is determined by another cause, and this again by another, etc.” (*Ethics*: II: 95). Intellect, according to Spinoza, is merely an abstract and short-hand term for a series of active ideas; and will an abstract term for a series of actions. Spinoza tackles the problem of multiple causality head-on:

Will, like intellect, is only a definite mode of thinking, and so (Pr. 28) no single volition can exist or be determined to act unless it is determined by another cause, and this cause again by another, and so ad infinitum. . . . Therefore in whatever way will is conceived, whether finite or infinite, it requires a cause by which it is determined to exist and to act; and so (Def.7) it cannot be said to be a free cause, but only a necessary or constrained cause. (*Ethics*: I, Prop. 32: 53)

Spinoza, speaking to the illusory feeling of freedom, takes his reader into a theory that postulates the many levels of determination. On his view, the downfall of humankind is their belief in lack of causality, wherein individuals think they are free precisely because they fail to understand the causes of their actions. It is through the analysis of human action that Spinoza approaches the essence of humanity and in so doing points to the

physical analyses of ideas as the tip of a much larger iceberg. The essential tenet of Spinoza's thesis is summed up thus:

Hence it follows that whenever the human mind perceives things after the common order of nature, it does not have adequate knowledge of itself, nor of its body, nor of external bodies, but only a confused and fragmentary knowledge. For the mind does not know itself save in so far as it perceives ideas of the affections of the body (Pr.23,II). Now it does not perceive its own body (Pr.19,II) except through ideas of affections of the body, and also it is only through these affections that it perceives external bodies (Pr.26,II). So in so far as it has these ideas, it has adequate knowledge neither of itself (Pr.29,II) nor of its own body (Pr.27,II) nor of external bodies (Pr.25, II), but only a fragmentary (*mutilatam*) and confused knowledge (Pr.28,II and Sch.). (*Ethics*: II, Prop. 289: 84)

What Spinoza is getting at is the extent to which conscious volition is nothing more than ideation and through the varied richness of associations, or through the absence of competitive ideas, remains in consciousness long enough to lead to action. For Spinoza, the physicality of ideas means no more than it says: ideas are physical. The idea becomes action unless it is stopped in the transition by an opposing idea. The idea is the first stage in a complex process of which external action is the completion. The idea runs parallel, so to speak, to physical form: when its form becomes more and more "substantial" we physically change. Spinoza argues for a non-reductionist materialism in which psychical events exist in a causal relationship with other psychical events, and similarly, physical events with other physical events, but the physical and mental do not interact with each other. He says:

The essence of the mind is constituted by adequate and inadequate ideas (as we showed in Pr.3,III), and so (Pr.7,III) it endeavours to persist in its own being in so far as it has both these kinds of ideas, and does so (Pr.8,III) over an indefinite period of time. Now since the mind (Pr.23,II) is necessarily conscious of itself through the ideas of the affections of the body, therefore mind is conscious of its *conatus* (Pr.7,III). (*Ethics*, III, Prop. 9: 109) . . .

When this conatus is related to the mind alone, it is called Will (*voluntas*); when it is related to mind and body together, it is called Appetite (*appetitus*), which is nothing else but a man's essence, from the nature of which there necessarily follow those things that tend to preservation, and which man is thus determined to perform. Further, there is no difference between appetite and Desire (*cupiditas*) except that desire is usually related to men in so far as they are conscious of their appetite. Therefore it can be defined as follows: desire is 'appetite accompanied by consciousness thereof.' (*Ethics*, III, Prop. 9: 109)

It is clear from the above considerations that we do not endeavor, will, seek after or desire because we judge a thing to be good. On the contrary, we judge a thing to be good because we endeavor, will, seek after and desire it. (*Ethics*, III, Prop. 9: 109)

What Spinoza is suggesting is the extent to which the antithesis conscious-unconscious operates in and upon our being. Desire, instinct or appetite, is the neurophysiological energy, the impulsive force which determines the duration of an idea, of which we may or may not be totally conscious. Free will for Spinoza tends to be more an ideal than something real: intellectual capital – a conceptual abstraction of an abstraction insofar as ideas, concepts and knowledge remain the highest level of human interpretation and expression. He says:

We can take no action from mental decision unless the memory comes into play; for example, we cannot utter a word unless we call the word to mind. Now it is not within the free power of the mind to remember or to forget any thing. Hence comes the belief that the power of the mind whereby we keep silent or speak solely from mental decision is restricted to the case of a remembered thing. (*Ethics*: III, Prop. 2, Scholium: 106-107)

In essence, the above passage points specifically to the extent to which human thought operates according to psychically determined laws. For Spinoza mind is not only an expression of physical substance, but one which can socially and psychically affect the nature of matter. Thus even though we might try our hardest to forget the past, the past will not let us forget it. Spinoza's non-reductionist materialism explores the plausibility



of how changes in one's psychical state entail changes in one's physical state and vice versa. Pure raw free will, according to Spinoza, may be considered a conceptual fantasy which disregards the dynamics of parallel psychophysical causal relations. To suggest, as Descartes did, that minds and bodies are substances – mental and physical substances respectively – is misleading. It is misleading because it suggests that particular things have an independence that they do not really have. Free action and determinism need each other in a way that mind needs body and that which is mental needs that which is physical. Spinoza's conception of mind–body recognizes the tremendous significance of a mental–physical causal dynamics thus taking philosophical and scientific exploration to higher levels of inquiry. The ramifications of conceptualizing will as not free, but as being determined by intricate psychophysical laws, brings to light serious issues for moral and religious schools of thought. Just because minds are determined by laws which are psychically and physically related it does not mean that an individual is no longer morally responsible for their behavior and the structure of their life. The structure of mind–body operates in such a way that one may see the relevance to the entire learning process with its ensuing codes of conduct which is founded on memories operating within, between and on all aspects of our behaviour. We give objects, events and people meaning by the frameworks of interpretation which we understand at any one particular point in time. Language, conceptual meaning and behaviour are embedded within a tightly woven web of psychophysical interconnectedness. What is more, the entire educational process relies precisely on psychophysical interconnections: actions are determined by memories. On

this issue we turn to the renowned philosopher/psychologist William James and his exploration of psychophysical dynamics and the problem of free will.

### 1.5 William James: Evolution-Driven Bio-Philosophical Psychologism

Few philosophers have written with the enthusiasm and elegance of William James. His passion for illuminating analysis lead James from anatomy to physiology to psychology to philosophy and at last back to metaphysics itself. One of James's best achievements was his two volume *The Principles of Psychology*, published in 1890. After 1900, his publications were almost all in the field of philosophy.

James's eclectic academic background laid the foundation for his paradigm shifts regarding causation and the conscious-unconscious, free will-determinism controversy. James, a biological psychologist, was enthusiastic about the implications of evolutionary theory for psychology, and was convinced of the purposiveness of human and animal behaviour. Because of his early scientific training, he was committed to seeking out explanations of purposiveness compatible with a materialist orientation. In *Reflex Action and Theism*, James tells his audience:

All action is thus *re-action* upon the outer world; and the middle stage of consideration or contemplation or thinking is only a place of transit, the bottom of a loop, both whose ends have their point of application in the outer world. . . . The current of life which runs in at our eyes or ears is meant to run out at our hands, feet, or lips. The only use of the thoughts it occasions while inside is to determine its direction to whichever of these organs shall, on the whole, under the circumstances actually present, act in the way most propitious to our welfare. (1897: 114)

Then he speaks directly to the role of will:

The willing department of our nature, in short, dominates both the conceiving department and the feeling department; or, in plainer English, perception and thinking are only there for behavior's sake. (p. 114)

James was interested in understanding conscious experience and relating it to biological and evolutionary perspectives within cultural–environmental sources of human psychology. Social evolution with its ethical–moral component was given great attention and was seen as an extension and analogue of biological evolution. Owen Flanagan writes of William James's 1890 masterpiece, *The Principles of Psychology*, as "the first formulation of the naturalistic position in the philosophy of mind." Flanagan explains:

Thanks to Darwin's theory he was able to understand mentality as a product of natural selection, and was thereby able to situate the origin and function of mental life in the natural world. Furthermore, he was able to do so without accepting the simplistic suggestion that the human animal is a mere bundle of reflexes. . . . The naturalist parts company with the reflex mechanist because he reads evolutionary theory as pointing not merely to increased complexity of biological organization but also as pointing to the need for increasing complexity at the level of explanation as we ascend the phylogenetic scale: reflexes require reflex analyses; full-blown mental phenomena require mentalistic analyses. Naturalism, you might say, is what you get when you take classical (say, Cartesian or Newtonian) materialism and reconstitute it with evolutionary concepts, in particular with the concept of different levels of biological organization and the concept of organisms as functional systems which continually change by interacting with other functional systems. (1984: 23-24)

James takes the problem of free will and determinism well beyond the inclusiveness of philosophical, scientific and religious analyses and incorporates a deeper level of analysis thus developing the conceptual implications of evolution-driven biological psychologism. Unlike Spinoza, James believed monism to be the natural disease of philosophers, who hunger and thirst not for truth, but for unity. James says:

'The world is One!' – the formula may have become a sort of number worship. 'Three' and 'seven' have, it is true, been reckoned as sacred numbers;

but, abstractly taken, why is 'one' more excellent than 'forty-three,' or than 'two million and ten'? In this first vague conviction of the world's unity, there is so little to take hold of that we hardly know what we mean by it. (quoted in Olin, 1992: 73).

James's comment speaks precisely to the dangers of a monistic tradition wherein absolutist rhetoric adheres to one system of laws holding throughout the universe, which facilitates explanation, prediction, and most importantly control. It is this particular way of thinking which runs counter to James's radical empiricism, wherein the world contains many kinds of existences, in which their uniqueness cannot be reduced to just one or two formulae.

Olin, interpreting James's position, says:

a monistic world, according to James, is a dead world; in such a universe individuality is a delusion; in reality the monist assures us, we are all bits of one mosaic substance. But in a pluralistic unfinished world we can write some lines of the parts we play, our choices mould in some measure the future in which we have to live. In such a world we can be free; it is a world of chance, and not of fate; everything is not quite; and what we are or do may alter everything. (Olin: 1992, 78-81)

James explains this in his own words:

It follows that whoever says that the whole world tells one story utters another of those monistic dogmas that a man believes at his risk. It is easy to see the world's history pluralistically, as a rope of which each fibre tells a separate tale; but to conceive of each cross-section of the rope as an absolute single fact, and to sum the whole longitudinal series into one being living an undivided life, is harder. (quoted in Olin, 1992: 78)

One of the very first philosophical problems James addressed was that of free will, or, as he called it, determinism versus indeterminism. Initially, James's training as a scientist, coupled with the best scientific perspectives of his day, led him to respect the principles of determinism, insofar as all actions – physical and mental – are completely manipulated by forces beyond our control. But this claim was problematic for James and

did not sit well. James had mixed feelings, and was equally committed to the ethical component in life, which required moral autonomy. It is interesting to note that in the following passage James comes close to Spinoza's monistic metaphysics with respect to Spinoza's account of "God or Nature". In a letter to Thomas W. Ward, James admits:

I feel that we are Nature through and through, that we are wholly conditioned, that not a wiggle of our will happens save as the result of physical laws; and yet, notwithstanding, we are *en rapport* with reason.—How to conceive it? Who knows? I'm convinced that the defensive tactics of the French "spiritualists" fighting a steady retreat before materialism will never do anything.—It is not that we are all nature *but* some point which is reason, but that all is nature *and* all is reason too. We shall see, damn it, we shall see! . . . (*The Letters of William James*, I: 152-153)

Sacrificing all moral and ethical significance to determinist principles would not suffice. Thus James searched for an intellectually respectable way to affirm freedom within a materialist frame. In *Pragmatism*, he says:

The world is indubitably one if you look at it in one way, but as indubitably is it many, if you look at it in another. It is both one and many – let us adopt a sort of pluralistic monism. Everything of course is necessarily determined, and yet of course our wills are free: a sort of free-will determinism is the true philosophy. The evil of the parts is undeniable, but the whole can't be evil: so practical pessimism may be combined with metaphysical optimism. (p. 25)

In *The Dilemma of Determinism*, James's skeptical optimism is revealed as he tells his readers:

The principle of causality, for example – what is it but a postulate, an empty name covering simply a demand that the sequence of events shall some day manifest a deeper kind of belonging of one thing with another than the mere arbitrary juxtaposition which now phenomenally appears? It is as much an altar to an unknown god as the one that Saint Paul found at Athens. All our scientific and philosophic ideals are altars to unknown gods. Uniformity is as much so as is free-will. If this be admitted, we can debate on even terms. But if anyone pretends that while freedom and variety are, in the first instance, subjective demands, necessity and uniformity are something altogether different, I do not see how we can debate at all. (1979: 116)

James scoffs at the absurdity of irreconcilable opposites and the simplistic interpretations of cause-effect, billiard-ball analogies; and puts forth the value of the many: *plurality*.

Now, evidence of an external kind to decide between determinism and indeterminism is, as I intimated a while back, strictly impossible to find. What does determinism profess? . . .

It professes that those parts of the universe already laid down absolutely appoint and decree what the other parts shall be. The future has no ambiguous possibilities hidden in its womb: the part we call the present is compatible with only one totality. (1979: 117)

Indeterminism, on the contrary, says that the parts have a certain amount of loose play on one another, so that the laying down of one of them does not necessarily determine what the others shall be. It admits that possibilities may be in excess of actualities, and that things not yet revealed to our knowledge may really in themselves be ambiguous. Of two alternative futures which we conceive, both now may be really possible; and the one become impossible only at the very moment when the other excludes it by becoming real itself. Indeterminism thus denies the world to be one unbending unit of fact. It says there is a certain ultimate pluralism in it; and, so saying, it corroborates our ordinary unsophisticated view of things. To that view, actualities seem to float in a wider sea of possibilities from out of which they are chosen; and, *somewhere*, indeterminism says, such possibilities exist, and form a part of the truth. (1979: 118)

Determinism, on the contrary, says they exist *nowhere*, and that necessity on the one hand and impossibility on the other are the sole categories of the real. (1979: 118)

James speaks to the limitations of determinist ideology and the ways in which determinist thinking constrains the potentialities inherent in the realm of the abstract, the realm of possibilities. And those who seek reality or truth through reductionistic theory are in for tough sledding. The paradox of theory can be summed up thus: on the one hand, we cannot truly know anything without theory, and on the other, it is precisely theory which inhibits the discovery of truths and realities, for a period of time. The issues James speaks to are complex. The question becomes not, what is determinism or conscious mental life really like according to one particular theory? Rather, it becomes what is the

best way to describe and explain determinism and conscious mental life for certain purposes? According to James, conceptions of thought as a series of separate ideas mechanistically associated, is a misleading copy of physics and chemistry; rather, thought is not a series, it is a stream, a continuity of perception and feeling which is subject to modification and revision. He explains:

In opposition to this dualistic philosophy, I tried, in [the first essay] to show that thoughts and things are absolutely homogeneous as to their material, and that their opposition is only one of relation and of function. There is no thought-stuff different from thing-stuff, I said; but the same identical piece of 'pure experience' (which was the name I gave to the *materia prima* of everything) can stand alternately for a 'fact of consciousness' or for a physical reality, according as it is taken in one context or another. (quoted in Smith, 1967: 137-138)

Similar to Spinoza's thesis of psychophysical parallelism, James also gets at the heart of descriptive and explanatory levels of analyses, insofar as we have thought stuff and thing stuff which correspond to predispositions, verbs, adverbs and conjunctions, as well as stuff which reflects the nouns and pronouns of our speech; we have feelings of *for* and *to* and *against* and *because* and *behind* and *after* as well as of matter and men. James tells his readers:

The great continua of time, space, and the self envelope [sic] everything, betwixt them, and flow together without interfering. The things they envelope come as separate in some ways and as continuous in others. Some sensations coalesce with some ideas, and others are irreconcilable. Qualities compenetrates one space, or exclude each other from it. They cling together persistently in groups that move as units, or else they separate. . . .

In all this the continuities and the discontinuities are absolutely co-ordinate matters of immediate feeling. The conjunctions are as primordial elements of 'fact' as are the distinctions and disjunctions. . . . Prepositions, copulas, and conjunctions, 'is,' 'is n't,' [sic] 'then,' 'before,' 'in,' 'on,' 'beside,' 'between,' 'next,' 'like,' 'unlike,' 'as,' 'but,' flower out of the stream of pure experience, the stream of concretes or the sensational stream, as naturally as

nouns and adjectives do, and they melt into it again as fluidly when we apply them to a new portion of the stream. (quoted in Smith, 1967: 94-95)

It is interesting to note the emphasis James places on vocabulary insofar as descriptions of reality can become explanations of reality. He is careful to point out the inevitable confusion between concepts with that part of reality they are meant to describe. Ideas become "true" insofar as they come into satisfactory relations with other parts of our experience. In essence, the theory dictates behaviour. This is precisely why James refused the seduction of monistic interpretations and professed plurality. Where exactly should I look in the brain to locate my self concept? Are behavioural repertoires in the front of the cranium or in the back? Answers to these questions point in a direction where descriptions of reality may enter the realm of explanations. This is important for the problem of free will because will is very dependent upon "thought stuff", which may be construed as free if and only if it is conceived as ideas, concepts, abstractions of abstractions, which are always subject to modification, change and revision, according to James's pluralistic view of the universe. He says:

On the principles which I am defending, a 'mind' or 'personal consciousness' is the name for a series of experiences run together by certain definite transitions, and an objective reality is a series of similar experiences knit by different transitions. If one and the same experience can figure twice, once in a mental and once in a physical context (as I have tried, in my article on 'Consciousness,' to show that it can), one does not see why it might not figure thrice, or four times, or any number of times, by running into as many different mental contexts, just as the same point, lying at their intersection, can be continued into many different lines. (quoted in Smith: 1967: 80)

If I understand James's position correctly, it is the "transitive" elements in the flow of thought that constitute the thread of our mental life, and give us some measure of continuity of things. Consciousness is not an entity, not a thing, but a flux and system of



relations; it is a point at which the sequence and relationship of thoughts coincide illuminatingly with the sequence of events and the relationship of things. In such moments it is reality itself, and no mere “phenomenon,” that flashes into thought; because for James, beyond phenomena and “appearances” there is “no-thing.” While it is not as simple as this, James seems to be on the right track. It is this passion for the immediate, actual and real – his pragmatic view of consciousness rather than a “substance” view as held by Descartes.

In short, James was a compatibilist. The everyday freedoms we recognize, freedom from physical restraint, freedom from coercion, compulsion, and oppression are all compatible with determinism. But as Owen Flanagan succinctly points out “James often writes as if mentality is synonymous with consciousness or conscious mental life” (1984: 25). And while both Descartes and James professed the supremacy of consciousness, James, unlike Descartes furthered the empiricist cause and envisioned the introspective potential of looking into one’s mind as the foundation for a psychology of mental life:

*Introspective Observation is what we have to rely on first and foremost and always. The word introspection need hardly be defined – it means, of course, the looking into our own minds and reporting what we there discover. Every one agrees that we there discover states of consciousness. So as far as I know, the existence of such states has never been doubted by any critic, however sceptical in other respects he may have been. That we have cogitations of some sort in the *inconcussum* in a world most of whose other facts have at time tottered in the breath of philosophic doubt. All people unhesitatingly believe that they feel themselves thinking, and that they distinguish the mental state as an inward activity or passion, from all the objects with which it may cognitively deal. I regard this belief as the most fundamental of all the postulates of Psychology, and shall discard all curious inquiries about its certainty as too metaphysical for the scope of this book. (1890, I:185)*

What most people would think of as the main advantage of Cartesian dualism, and of James's introspective psychology, is that they make sense of the distinction between conscious, purposeful, and voluntary free actions, on the one hand, and mechanical, nonintentional, involuntary determined bodily movements on the other. James's ambitious enterprise had all the makings of a naturalistic theory of mental life. To that end, James contributed immensely to the granite-like foundation for the exploration and discovery of individual identity and differences. And while James's perspective incorporated consciousness within a materialist frame, his view of consciousness tended to be completely concerned with "personal form" or "subjective centering" only. His level of analysis tended to be constrained by vocabulary. James was caught in a linguistic bind insofar as he could not make the metaphysical leap and push the psychophysical envelope to its extreme. Nevertheless what we can say with relative confidence about James's interpretation is that psychophysical causal interrelatedness and interaction tend to be more indivisible than ever before because materialism needs an epistemology in the same way mind needs body and free will needs determinism because without each other neither concept in each pair has meaning in and of itself alone.

Thus far we have seen the shift in claims put forth not only by Descartes, previously outlined, but also by James toward his commitment to radical empiricism. Conscious free will becomes compatible with determinism. In *The Principles of Psychology* (1890) James initially defined psychology as the science of consciousness and scoffed at the notion of an unconscious. However, in *The Varieties of Religious Experience* (1902) reflecting on the future of psychology, James admits that the "discovery that memories, thoughts, and feelings

exist outside primary consciousness was the most important step forward that has occurred in psychology since I have been a student of that science" (1982: 233). The paradigm shifts of both Descartes and James coupled with the synthesis of Spinoza's psychophysical parallelism is revealing. Their interpretations suggest that unequivocal freedom of will is more of an ideal than something real. But we shall see, as we move on in time, that conceptions of free will and determinism evolve into a plethora of descriptive and explanatory interpretations.

It is true, ideas often have a long history. Descartes' *res cogitans* and *res extensa*, Spinoza's psychophysical parallelism and James's evolution-driven, bio-philosophical psychology, bring to light the most profound theory building with respect to mind-body analyses and the problem of causation. What is at issue is nothing less than how the mind and body should be conceived within the confines of causation. As we move forward in time, we have seen with Descartes, Spinoza and James, mind-body analysis takes on deeper levels of syntheses and interpretation, transforming our conceptual understanding of psychophysical interaction. What appears to be the case is the fact that traditionally-conceived free will becomes conceptually plausible if and only if mind is considered a mental entity only which is disengaged from that which is physical and material. As we turn to the next chapter, it will become more apparent that any person who is convinced they possess unequivocal freedom of will has indeed underestimated the extent to which psychic determinism governs human mental life.

In this chapter I introduced the problem of causation and spoke to the ways in which a unified theory of mental-physical, mind-brain, conscious-unconscious may be derivable

as related components of one primary system of ideas which conceivably refer to the same constructs and entities known metaphysically as free will and determinism. I introduced theorists such as René Descartes, Benedict de Spinoza and William James to set the stage for the evolution of ideas regarding the mind–body controversy. In the next chapter I shall point to several 20th century interpretations of levels of description and explanation regarding the mind–body, mental–physical dichotomy with specific reference to the problem of the nonconscious–unconscious–conscious dynamics. I shall introduce a Freudian model of mind, elucidating the problem of free will within the confines of psychic determinism. In the next chapter we shall see precisely how the conceptual implications of the notion of a causal chain, adaptation and the reflex-arc approach to mind become the critical thematic foci inherent within the free will–determinism dilemma.

## Chapter 2

### Hard Determinism and the Rediscovery of the Unconscious

The previous chapter dealt primarily with the problem of mind–body using the vocabulary of causation, free will–determinism, mental–physical. Only with the interpretation of William James did we see an expansive shift in lexicon to include consciousness as that which is associated with free will and mind. In this chapter I will bring to light a vocabulary which admits three additional levels of description and explanation, each with corresponding layers of active–passive, abstract and concrete modes of psychophysical dynamics. In this context the notion of a causal chain takes on even greater significance for the problem of free will.

The concept of an unconscious mental life has been a source of controversy more often than not. It is with behaviourism that we begin to see the term ‘unconscious’ being reintegrated into the language of mind–body analyses and the problem of free will. Behaviourism spoke out vehemently not only against consciousness, but against the unconscious as well, limiting psychology to what could be observed and measured. Behaviourist theory originated with John B. Watson (1878–1958) and is in a tradition consistent with Locke’s empiricism, despite Locke’s conception of mind and body that is

not merely dualistic but strikingly Cartesian. Accordingly, this model was rendered the focus of study. For the behaviourist, however, there was no such thing as an “internal” mind. Watson, an American, was impressed with the work of Ivan Pavlov in the Soviet Union, who taught dogs to salivate at the sound of a buzzer by pairing the sound with the presentation of food. L.S. Vygotsky captures the mechanistic view of consciousness represented by Pavlov’s work and in so doing presents the concept of the unconscious which was incorporated into scientific descriptions and explanations involving classical conditioning. Vygotsky explains:

Pavlov called this mechanism a chain or sequential reflex and used it to explain instinct. In his experiments, Dr. Zelenyi discovered the same mechanism in studying rhythmic muscular movements that also proved to constitute a chain re-action. Thus, this mechanism provides the best explanation for unconscious, automatic combinations of reflexes. (1925:18)

What is interesting to note is the extent to which Vygotsky elaborates on Pavlov’s claim regarding the dynamic interaction of nonconscious–unconscious–conscious reflex mechanisms and processes, pointing to the theoretical significance of compatibilist or soft determinist ideology. He says:

But if we take into account not merely the same system of reflexes but different ones and the possibility of transmission from one system to another, this mechanism is also essentially the mechanism of consciousness in its objective sense. The capacity of our body to serve as a stimulus (through its actions) for itself (for new actions) – therein lies the basis of consciousness. (1925: 18)

What Vygotsky seems to be suggesting is that consciousness can be understood both as the apparatus and as the result of the functioning of this apparatus as it employs the accumulation of both mental and physical energy upon some line of thought, action or object. This is important for considerations of the problem of free will because by linking

mind–body analyses with the concept of a causal chain, investigations into the realm of unobservables is validated. In short, free will becomes more an ideal than a real, given Pavlov’s and Vygotsky’s interpretations of interaction between levels deemed “mental” and “physical”. This is not the separation of two realms, but rather is the unification of intricate levels operating as one complex continuous dynamic enterprise. Unadulterated free will would be possible if and only if mind and all it entails is disengaged from that which is material and physical, as Descartes maintained, or put otherwise, disengaged from a causal chain. They are denying this disengagement. What is extremely interesting for our purposes within this thesis is that on close examination, both James’s and Descartes’s philosophy of the body include a “reflex hypothesis” which as we will see comes remarkably close to one of the most powerful explanatory descriptions of the mind–body problem and the dilemma of free will. Owen Flanagan captures the essence of Descartes’s reflex hypothesis:

Although Descartes insisted that a mechanical body was necessary for any action to take place, he rejected reflex mechanism for humans, that is, he denied that human action can be exhaustively analyzed in terms of reflex arcs. Most human action, he believed, is initiated at, so to speak, the center of the arcs—by the mind, by *res cogitans*. Descartes insisted that although all human behavior requires a body for its execution, not all behavior is initiated by other physical bodies. Some is initiated by an incorporeal mind. (1984: 4-5)

What is significant here is the depth and breadth of both physical and mental explanatory and descriptive levels of analyses. Both Rationalists and Empiricists were onto something monumental. Psychophysical interactionism was considered by both scientific and philosophical schools of thought to be a highly promising research endeavour. Rationalists included a degree of “internalism” in their metaphysics and epistemology.

Their view of the body consisted of a non-conscious, purely anatomical, organic structure with certain organs that function in particular ways. Consciousness was considered to be property of mind alone. Thus a conscious act is the defining differentiation between what is “corporeal” and what is “mental” in human beings. The Empiricists took the view that the very idea of an unconscious thought was a contradiction in terms. Although the great war between Cartesian Rationalism and Empiricism has been fought on several fronts, the two opposing views had a common thread: both identified “consciousness” as the defining characteristic of mental life. And because the most dominant academic traditions tended to conceptualize free will as that which corresponds with conscious awareness and mental life generally, there was little room left for the plausibility of a covert unconscious aspect of mind. It was precisely this line of reasoning which had given the idea of free will its validity because volitional acts and thoughts would then have been within the purview of individual conscious control.

## **2.1 What’s all the fuss about?**

Thus far a number of important issues have been raised as a result of varied interpretations regarding mind-body and the problem of freedom of the will. Hard determinists, such as the behaviourists, say free will is illusory. Compatibilists, or soft determinists, on the other hand, suggest free will is compatible with, and perhaps even presupposes, the view that human actions and decisions are as much the effects of causes as are any other events. However, arguments against determinist claims, more often than not, tend to be founded on the alarming possibilities of directing the development of the



human species through the study of genetics and environmental factors influencing behaviour. But William James, in defense of the determinist position, has this to say:

There is a *fatalistic argument* for determinism, however, which is radically vicious. When a man has let himself go time after time, he easily becomes impressed with the enormously preponderating influence of circumstances, hereditary habits, and temporary bodily dispositions over what might seem a spontaneity born for the occasion. "All is fate," he then says; "all is resultant of what pre-exists. Even if the moment seems original, it is but the instable molecules passively tumbling in their preappointed way. It is hopeless to resist the drift, vain to look for any new force coming in; and less, perhaps, than anywhere else under the sun is there anything really mine in the decisions which I make." This is really no argument for simple determinism. (1890, II: 574)

His alternative is this:

But genuine determinism occupies a totally different ground; not the *impotence* but the *unthinkability* of free-will is what it affirms. It admits something phenomenal *called* free effort, which *seems* to breast the tide, but it claims this as a *portion of the tide*. The variations of the effort cannot be independent, it says; they cannot originate *ex nihilo*, or come from a fourth dimension; they are mathematically fixed functions of the ideas themselves, which are the tide. Fatalism, which conceives of effort clearly enough as an independent variable that *might* come from a fourth dimension, if it *would* come, but that does *not* come, is a very dubious ally for determinism. It strongly imagines that very *possibility* which determinism denies. (1890, II: 574)

James speaks to the convenience of fatalistic explanations regarding one's own thoughts and actions which are deemed inevitable due to uncontrollable prior causes. But there was also a danger of extremism for indeterminists as well, especially followers of Cartesian dualism, wherein all that was not conscious was material and physiological, and therefore not mental. However, James makes a point of discussing the levels of determinacy insofar as descriptions and explanations of causation are concerned. What James alludes to in the above passage is precisely the psychophysical interconnectedness wherein ideas, thoughts and actions are a culmination of mind and body. However, it is

easy to understand how strict determinists might, if given the appropriate scientific methodology, take the determinist line of reasoning one step further, and look forward to the day when the various social sciences have formulated causal laws that allow us to produce happier and “better” people. More recently than James selections from B.F. Skinner’s *Walden Two* give us a famous psychologist’s view of an ideal society possible from a greater understanding of human conditioning. Skinner argues that through the application of various conditioning and reinforcement techniques, we can produce people who have those psychological characteristics necessary for a productive and viable society (1948: v-xvi). In *Beyond Freedom and Dignity*, Skinner addresses the rigid frame for natural science which formed not only science but was supported by the fundamental concepts of classical physics, space, time, matter and causality. The concept of reality, for Skinner, is understood as that which could be applied to the things and events that we could perceive by our senses or that could be observed by means of refined instruments that technical science provided. Skinner defends the progress of science as a crusade-like conquest of the material world in the following remarks:

In short, we need to make vast changes in human behavior, and we cannot make them with the help of nothing more than physics or biology, no matter how hard we try. (1971: 2) . . .

What we need is a technology of behavior. . . . But a behavioral technology comparable in power and precision to physical and biological technology is lacking, and those who do not find the very possibility ridiculous are more likely to be frightened by it than reassured. That is how far we are from “understanding human issues” in the sense in which physics and biology understand their fields, and how far we are from preventing catastrophe toward which the world seems to be inexorably moving. (1971:3)

One can easily take the Skinnerian line of reasoning to its extreme and envision the ill effects of controlled behaviour: genetic engineering or dictatorship capable of manipulating people in any way the rulers desired. Just imagine the social, ethical and political ramifications if all our thoughts, feelings and actions were causally determined by a controlling technology of behaviour. For some it would unarguably lead to hopelessness and despair. For others it might connote triumph, gratitude and a more comprehensive understanding of human nature. It would offer an explanation at last which gets us off the responsibility hook. One can begin to see why free will matters. If it is true that all thought and behaviour is determined by prior causes, the conceptual implications of individual control become mysterious. But, as some have argued, this line of reasoning is absurd because determinism takes various forms. On the one hand, Pavlov, Watson and Skinner are positioned, to be sure, as major players in the hard determinist playing field but theorists such as Descartes (later thesis), Spinoza and William James may be thought of as undeniably compatibilist.

If contemporary mentalism “merges” (a term used by Olsen, 1998) with materialism within the nexus of a causal chain rather than the ‘either/or’ story of causality, there appears to be a solution to the free will–determinism dilemma. If all our thoughts, feelings and actions are causally determined by heredity, biology and the environment, then will cannot be truly free. But if, as the “merger” thesis seems to imply, ideas are ultimately physical, *unequivocal* indeterminism would be plausible if and only if mind is considered a psychological entity disengaged from a physical and material body. And this radically

breaks with any kind of materialism and, consequently, breaks or destroys the merger of materialism and mentalism.

By making sense of antithetical concepts like mind–body, voluntary–involuntary, conscious–unconscious, free will–determinism, psychophysical dualism created a multitude of contentious perspectives and forged philosophical and scientific investigation to new heights of understanding. Research into consciousness has become one of the most accepted and perplexing academic challenges in recent years, especially in the past decade. What seems monumental is how the field of consciousness studies which was rejected outright in the middle of the century has become as broad as it is diverse. Philosophy, neuroscience, psychology, biology, chemistry, physics, physiology and religious studies all point to the volatile mixture of investigative dialectic currently taking place.

But as diverse as consciousness studies appear, it needs to be pointed out that many of the best theorists writing on the various issues of consciousness have shown surprisingly little interest in the problem of *unconscious* mental life except for the discipline of cognitive science and psychodynamic psychiatric-oriented analyses. There tends to be a stigma attached to the concept of the unconscious. As one example, in 1890, William James wrote: “The distinction is that *between the unconscious and the conscious being of the mental state*. It is the sovereign means of believing whatever one likes in psychology, and of turning what might become a science into a tumbling-ground for whimsies” (163). While James cannot be characterized as an hard behaviourist. His sentiments about the concept of unconscious processes have been shared by generations. And while it is true that most interpretations of consciousness to date render most, if not all, conceptions of the

unconscious superfluous, facts are facts which cannot be made nonexistent. As we will see the reality of mutually competing, even contradictory, hypotheses, reflects the complexity and confusion in the theoretical milieu.

## 2.2 The Overdetermined Ontology of Consciousness

My interest in this section is to illuminate a Freudian model of mind which draws heavily on the tenets of dynamic psychiatry. Dynamic psychiatry is derived mainly from the works of all of the great masters with whom Freud took his lectures. According to Ellenberger, dynamic psychiatry can be “traced to the year of 1775, to a clash between the physician Mesmer and the popular healer Gassner” (1970 53). In this section I will also set forth the innumerable problems regarding the tripartite divisions of conscious–unconscious–nonconscious dynamics and in so doing point directly to the shift in language from references to mind–body to references to mind–brain. Hence analyses using “mind–brain” terminology tends to speak more precisely to the intricate network of levels of psychophysical interaction exposing to a much greater degree the illusory nature of free will.

As we have seen, Descartes raised, directly and indirectly, virtually all of the significant issues related to the foundations of a meta-science of mind. He provided the most influential framework within which philosophical discussions, assumptions, implications and conundrums have been advanced in areas such as psychology, philosophy, cognitive science and dynamic psychiatry. And while it is true that philosophical investigation has revealed the depth of complexities regarding the problem

of consciousness at large, there does seem to be a major shortcoming as far as the ontological status of consciousness is understood. To this end, one of the most bewildering obstacles in the conceptualization of consciousness is the confusion generated by the unconscious and its relation or lack thereof to consciousness. By forging ahead rather than pushing aside the subject matter we can advance our understanding of the complexities of human nature and increase the boundaries currently operative. Spinoza once advised: "it is necessary to get to know the impotency and potency of our nature" (*Ethics*: IV:17sch). It is hardly an exaggeration to suggest that consciousness and its relation to the unconscious is one of the most critical philosophical–scientific problems awaiting solution at present.

### **2.3 Freud's Epistemic Crisis**

Hovering in the background of the free will–determinist controversy and inflaming it further in the minds of his opponents' unconscious, was Freud's belief that psychoanalysis was a revolutionary science with an illustrious pedigree going back to Copernicus and Darwin. Copernicus, for example, shattered long-standing illusions about humanity's habitation – the earth – reducing it to a satellite around the sun. Darwin decentered humanity itself from its previous elevated status as a special creation. Psychoanalysis, Freud believed, decentered consciousness as the sole source of individual experience, meaning and control. Ultimately, after the discovery of the unconscious, Freud argued, no one could conceivably continue to believe that the consciousness each of us possesses is the self-evident instrument by which we control ourselves and our lives. The Freudian

model of mind challenged directly claims regarding the human capacity for self-knowledge and free will. What we can say with a certain degree of credibility, putting aside all of the complexities involved with Freudian (mis)interpretation and analyses, is that the unconscious has played a pivotal role in teasing apart the doctrine of free will and determinism.

To recap, the Cartesian catastrophe had two obvious outcomes. First, it identified the mind with conscious thinking only. The second consequence was somewhat unexpected.

Lancelot White describes this in a key passage:

Prior to Descartes and his sharp definition of the dualism there was no cause to contemplate the possible existence of unconscious mentality as part of a separate realm of mind. Many religious and speculative thinkers had taken for granted factors lying outside but influencing immediate awareness; Augustine's remarks on memory are a famous example. Until an attempt had been made (with apparent success) to choose *awareness* as the defining characteristic of an independent mode of being called mind, there was no occasion to invent the idea of *unconscious* mind as a provisional correction of that choice. It is only after Descartes that we find, first the idea and then the term, "unconscious mind" entering European thought. (1960: 27-28)

To a great degree, since Cartesian philosophy had no room for it, the concept of the unconscious had to be re-invented. What Whyte's interpretation suggests is that prior to Descartes it had been taken for granted; after Descartes it became the object of intensive study. The complete understanding of what it means to be human required detailed exploration beyond conscious mental life. Thus, it is critical to understand the extent to which the unconscious, understood in its broadest sense, invariably forms an important component problem in cases where the determination of conscious awareness is investigated. To this end, progress toward a more comprehensive investigation of the problem of human nature must not only engage in serious constructive dialogues among

a multitude of viewpoints but rather take our exploration of consciousness to new levels of analyses incorporating various perspectives and claims regarding causality. Freud tells his audience:

Two of the hypotheses of psychoanalysis are an insult to the entire world and have earned its dislike. One of them offends against an intellectual prejudice, the other against an aesthetic and moral one. We must not be too contemptuous of these prejudices; they are powerful things, precipitates of human developments that were useful and indeed essential. They are kept in existence by emotional forces and the struggle against them is hard. . . .

The first of these unpopular assertions made by psychoanalysis declares that mental processes are in themselves unconscious and that of all mental life it is only certain individual acts and portions that are conscious. You know that on the contrary we are in the habit of identifying what is psychical with what is conscious. We look upon consciousness as nothing more nor less than the *defining* characteristic of the psychical, and psychology as the study of the contents of consciousness. . . . Yet psychoanalysis cannot avoid raising this contradiction; it cannot accept the identity of the conscious and the mental. It defines what is mental as processes such as feeling, thinking and willing, and it is obliged to maintain that there is unconscious thinking and unapprehended willing. (1962, vol.1: 46)

Freud's position is complex and will be explained in depth as we proceed. But for now it is important to understand that it is not so straightforward when Freud claims that "mental processes are in themselves unconscious". What he is speaking to is highly significant and needs to be conceptually grasped for the remainder of this thesis to make sense. Unconscious psychological processes – feelings, intentions, desires – evolve from a lower neurobiological level in which there is the distribution and circulation of quantities of energy throughout the material elements of the brain. But brain anatomy and physiology are *nonconscious*. We are never consciously aware of the multitude of covert involuntary nonconscious physical processes and we may or may not be cognizant of the numerous unconscious psychological effects occurring at any single point in time. Although it may seem conceptually confusing, the concepts of the conscious, unconscious



and nonconscious will come to take on different but related meanings as we proceed. It might be useful to introduce a somewhat lengthy analogy at this point to elucidate an extremely critical point in this thesis:

In the daytime, we can't see the stars. We talk as if they "come out" at night, even though they are there all the time. We also underestimate the sheer number of stars. We look up at the sky, see a smattering of dim stars, and assume that's all there is. When we travel far away from city lights, we see a sky strewn with stars and are overwhelmed by the brilliance of the heavens. But it is only when we study astronomy that we learn the whole truth: the hundreds of thousands of stars that we see on a clear, moonless night in the country are only a fraction of the stars in the universe, and many of the points of light that we assume to be stars are in fact entire galaxies. (Hendrix, 1988: 8-9)

So it is with conscious mental life: the orderly, logical thoughts of our conscious mind are but a thin veneer over nonconscious and unconscious modes of dynamic interaction, which are active and functional at all times. This line of reasoning is crucial for our understanding of the problem of free will because it demonstrates how erroneous it is to think of two contrasted disconnected kinds of processes. Rather, there exists a causal change of neural physical events which are nonconsciously continuous, although certain transitory aspects or modes are made accessible to immediate conscious attention. What this means is that there are not any causally separable mental processes, only particular features or transitory phases of mental processes which may or may not enter direct awareness.

Given the disreputable past of the unconscious, contrary to popular belief, the concept of the unconscious mind was no more invented by Freud than the concept of evolution was invented by Darwin. Ellenberger says that Freud incorporated the ideas of: "Brücke, Darwin, Herbart, Brentano, Fechner, Nietzsche, Spinoza, Breuer, Exner, Fliess,

Charcot, Schopenhauer, Von Hartmann, Goethe, Lipps, Meynert, Benedickt and Janet”

(1970: 469-497). Ellenberger does, however, credit Freud with original insights:

Even more than the conceptual framework of psychoanalysis, the psychoanalytic method is Freud’s creation and constitutes the inmost originality of his work. Freud was the inventor of a new mode of dealing with the unconscious, that is, the psychoanalytic situation with the basic rule, free associating, and the analysis of resistances and transference. This is Freud’s incontestable innovation. (Ellenberger, 1970: 549).

Lancelot Whyte explains this evolution of ideas:

*In Europe from around 1750 onward a shift of emphasis is evident in philosophical and scientific thought from static toward process concepts which is still in progress today. Since this continuing is rendering the human intellect more powerful and extending its scope into new realms I shall call it the great transformation. . . .*

The transformation from 1750 onward found its best known expression in the development of evolutionary ideas, but it coincided closely with the progressive recognition of unconscious mental processes. Darwin and Freud are at once products and promoters of the transformation. By showing that organic species and individual minds are fundamentally modified by the processes in which they partake, these two thinkers carried on the transformation of thought which had already begun. (1960: 49; author’s italics)

What is more, Arthur Koestler, in the introductory pages to Lancelot Whyte’s *The Unconscious before Freud*, tells his readers that the concept of the unconscious has a distinguished history which can be traced back to antiquity. Koestler says of Whyte:

Whyte – very wisely, I think – refrains from burdening his readers with obscure quotations from the *Upanishads* or ancient Egypt, and starts his history of the unconscious with the dawn of Christian Europe, when the dominant influence on philosophy were the Neoplatonists, foremost among them Plotinus, who apparently took it for granted that ‘feelings can be present without our being aware of them’, and that ‘the absence of conscious perception is no proof of the absence of “mental activity”’. . . .

St. Augustine, too, marveled at man’s immense store of unconscious memories and its ‘limitless depth’. In fact, the knowledge of unconscious mentation had always been there – as Whyte shows with an abundance of quotations from theologians like St. Thomas Aquinas, mystics like Jacob Boehme or St. John of the Cross, physicians like Paracelsus, astronomers like

Kepler, writers and poets as far apart as Dante, Cervantes, Shakespeare and Montaigne. Yet this shared, fundamental insight into the working of the human mind was lost under the impact of the scientific revolution, and more particularly of its most influential philosopher, René Descartes. (1960: 2 [unnumbered page])

One gets the sense that Freud's greatness lies not in any one of his particular ideas; rather, he forced the attention of the Western world to the fact that the unconscious is powerful and must not be neglected. He argues as follows:

Our right to assume the existence of something mental that is unconscious and to employ that assumption for the purposes of scientific work is disputed in many quarters. To this we can reply that our assumption of the unconscious is *necessary* and *legitimate*, and that we possess numerous *proofs* of its existence.

...

It is *necessary* because the data of consciousness have a very large number of gaps in them; both in healthy and in sick people psychical acts often occur which can be explained only by presupposing other acts, of which, nevertheless, consciousness affords no evidence. These not only include parapraxes and dreams in healthy people, and everything described as a psychical symptom or an obsession in the sick; our most personal daily experience acquaints us with ideas that come into our head we do not know from where, and with intellectual conclusions arrived at we do not know how. All these conscious acts remain disconnected and unintelligible if we insist upon claiming that every mental act that occurs in us must also necessarily be experienced by us through consciousness. . . (1984: v. XI: pp. 167-168)

Freud speaks to the conceptual complexities of psychophysical interaction, and ends his discussion with an appeal to stop quibbling about words:

We can go further and argue, in support of there being an unconscious psychical state, that at any given moment consciousness includes only a small content, so that the greater part of what we call conscious knowledge must in any case be for very considerable periods in time in a state of latency, that is to say, of being psychically unconscious.

It is clear in any case that this question – whether the latent states of mental life, whose existence is undeniable, are to be conceived of as conscious mental states or as physical ones – threatens to resolve in verbal dispute. (1957, v. XI: 168-169)

Freud, building on the conception of unconscious mental processes, suggests a much more comprehensive way of thinking insofar as he brings to light the conceptual implications of 'interactionism' which dualistic thinking leaves obscure. Owen Flanagan reflects on Freud's theoretical position:

By Freud's time the mind-body problem had become the mind-brain problem. Descartes had located the single point of commerce between *res cogitans* and *res extensa* in the brain, and neurophysiological and physiological research in the eighteenth and nineteenth centuries had come to locate the center of most interesting nervous system activity in the cerebral cortex. So common was the assumption of the brain's centrality by the beginning of the twentieth century that the great Russian psychologist Pavlov unreflectively subtitled his famous book *Conditioned Reflexes*, "An Investigation of the Physiological Activity of the Cortex," even though he worked almost exclusively on intact animals and studied only their overt behavior. (1984: 57)

If mind is associated with conscious awareness only as a psychological realm of motives over which we can exercise volitional control regarding choices of action and thought, and which is disengaged from that which is physical, then free will becomes conceptually plausible. But as we move away from dualistic claims, we also move away from the sharp lines of demarcation between mind and body and move into more intricate and subtle levels of covert and overt psychoneurophysiological "interaction" with a material brain at the center. Hence the conceptual plausibility of free will begins to waiver. This is because free will is usually assumed and interpreted as the absence of any physical determination. It is essential for free willers that there should be motives which lead to different courses of action and thought, between which one freely chooses. And it is essential that these choices be more or less free floating rather than physically determined. But as we move forward in time we begin to understand the implications of an intricate psychophysical causal chain. A causal chain is a series of events such that each event is the

effect of the preceding event and the cause of the following event. Since events have multiple causes, the causal chains usually branch and intersect, resulting in a causal network. The language of neurophysiology begins to bridge the theoretical chasm between mind and body and in so doing confronts the conceptual plausibility of indeterminism. To contextualize this issue properly we must examine a few preliminary points regarding the tenets of dynamic psychiatry and Freud's early ambition of "eliminative reductionism" (Flanagan, 1991: 58). Freud, at an early stage of his psychological inquiries, tried to construct an explicitly physiological psychology based on the interaction of neurons. He attempted to advance in knowledge an understanding grounded by designations of the anatomy of the brain, physiology of the brain, and psychopathology, respectively. James Strachey captures the intensity of Freud's endeavour with the limitations of cerebral physiology:

But the principal reason was that Freud the neurologist was being overtaken and displaced by Freud the psychologist: it became more and more obvious that even the elaborate machinery of the neuronal systems was far too cumbersome and coarse to deal with the subtleties which were being brought to light by 'psychological analysis' and which could only be accounted for in the language of mental processes. (1957, v. XI: 163)

Here we get the sense that too little was known about neurophysiology to enable Freud or anyone else to think about a physical system in mentalistic terms. Strachey explains Freud's scientific undertaking:

The neurological method of describing psychopathological phenomena was accordingly the one which Freud began by adopting, and all his writings of the Breuer period are professedly based on that method. He became intellectually fascinated by the possibility of constructing a 'psychology' out of purely neurological ingredients, and devoted many months in the year 1895 to accomplishing the feat. Thus on 27 April of that year (Freud, 1950a, Letter 23) he wrote to Fliess: 'I am so deep in the "Psychology for Neurologists" that it

quite consumes me, till I have to break off really overworked. I have never been so intensely preoccupied by anything. And will anything come of it? I hope so, but the going is hard and slow.' Something *did* come of it many months later – the torso which we know as the 'Project for a Scientific Psychology', dispatched to Fliess in September and October 1895 (1957, v. XI: 163)

A strange transformation gradually occurred in Freud's writing. Not only had the neurological account of psychology disappeared, but much of what Freud had written in the 'Project' in terms of the nervous system turned out to be correct and far more intelligible when translated into mental terms. Freud's genius lay in his theoretical strategy which relied heavily on psychoneurological conceptual exploration and expansion. It must be kept in mind that Freud tried to resolve the fact that brain events and mental events were to be described in different languages. The language of conscious, nonconscious and unconscious processes and dynamics became permanent once and for all. Freud challenged the established Cartesian identification of conscious free will with his hypothesis of psychic determinism, which was to a great degree his extension of the physical sciences' dogma of determinism to the psychological realm. The concept of psychic determinism is important to understand because it directly challenges the thesis of indeterminism. Charles Rycroft, in *A Critical Dictionary of Psychoanalysis*, provides an excellent description of Freud's thesis:

Psychic determinism is the assumption made by Freud that mental phenomena have causes in whatever sense physical ones do. He seems to have held that demonstration of the existence of unconscious mental processes proved the assumption of determinism, since it made it possible to assert that conscious processes were the effects of unconscious ones. He did not, however, regard consciousness as a mere epiphenomenon, but as a regulator capable of a 'more stable control and guidance of the flow of mental processes'. (1968: 33-34)

The strength of the Freudian model of the mind lies within its stance of psychic determinism in which so-called mental occurrences must emerge through a lawfully determined sequence of stages prior to becoming conscious. Accordingly, consciousness may be conceived as an emergent property supervening on a lower level neuronal substrate. Consciousness is designated as a 'regulator' of the totality of the psychic apparatus. In essence, Freud's principle of psychic determinism established a foundation for a metapsychology of intentionality. I explain this in the following section.

#### **2.4 Reflex-Arc Approach to Consciousness**

Neurons, as far as we know, are the basic neurological units of the brain and central nervous system. They are devices for receiving, transmitting and discharging electrochemical excitation. Analogously, the brain can be conceived of as groups of activities organized to receive and discharge excitation. For example, if we represent processes of the mind taking place, we can say with equal confidence that all mental processes have a direction and have a tendency toward discharge – all mental processes have a source, an aim, an object and intensity. Thus Freud, following but also extending the lead of Brentano, laid bare a theory of intentionality. Ellenberger speaks to Freud's theoretical move:

The main idea of the Project is the correlation of psychological processes with the distribution and circulation of quantities of energy throughout certain material elements, that is, hypothetical brain structures.

The energy called quantity by Freud is equated with sums of excitation originating either from the outer world through the sensory organs, or from the inner world, that is, the body. Quantity is ruled by two principles, inertia, which is the tendency to the full discharge of the energy, and constancy, which is the tendency to keep constant the sum of excitation. (1970:478)

According to Freud, the strength of particular aims, motives and intentions are intimately bound to free and bound energy, that is, qualitative concerns are intimately conjoined to that which is quantitative. For example, when we are attracted to an object, this object will produce an excitation and curiosity. We engage wittingly or unwittingly in motor activity which will discharge the excitation produced by the stimulus. For example, we walk over to it, eye-ball it, to get a closer look. Thus excitation picked up by perception will activate and release previous excitations of the past which have been coded and stored, and this initiates the action of an appropriate or inappropriate response. Experience coded in nonconscious neuronal traces via associations organizes excitations so that they may discharge or not discharge in an adaptive or maladaptive manner. Thus psychic determinism previously defined by Rycroft is the process by which mental contents become conscious in a lawfully determined sequence of steps. All mental processes have a source, intensity, aim and object. Psychiatrist Eric Gillett explains:

I will suggest as a plausible hypothesis that a mental content pressing toward consciousness originates in those parts of the brain not directly correlated with conscious mental events and moves to those parts of the brain that are directly correlated with conscious experience. What moves from one brain structure to another is a pattern of neuronal excitation that encodes the information comprising the mental content. What the conscious mental content has in common with its nonconscious predecessor is that both contain the same information encoded in a pattern of brain activity. (1988: 567)

Like Freud, Gillett, understands the brain as an organ of the mind. Neither theorist implies a one-to-one brain–mind isomorphism, but suggest various parts of the brain and its activities cooperate together to produce processes that are deemed mental in character but are not reducible to discrete localized, anatomical components of the brain. Freud’s understanding of the mind is based on a “reflex arc”: all mental processes have a direction



and tendency toward discharge, just as the neuronal system is designed and constructed in such a way that it receives excitations and has methods for discharging them. If you have an organism which is capable of physical and psychical excitation and a response to these excitations, then it is reasonable to suggest that the organism will organize itself to achieve psychophysical excitational discharge. There is an intensity of excitations, varying sources responsible for excitations, an aim of each excitation and the object-directedness of the intensity, source and aim which leads to numerous discharges. Social and individual experiences unfold in a physical world which are discovered and operated on with our noncognitive and cognitive apparatus. Thus our perceptions relate to and correspond with our actions. There is a simultaneous, bi-directional progressive and regressive movement among nonconscious-conscious-unconscious dynamics. Intentionality is inextricably linked to the notion of a causal chain in Freudian theory. This is a sharp departure from Brentano.

Lev Vygotsky must be introduced at this point again in connection with the Freudian model of mind because both attempted to bridge the innumerable gaps separating behavioural and psychodynamic approaches toward a complete metaphysics of persons. The ideas of the unconscious, reflex-arc and multiple causality undoubtedly had an impact on his theoretical contributions regarding the nature of consciousness. Vygotsky advocated a "systems of levels" approach that addresses the causal complexities at large. Although the quote is lengthy, to omit any part of the text would drastically reduce the effectiveness of Vygotsky's claim:

Pavlov compared the hemispheres of the brain with a telephone switchboard at which new temporary connections are established between

elements of the environment and specific responses. But much more than a telephone switchboard our nervous system resembles the narrow doors in some large building through which a crowd of many thousands is rushing in panic; only a few people can get through the door; some get through intact, but many thousand others die or are pushed back. This more closely conveys the catastrophic nature of the struggle, the dynamic and dialectic process, between the environment and the person and within the person that we call behavior.

...

1. We could say that the outside world flows into the wide opening of the funnel via thousands of stimuli, attractions, and appeals; within the funnel a constant struggle and competition take place; all excitations flow out of the narrow opening as responses of the organism in a greatly reduced quantity. What actually takes place in behavior is only a negligible fraction of what is possible. At every moment the individual is full of unrealized possibilities. These unrealized possibilities of our behavior, this difference between the wide and the narrow openings of the funnel, is consummate reality; it is the reality of victorious reactions, since all three aspects of a response are present in it. . . .

The unrealized behavior can have an extremely wide variety of forms, given even a slightly complicated structure of the final common field and taking into account complex reflexes. "In complex reflexes, reflex arcs sometimes ally themselves with one portion of the common field and compete with one another for another part of the field." Thus, a response may remain half realized or unrealized in some, always indefinite, portion of it. (1925: 17-18)

Vygotsky, speaking about particular determinants of behaviour, encapsulates nonconscious–conscious–unconscious dynamics and puts forth an analogy very similar to Freud's 1916 articulation in the "General Theory of Neuroses." Freud explains:

This may be advantageously expressed by saying that an individual process belongs to begin with to the system of the unconscious and can then, in certain circumstances, pass over into the system of the conscious.

The crudest idea of these systems is the most convenient for us—a spatial one. Let us therefore compare the system of the unconscious to a large entrance hall, in which the mental impulses jostle one another like separate individuals. Adjoining this entrance hall there is a second, narrower, room—a kind of drawing-room-in which consciousness, too resides. But on the threshold between these two rooms a watchman performs his function: he examines the different mental impulses, acts as a censor, and will not admit them into the drawing-room if they displease him. . . . The impulses in the entrance hall of the unconscious are out of sight of the conscious, which is in the other room; to begin with they must remain unconscious. If they have already pushed their

way forward to the threshold and have been turned back by the watchman, then they are inadmissible to consciousness; we speak of them as *repressed*. But even the impulses which the watchman has allowed to cross the threshold are not on that account necessarily conscious as well; they can only become so if they succeed in catching the eye of consciousness. We are therefore justified in calling this second room the system of the *preconscious*. (1973: 336-337)

One sees in both Freud's and Vygotsky's theoretical contributions a systematic attempt to establish within the framework of psychology the groundwork for a theory of human behaviour in general, wherein the antithesis conscious–unconscious has its roots in a biological structure inundated with tensions between on-going processes and manifestations of undifferentiated and differentiated psychophysical phenomena. The reflex-arc approach to consciousness and the principle of psychic determinism undermines the Cartesian confidence about self-knowledge and the thesis of two independent realms, matter in motion and mind necessarily aware, thus turning the validity of free will on its head. There is a multitude of factors of which we are not aware and which influence thought and behaviour: we are much more than our immediate awareness. Flanagan points to the overdetermination of rational thought in everyday life. He says:

What the mind's eye claims to be our real thoughts, motives, and wishes are not even probably, let alone necessarily, our real thoughts, motives and wishes. This is because the mind's eye is the rational, conscious, language-using part of the self and it lacks the desire as well as the ability, to observe the irrational, unconscious, nonlinguistic part of the self. (1984: 72)

It is easy to think of how this line of reasoning may come into being because the conscious subject who thinks (s)he thinks is not the same as the organ which does the thinking. The conscious person is one component only within a series of transitory modes of the thinking subject. Vygotsky in a similar vein challenges the concept of freedom of will and

incorporates an emergent line of reasoning wherein both mechanistic and phenomenological claims are incorporated into his analysis:

Giving account also means translating one set of reflexes into another. The unconscious mind also refers to reflexes that have not been translated into other systems. There may be an infinite variety of stages of consciousness, i.e., the interaction of systems participating in the mechanism of an active reflex. To be conscious of one's own experiences means nothing less than to possess them in object form (stimulus) for other experiences. Consciousness is the experiencing of experiences, just as experience is simply the experience of objects. But this capacity of a reflex (the experience of an object) to be a stimulus (the object of an experience) for a new reflex, this mechanism of consciousness is also a mechanism for translating reflexes from one system into another. (1925: 19-20)

Vygotsky is trying to construct a comprehensive model of the structure and dynamics of unconscious-conscious processes which go beyond a black box model. It seems as though the mind for Vygotsky can be viewed primarily as a "reflex arc". Like their predecessors (Descartes, James and Pavlov) both Freud and Vygotsky incorporate the reflex hypothesis into their mind-body analyses but extend its structure and function into their metapsychology. Vygotsky, committed to the same physicalist principles of bound and free energy, says:

Our consciousness of our will creates the illusion that it consists of two aspects: I think, and then I do. Indeed there are two reactions, but they are in the opposite sequence: first comes the secondary reaction, and then the basic or primary reaction. Sometimes the process is made more complicated by motives, i.e., the collision of several secondary reactions, also agrees completely with the thoughts propounded above. (1925: 28)

For Vygotsky, the danger is when we take awareness to be the only criterion of mentality because the totality of human nature lies not merely in conscious life, but also in the unconscious and nonconscious which link the moments of human awareness with the background of organic processes within which they emerge. Vygotsky addresses the depth

of consciousness as involving three levels of inseparable interaction. For Vygotsky, nonconscious–unconscious–conscious components are dynamic layers of an intricate system of determinateness which correspond to physiological, biological and psychological vocabulary respectively.

It is not difficult to see that consciousness cannot be regarded as a second-order phenomenon in either biological, physiological, or psychological terms. A place must be found for it, and it must be interpreted in line with all other responses of the organism. This is the first requirement of our working hypothesis. Consciousness is a problem of the structure of behavior. (1925: 12)

We can start to see why free will matters. And why the problem of determinism is felt to be so deep and disturbing. Perhaps at this point it is best to frame the free will–determinism problem within the general problem of conceptual levels of analyses and diversity of explanations. The philosophical and scientific controversy over the relationship of mind to brain would have no meaning in the absence of a distinction between the psychological and the neuophysiological or biological. As we have seen, our conceptions of human nature affect the orientation of mind–body theories. To a great degree, the evolution of ideas manifested two entirely different conceptual orders in which explanations could be formulated. The claim that all physical facts of the world determine all the facts, including mental facts, is a daunting one. Free will, according to a metaphysics of materialism, may be best understood at its lowest level as nothing more than quantities of free energy existing within an organic system. How one manipulates this energy is varied as development and maturation proceed in a progressive social–political–cultural direction. According to Freud:

It may be even be supposed that the disposition of all human beings is qualitatively alike and that they differ only owing to these quantitative conditions. . . . The ultimate

aim of mental activity, which may be described qualitatively as an endeavour to obtain pleasure and avoid unpleasure, emerges, looked at from the economic point of view, as the task of mastering the amounts of excitation (mass of stimuli) operating in the mental apparatus and of keeping down their accumulation which creates unpleasure. (1962, v. 1; 422)

Here we see Freud's psychology of intentionality in which all mental processes have a direction and tendency toward discharge: they have a source, an intensity, an aim and an object. Consciousness for Freud is a transitory property which perceives states of tensions and discharges excitation in the most expedient way. One of the many strengths of the Freudian model of mind lies within its stance of consciousness as an emergent property on a lower level neuronal substrate. Free will on a dualist model is untenable; but within the Freudian model just articulated, free will begins to find a viable role as energy.

While it is true that Freud made great leaps and bounds side-stepping the either-or two component world of mental-physical phenomena, it is equally true that in the process he created a multitude of conceptual problems with his tripartite terminology. Ego, id, superego, conscious, unconscious, instinct and drives, just to mention a few, are conceptually problematic and open up an abundance of problematic issues and dilemmas. Freud was well known to interchange the meaning of nonconscious and unconscious throughout his academic and professional career. The concepts are difficult enough to grasp without Freud himself getting us confused and contradicting his previous theoretical contributions. I shall try to alleviate some of this conceptual confusion in the following chapter.

What we have explored in the last two chapters points to the fact that throughout history issues which implicate human cognition and human action – outside and inside the

confines of awareness – have been cloaked in language indicative of much larger metaphysical concepts such as free will and determinism. But as we move forward in time we begin to see the synthesis of levels of analyses within and between thought and action described and explained simultaneously to the human meaning of behaviour and to its biological and physical origins. For now at least perhaps it is best to ground philosophical and scientific conceptions of free will and determinism within the long history of diversity of explanations and descriptions. As we approach the third and final section, I continue to explore the extent to which human nature is construed indirectly or directly into human action and thought which can be described and explained in entirely different ways. Each description tends to be contingent on underlying conceptual schemata insofar as the notion of a causal chain is embedded within the intricate matrix of human understanding and theory building.

## Chapter 3

### Psychic Determinism and the Problem of Free Will

The framework of levels of description and explanation has broad relevance to the conceptual plausibility of free will and, significantly, to all of science. The world at first glance seemed to consist of two kinds of phenomena: mental experiences and physical objects. As previously discussed, seventeenth century French Philosopher René Descartes called these two categories *res cogitans* (thinking stuff) and *res extensa* (extended stuff, i.e., stuff that occupies space). The Greeks dubbed these two basic essences “psyche” and “physis” from which we derive psychology, the science of mind; and physics, the science of matter. Philosophers call the question of how mind and matter are related the mind–matter problem, or alternatively, the mind–body problem.

Given such a two-component world, it is easy to understand the conceptual plausibility of free will. If mind and all that is mental is comprised of entirely different stuff than body and all that is physical, then free will makes sense because the concept of a causal chain is not taken into consideration. Thus we can be consciously aware and in control of all our thoughts and actions. But as the conceptual ramifications of interactionism and the notion of a causal chain became clear it also became clear that they directly challenged the validity of indeterminism. If free will implies that our choices, thoughts and actions are not determined, the very notion of a causal chain reduces the plausibility



of free will. The paradigm shift from dualism to monism also represented significant modifications in descriptive and explanatory vocabulary. Freud's detour from biology and physiology over time gave us an explanation of how it is possible to think on different levels about a physical system, given the lack of complete physical understanding of that system. In this context, the problem of mind-body emerged as the problem of mind-brain with its ensuing nonconscious-unconscious-conscious processes, mechanisms and relations. In the next section I will explore some influential theoretical claims regarding mind-brain analyses and the problems they represent for the concept of free will.

### **3.1 Categories of Causation: The "Layer" Model**

While it is true that ideas often come suddenly to individuals, it is equally true that they usually have a long history. Thus one way of improving current ideas is to recall what was thought and said in earlier times. As such, many of the theorists presented within this chapter have modified and improved upon interpretations of the mind-body conundrum.

At present the complexity of dilemmas regarding the ontological status of consciousness and the physiological processes of the nervous system tend to concentrate on five important philosophical interpretations, each demonstrating progressive claims regarding mind-brain and the nature of mental-physical, nonconscious-conscious-unconscious dynamics. What each claim substantiates directly or indirectly is the significance of a causal chain with varying levels of determinateness. With each progressive claim there appears to be more and more evidence against the plausibility of free will as

traditionally conceived. For more contemporary versions of the problem under consideration we turn to Ralph Ellis as he lays out several definitions:

Theories of Psychophysical Identity hold that mental processes and physiological processes in the brain are really identical with each other; Interactionism maintains that there are two essentially different causal sequences, the one mental, the other physical, and that the two sequences sometimes causally interact with each other; Parallelism, is similar to Interactionism except that it denies any causal interaction between the two causal sequences; Epiphenomenalism, suggests that all mental phenomena are caused by physical events, and denies that one mental event can ever cause another. (1986: 2-3).

The last two positions are Emergentism and Supervenience. *A Companion to the Philosophy of Mind* provides an excellent description of each:

According to Emergentism, higher-level properties emerge when, and only when, an appropriate set of lower-level 'basal conditions' are present, and this means that the occurrence of the higher properties is determined by, and dependent on, the instantiation of appropriate lower-level properties and relations. (1994: 576-577)

Last and certainly not least is a description of the thesis of Supervenience:

Donald Davidson (1970) was perhaps first to introduce supervenience into discussions of the mind-body problem, when he wrote: '... mental characteristics are in some sense dependent, or supervenient, on physical characteristics. Such supervenience might be taken to mean that there cannot be two events alike in all physical respects but differing in some mental respect, or that an object cannot alter in some mental respect without altering in some physical respect.' Following Moore and Hare, from whom he avowedly borrowed the idea of supervenience. Davidson went on to assert that supervenience in this sense is consistent with the irreducibility of the supervenient to their 'subvenient', or 'base', properties: 'Dependence or supervenience of this kind does not entail reducibility through law or definition ... (1994: 576)

As an interesting aside, Lloyd Morgan (1923) first advanced the notion of Emergentism, which evolved more recently into Supervenience theory. Mind-body analyses have come a long way. The conceptual move from what was once conceived as

conceptually significant, physical facts of the world determine all the facts, to a more all-encompassing approach involving numerous levels, tends to draw out the complexity of claims with greater clarity. Theorists are now in a position to elaborate on the nature of conscious experience using evolution-driven mental-physical conceptual phenomena insofar as current theories build upon what I shall call a “layer model” approach. This model involves the notion of a causal chain, which incorporates numerous levels of non-reductive materialist determination. Thus phylogenetic characteristics, which were previously construed as irrelevant in broader theories, are being integrated and conceived as relevant in more limited contexts. Daniel Dennett captures the importance of this conceptual move in *Consciousness Explained*:

To make further progress, we must shift field and approach the complexities of consciousness from a different quarter: evolution. Since there hasn't always been human consciousness, it has to have arisen from prior phenomena that weren't instances of consciousness. Perhaps if we look at what must have—or might have—been involved in that transition, we'll get a better perspective on the complexities and their roles in creating the full-fledged phenomenon. (1991: 171)

In light of what we know about the ontological status of consciousness put forth thus far, we tend to get a new sense of the inescapable reality of the conceptual connectedness between that which is conscious-mind-mental-psychological and that which is body-physical-material-determined and biological. The deterministic thread running through so much of philosophy of mind is emphasized here because it speaks directly to the basic hypothesis of this thesis, that is, the reality of psychic determinism wherein mental events have an underlying coherence and structure which can be construed as operative and active at all times but are not reducible to any one finite property, structure, or relation.

Indetermination is tenable and conceptually valid if positioned within a dualistic frame wherein conscious awareness is disengaged from the conceptual implications of a causal chain. But since dualism is ultimately untenable, so too is indetermination in that framework. What seems to be occurring as we move through time is the multitude of shifts in claims pointing to the precise nature of the relationship that underlies mental-physical and mind-body. It is precisely the notion of a causal chain that takes us out of the limited dimensions of Cartesian and Freudian multipartite and tripartite descriptions and explanations and into more advanced meta-level approaches involving psycho-neurophysiological interactions.

### **3.2 The Theoretical Revolution**

Never before in the history of ideas has there been so much confusion at the core of the concept of nonconscious-unconscious-conscious dynamics. Just as the concept of the unconscious was not the discovery of any single individual, neither was it the preoccupation of any single century or culture. Thanks to Sigmund Freud's predecessors and contemporaries, conceptions of free will would never be the same. Psychic determinism challenged outright the validity of unequivocal (i.e., dualistic) free will and brought to light the explanatory power of causal interaction. However, the plausibility of unconscious determinants of thought and action has led and still leads an exceedingly troubled existence: denial, omission, unbelievability and the outright rejection carried out by behaviourism, the dominant force in American psychology between the late 1920s and the late 1950s. And while unbelievability was the order of the day for conceptions of an

unconscious mental life, in the late “1950s and early 1960s, a new theoretical revolution was brewing within psychology that would soon uproot behaviourism from mainstream experimental psychology and render the just-concluded experimental rejection of unconscious processes ingenuous” (Erdelyi, 1985: 59). But teasing apart the latest theoretical contributions put forth by numerous authors on the nature of the unconscious and its relation to consciousness is no easy task and by no means has any agreed-upon conclusion been reached. Thus far we have seen by way of Erdelyi how:

American experimental psychology did away with not only the unconscious but also the conscious – in short, the mind – as a proper subject for scientific psychology. And how psychoanalysis was dismissed out of hand as an intellectual aberration on the plane with phrenology (Watson, 1924: 297), whose constructs, including the unconscious, were to be regarded as a contemporary reversion to demonology (1985: 58.)

But Erdelyi also suggests that an “experimental program arose in the late 1940s, usually known as ‘the New Look,’ to explore the problem of subliminal (unconscious) perception, and the interaction of motives, including defenses, with perception and memory. The resulting literature was riddled with controversy” (1985: 58.)

This is important because there seemed to be a monumental shift in academic attention and seriousness which began with the discoveries of Descartes, Freud and dynamic psychiatry to the reputable revelations of the information-processing approach or cognitive revolution. This perspective is absolutely critical for determinist claims because it adopted the computer metaphor generating a host of theoretical constructs which approximated paradigms advanced by dynamic psychiatry. This conceptual move served to validate the significance of a causal chain and the existence of the unconscious. While there are major points of departure between the information-processing model and the

Freudian model of mind, Erdelyi points out numerous parallels from several other sources in his 1985 book (p. 59):

. . . "censorship" (filtering, selectivity); "ego" (executive control processes, central processor); "conflict" (decision nodes); "force," "cathexis," "energies," (weights, attention); "mental economics" (capacity); "mental topography," "depth" (depth of processing, up-down processing); the "conscious" (working memory); "psychic structure" (routines, programs, software), and so forth. (cf. Erdelyi, 1974; Erdelyi and Goldberg, 1979; Foulkes, 1978; Kahneman, 1973; Peterfreund and Schwartz, 1971)

An excellent example of the advances made in approaches to mind-brain, mental-physical interactionism can be seen Daniel Dennett's position in his chapter "Self-Made Selves" (1984). Dennett's position is interesting in the sense that he comes close to the Freudian interpretation of the mind as reflex arc but side-steps the problematic vocabulary indicative of nonconscious-unconscious-conscious phenomena. As Dennett puts it:

The expenditure of large amounts of stored energy is controlled by modulation of lower energy events. An information-processing system is essentially an organization of switches or triggers. The switches that control the output effectors – the arms, legs, mouths, wheels, projectiles, rockets – use very little input energy to initiate, modulate, and terminate processes or activities that expend dramatic amounts of energy in clearly observable ways. Moreover, such a system's input switches – the transducers that form the perceptual organs – are also amplifiers. The "firing" of a retinal neuron, for instance, may be "triggered" by the arrival of a single photon on a retinal receptor. Vast amounts of information arrive on the coattails of negligible amounts of energy, and then, thanks to the amplification power systems of switches, the information begins to do some work – evoking other information that was stored long ago, for instance, transmuting it for the present occasion in a million small ways, and leading eventually to an action whose pedigree of efficient (or triggering) causation is so hopelessly inscrutable as to be invisible. We see the dramatic effects leaving; we do not see the causes entering. (1984: 76-77)

Cloaked in contemporary language, Dennett understands the mind as a sort of program which is instantiated in the brain, where the brain's architecture consists of many parallel processes that are all acting simultaneously. Dennett's analysis speaks precisely to

the illusory feeling of indetermination insofar as conscious awareness is never truly aware of the covert levels of causal determination. What the information-processing approach, psychoanalysis (whatever is thought of the detail of psychoanalysis) and cognitive psychology (for instance, Fodor's and Chomsky's work in psycholinguistics) claim to have shown is that the intellectual operations we are aware of are only a small part of the workings of the mind. And while a multitude of papers have been published within the last twenty years on various aspects of consciousness, few have fleshed out any significant connections between notions of the unconscious and its relation to consciousness and how it relates to the problem of indetermination. However peculiar the problem of the unconscious and the notion of a causal chain may seem, the classical question of subjective consciousness and its relation to that which is active, latent and unobservable has resulted in a flurry of theoretical insight and analyses, most of which get caught up in the troublesome tripartite vocabulary of nonconscious–unconscious–conscious processes and dynamics, which either sound too neurobiologically oriented or appear so much like artificial machines that it takes away from the complexities of the subject under investigation. It has been so problematic precisely because all theoretical positions to date have relied on previous vocabulary of the mind and vocabulary of the body, each of which has utilized different languages, different concepts with differing levels of abstraction and complexity and differing sets of tools and techniques. But all use the language of nonconscious–unconscious–conscious relations or hardware and software metaphors explicitly or implicitly. This is fine but we can never get beyond this level of articulation which tends to lead one into an appeal to the best semantics. Daniel Dennett captures the

essence of methodological complexities inherent within the subject of human nature when he says:

First there is a *design stance*. If one knows exactly how the computer's program has been designed (and we will assume for simplicity that this is not a learning or evolving program but a static one), one can predict the computer's designed response to any move one makes. One's prediction will come true provided that the computer performs as designed, that is, without breakdown. . . . The essential feature of the design stance is that we make predictions solely from knowledge of our assumptions about the system's design, often without making any examination of the innards of the particular object.

Second, there is what we may call the *physical stance*. From this stance our predictions are based on the actual state of the particular system, and are worked out by applying whatever knowledge we have of the laws of nature. It is from this stance alone that we can predict the malfunction of systems (unless, as sometimes happens these days, a system is *designed* to malfunction after a certain time, in which case malfunctioning in one sense becomes part of its proper functioning). . . .

There is a third stance one can adopt toward a system, and that is the *intentional stance*. This tends to be most appropriate when the system one is dealing with is too complex to be dealt with effectively from the other stances. . . . Here one assumes not just the absence of malfunction, but the rationality of design or programming as well. (1981: 237-238)

In light of this, it is reasonable to suggest that defenders of free will exclude the realm of lower-level involuntary, non-observable, psychophysical entities in favour of the manipulation of higher-level voluntary thoughts and acts which are consciously executed. But as we shall soon see there is a handful of theorists who are driving mind-brain research to its extreme and as a result have taken the conceptual implications of nonconscious-unconscious-conscious dynamics to new levels of understanding.



### 3.3 The Unconscious and Its Relation to Consciousness: Surface Structure and Deep Structure

John Searle, in "Consciousness, Explanatory Inversion, and Cognitive Science," tells his readers: "When consciousness is no longer regarded as a suitable topic for scientific discussion, something else must take its place and in this case that is obviously the *unconscious*" (1990: 585-586). This is precisely the point at which theoretical argumentation looms large. In *The Rediscovery of the Mind*, Searle, tells his audience:

Consciousness is caused by the behavior of lower-level elements, presumably at neuronal, synaptic, and columnar levels, and as such it is a higher-level feature of the entire system. I do not mean to imply that there is anything simple about consciousness or about neurophysiology. Both seem to me immensely complex, and consciousness, in particular, comes as we have seen in a variety of modalities: perception, emotion, thought, pains. But on my view, that is all that is going on inside the brain: neurophysiological processes and consciousness. (1992: 167-168)

Accordingly, Searle believes that states of consciousness are properties of the brain caused by, but not reducible to, its neural activity. Moreover, Searle is noncommittal insofar as subjective consciousness is not reducible to anything at all:

My view is emphatically not a form of dualism. I reject both property and substance dualism; but precisely for the reasons that I reject dualism, I reject materialism and monism. The deep mistake is to suppose that one must choose between these views. (1992: 28)

Searle's position is that consciousness may indeed be construed as that which corresponds with mind, free will and that which is mental, *and* that which is neurophysiological, thus rendering freedom of will metaphysically more ideal than real. Searle explains:

Consciousness is a higher-level or emergent property of the brain in the utterly harmless sense of "higher-level" or "emergent" in which solidity is a higher-level property of H<sub>2</sub>O molecules when they are in a lattice structure (ice), and liquidity is similarly a higher-level emergent property of H<sub>2</sub>O molecules when they are, roughly speaking, rolling around on each other (water). Consciousness

is a mental, and therefore physical, property of the brain in the sense in which liquidity is a property of systems of molecules. If there is one thesis that I would like to get across in this discussion, it is simply this: The fact that a feature is mental does not imply that it is not physical; the fact that a feature is physical does not imply that it is not mental. (1992:14-15)

Perhaps Searle's forceful rhetoric is a result of an intense frustration: the same dissatisfaction Descartes, James, Freud and Vygotsky experienced attempting to explain a physical system in mentalistic terms. In fact, Searle's position reflects Gilbert Ryle's understanding of a category mistake. In *A Dictionary of Philosophy*, Antony Flew explains:

Ryle had earlier employed the notion of "systematically misleading expressions" in an effort to show how we can be misled by purely grammatical structure into unwarranted beliefs. . . . He criticized Descartes' dualism of body and mind as "one big mistake and a mistake of a special kind. It is, namely, a category mistake. It represents the facts of mental life as if they belonged to one logical type or category (or range of types or categories) when they actually belong to another" (1984: 58.)

This point is important, so let me expand on it for just a moment. As we have seen throughout this thesis, the possibility of making a category mistake arises from the fact that in most analyses, the terms 'unconscious' and 'conscious' name qualities which apply strictly to the domain of mental contents, that is, to the entities of which the mental system is composed. Nonmental entities, such as physiological processes, can more or less be said to be nonconscious, but not unconscious. But as we will see shortly the notion of a deep unconscious crosses into the territory of the nonconscious. It becomes, as we have seen with Descartes, Spinoza, James and Freud, an extremely complicated issue of semantics. This is what Searle is alluding to, more or less, insofar as it would be a category mistake to apply the antithesis conscious-unconscious to anything that is not mental. But Searle's analysis still remains within the problematic vocabulary of nonconscious-unconscious-conscious

relations. There is however one theorist who has pushed the metapsycho-biological envelope to its extreme and has put forth a convincing taxonomy which speaks precisely to the layers of intricate interaction between psychoneurobiological phenomena but avoids the legacy of pitfalls and conundrums of centuries past and present. Christopher Olsen, in *The Janus Character of Mind/Brain*, has developed a philosophical taxonomy which captures the conceptual essence of bio-psycho-social adaptation within the larger conceptual frame of ontological inquiry and in so doing indirectly addresses the nature of psychophysical interaction. Olsen says:

This taxonomy will have three “dimensions” to deal with the problem of conscious and so-called unconscious intentional states that I claim are cognitional modes of consciousness. The first dimension is an occurrent/non-occurrent dimension. It pertains to whether the intentional states in question are *currently* occurring – or not – within the subject’s mental economy. The second dimension is an operative/non-operative dimension. It pertains to whether the intentional states are causally involved – or not – in the subject’s behavioural economy. The third dimension, already mentioned above, is a reflective/non-reflective dimension of a subject’s “consciousness economy”. It is narrower than the subject’s overall mental economy. (1998: 183)

It may be instructive to examine the importance of Olsen’s taxonomy from three critical points at issue. First it allows one to think of psychical processes in other than reductionist terms. Olsen’s non-reductionive materialism claims an emergent co-intensive meta-level analysis in which issues of adaptation, synthesis, rational and non-rational action are criteria for conscious and so-called unconscious intentional states. His terminology captures three qualitatively distinct yet quantitatively interrelated dimensions: mental economy, behavioural economy, consciousness economy, wherein he assigns a non-hierarchical structure of values to each level. Olsen’s taxonomy utilizes a “layer-model” (my term) approach with respect to the notion of a causal chain wherein there is a

differentiation of mental from the organic and material. Thus a higher level invariably means the emergence of something new, in comparison with lower levels. Each level is comparatively autonomous. None can be explained through a reduction to a lower level, so to speak; instead, each level is characterized by a specific type of determination. Notice Olsen's metalinguistic claim in the term "so-called unconscious" (p. 183). This is important because what Olsen is alluding to is one of the most problematic claims to be addressed in this section, that is, the plausibility of a deep unconscious, which will be addressed shortly. In essence, Olsen's taxonomy is conceptually critical for several reasons. First and foremost it mediates between the information-processing approach and the psychoneurobiological approach wherein multipartite and tripartite divisions of mind-brain-body become so inundated with semantic obstacles that the subject matter under investigation becomes obscure. Secondly, it points precisely to the significance of multiple causality rendering the plausibility of traditional indeterminism (or free will) untenable. Olsen's taxonomy commits him to a deterministic position insofar as the plausibility of actions and events, at certain levels of systems, are not free but are causally interactive and operative at all times. In essence, Olsen's layer-model approach to the unconscious and its relation to consciousness may be seen as foundational for evolution-driven accounts of mind-brain-body analyses operating within the larger frame of free will and determinism. Traditional free will within Olsen's framework, would have to be construed as illusory because conscious awareness is parasitic on lower-level properties which are bound within, between and upon levels and layers of relations. One gets a sense of Olsen's commitment to the implications of adaptation and evolutionary theory as they play out in a non-

reductionist materialist orientation. Both Searle's and Olsen's claims regarding the unconscious and its relation to consciousness raise some of the most contentious issues regarding mind-brain analyses to date.

Let's turn our attention to see how both Olsen and Searle conceptually negotiate one of the most contentious claims currently under investigation: the existence of intentional unconscious information processing which, in Freudian terms, would occur in the "deep unconscious". Searle says:

There is nothing going on in my brain but neurophysiological processes, some conscious, some unconscious. Of the unconscious neuro-physiological processes, some are mental and some are not. The difference between them is not in consciousness, because, by hypothesis, neither is conscious; the difference is that the mental processes are candidates for consciousness, because they are capable of causing conscious states. But that's all. All my mental life is lodged in the brain. But what in my brain is my "mental life"? It is just two things: conscious states and those neurophysiological states and processes that – given the right circumstances – are capable of generating conscious states. Let's call those states that are in principle accessible to consciousness "shallow unconscious" and those inaccessible even in principle "deep unconscious." Our first conclusion is that there are no deep unconscious intentional states (1990: 588).

Unlike Searle, however, in a similar line of reasoning, even though he does not use the term, Olsen at least allows for the conceptual implications of a "deep unconscious" insofar as his claim seriously considers the plausibility of states existing at a lower-level which are causally operative, have subjectivity and intentionality and which are not conscious. In essence, Olsen eliminates the problematic claims associated with terminology of the "unconscious" and redirects his reader into a layer-model approach avoiding some of the problems associated with deep unconscious intentional states identified by Searle. Olsen says:

So-called unconscious beliefs and desires are thus to be understood as cognitional states that are just not at the reflective level of consciousness. Yet if these "unconscious" cognitional states in fact do have the two features of consciousness that have been central to this discussion, viz., subjectivity and intentionality, they have the features of consciousness essential to the determination of an action. Insofar as they are cognitional states, they are therefore not "unconscious" states at all. Rather, they are intentional states that are directed towards conceptually structured intentional objects for which conceptual *consciousness* is necessary in order to "structure" the world into behaviourally relevant objects. (1998: 183)

This is precisely the point at which Olsen's taxonomy, previously outlined, may be construed as conceptually pivotal in non-reductionist evolution-driven psychophysical accounts of a complete metaphysics of persons wherein mentalism and naturalism are positioned, if you will, as varying in degrees.

But there tends to be within broad concepts of the unconscious a fundamental distinction between mental entities which are capable of becoming conscious under certain conditions, versus those which are incapable of becoming conscious under any conditions. It is the latter category that is referred to by cognitive scientists and dynamic psychiatrists as the "deep unconscious". However, not all theorists are in complete agreement. As we have just seen, John Searle suggests no such deep unconscious exists, whereas Olsen opens the door to it in a deliberately paradoxical way.

I think Searle's move is two-fold. First, Searle is in line with an antireductivist position which he accordingly finds necessary to account for a comprehensive metaphysics of persons. Thus, similar to Freud's abandonment of the "Project," Searle plays it safe by denying phenomena or entities which fall descriptively and explanatorily outside the realm of neurobiological causality. For Searle there is no intermediate level of unconscious information processing between the level of the mental and the level of the neurobiological.

This is precisely where Olsen's thesis surpasses Searle's. Olsen allows for neuro-physiological description, which refers to intrinsic nonconscious properties of the brain, and also psychological descriptions, which refer to conceptual relationships between the brain and the environment. It's almost as if Searle is suggesting a mind-brain isomorphism insofar as causal chains of brain events are precisely correlated with unconscious and conscious mental events. This is the point at which Searle's argument against the plausibility of unconscious intentional information processing gets complicated. In "Consciousness, Explanatory Inversion, and Cognitive Science," Searle sets up his position with an excellent six-step discussion on what he refers to as the "Connection Principle," which suggests: "The ascription of an unconscious intentional phenomenon to a system implies that the phenomenon is in principle accessible to consciousness" (1990: 586). Searle goes on to propose that "*Intrinsic intentional states, whether conscious or unconscious, always have aspectual shapes*" (1990: 587). So far so good. Searle introduces his thesis of "aspectual shape" and explains:

Whenever we perceive anything or think about anything, it is always under some aspects and not others that we perceive or think about that thing. These aspectual features are essential to the intentional state; they are part of what makes it the mental state that it is. Aspectual shape is most obvious in the case of conscious perceptions; think of seeing a car, for example. When you see a car it is not simply a matter of an object being registered by your perceptual apparatus; rather you actually have a conscious experience of the object from a certain point of view with certain features. You see the car as having a certain shape, as having a certain color, and so forth. And what is true of conscious perception is true of intentional states generally. (1990: 587)

According to Searle, the concept of aspectual shape is clear for conscious thoughts and experiences, but he is not clear how it works for unconscious mental states. If unconscious mental events refer to neural events, which they do for Searle, then to claim the existence

of a psychical unconscious in the sense of something nonphysically distinct from neural events commits one to dualism on the level of the unconscious. This is precisely what Searle finds incoherent. He criticizes Freud for what he sees as dualism when he says:

He thinks that there is something there causing the behavior that is not just neurophysiological, but is not conscious either. I cannot make this consistent with what we know about the brain, and it is hard to interpret it except as implying dualism, as Freud is postulating a class of non-neurophysiological mental phenomena; and thus it seems to constitute an abandonment of Freud's earlier project for a scientific psychology (1895). (1992: 170)

Searle recognizes the problem with talking about materialism since such talk is generally confused with an appeal to a reductionist materialism. And since the explanatory power of reductionist materialism is limited, and as we have seen, its ideational fruits sterile, dualism tends to be proffered as the reasonable alternative, although dualism in its own way is just as inadequate as reductionist materialism. While it is true that dualism with respect to conscious mental events is highly problematic and controversial, it is at least an arguable position. However, Searle will entertain none of it for the following reasons: "Not only is there no evidence for their existence, but the postulation of their existence violates a logical constraint on the notion of intentionality" (1992: 173). The problem with Searle's position is that he puts too much emphasis on the connection principle insofar as he professes subjective consciousness to be the prime mover and shaker of the psychophysical world. Olsen explains his concerns with Searle's stance:

Even this remains problematic since, as just reiterated above, intentional states, including unconscious ones, are *already* modes of conceptualizing consciousness. To speak of *their* "accessibility to consciousness", as Searle does, comes close to making a Rylean category mistake (on my view) because it seems to suggest that consciousness itself is being made into another intentional object as opposed to its being a way (mode) of being aware of objects. But if consciousness is not an "it" (but is only an awareness of "its"), there is no thing



for consciousness to have access *to* in the way it has access (or *is* an access) to its intentional objects. (1998: 199)

Intentionality independent of consciousness, for Searle, is untenable; but as Olsen has just pointed out, consciousness is not an “it”. Rather, it is a mode of being aware of objects. In essence, consciousness may be considered an apparatus for the functioning of the apparatus as it employs and deploys excitational energy. Unconscious intentionality has an object, source, aim, and intensity, all of which cooperate together in a lawfully determined way to achieve the most expedient or inexpedient means of discharge. This Searle believes is none other than neurophysiology. But we shall see in the next section the extent to which some theorists go to support the validity of a deep unconscious.

According to Searle then, one must not postulate more unobservable entities and activities than are absolutely necessary for explaining the observable phenomena in all their complexity. Searle’s position hinges on an argument from logic: because unconscious mental events are unobservable, their existence can never be logically inferred from conscious observable events. They can only be postulated as theoretical entities and their existence justified through a “connection” to conscious events. Searle explains:

These two features – the fact that an unconscious intentional state must nonetheless be intrinsically mental, and the fact that it must have a certain aspectual shape – have important consequences for our conception of the unconscious. They will provide the basis for an argument to show that we understand the notion of an unconscious mental state only as a possible content of consciousness, only as the sort of thing that, though not conscious, and perhaps impossible to bring to consciousness for various reasons, nonetheless is the *sort of thing* that could be or could have been conscious. The idea, that all unconscious intentional states are in principle accessible to consciousness, I call the connection principle . . . (1992:155-156)

But the point here, and I will use Olsen's words to make it, is that "... Searle cannot have it both ways without equivocation. He cannot say that intentional states must in principle be accessible to consciousness and then admit that some may be impossible to bring to consciousness" (1998: 195-196). Olsen explains his concern with Searle's claim:

In the terms of my taxonomy, most of the beliefs and desires we may properly be said to have are not *occurently* reflective. Thus insofar as we have such mental states they are mostly *unconscious* in the sense that we are not reflectively aware of their intentional objects. (1998:194)

What is at issue is the fact that there are mental entities, of which we are not aware, which influence our thought and actions which are "causally operative" within the "non-reflective", "non-occurrent dimension" (Olsen: 183) of psychic life. Searle sells short the complexity of issues surrounding the layer-model approach in which neurophysiological explanatory phenomena are integrated into an intricate causal network of unconscious-conscious psychophysical interaction. Searle settles for an innocuous noncontroversial metalinguistic thesis using terms such as "connection principle" and "aspectual shape" and in so doing fails to grasp the complexities inherent in the terminology of the unconscious. And while it is true that disagreements and contradictions run rampant within some of the leading theoretical contributions cited above, it can also be said with equal confidence that their claims challenge the thesis of free will. Thus it is reasonable to suggest, given our discussions thus far, that unequivocal freedom of will is conceptually plausible if and only if psychological explanatory and descriptive properties and relations are disengaged from bio-neurophysiological inquiry. Interestingly, the argument runs even deeper among and between determinists and compatibilists alike. In fact, some theorists do not think the thesis

of intentional unconscious information processing is incoherent at all. Thus another paradigm shift is about to unfold.

### 3.3.1 *Philosophy, Dynamic Psychiatry and Neuropsychiatry*

One might inquire what dynamic psychiatry has to offer at this point. With respect to the antithesis conscious–unconscious and the problem of free will, the direct causation of responses may or may not be obviously voluntary because reactions occur at levels inaccessible to both subject and observer. Thus one’s feeling of being in control omits the subtleties of evolution-driven defensive operations of adaptation. In short, there tends to be a case for the plausibility of a submerged network of defense mechanisms, a *deep structure*, which are excluded completely from conscious awareness. Let me explain.

A handful of theorists such as Joseph Lichtenberg and Joseph Slap entertain the implications of such a thesis in “On the Defensive Organization”.

We may be justified in conceiving the defensive processes and the defence mechanisms as being part of and operating within a *defensive organization*, which is itself a part of the total ego-organization, though not identical with it. This concept, the defensive organization, is in our view a valuable theoretical tool which has not been utilized to its potential. . . . In our conception of the defensive organization, we emphasize its problem-solving function in states of disequilibrium that result from conflict from a greater or lesser intensity. While direction for problem-solving comes from all aspects of the psychic apparatus (the drives, other aspects of the ego besides the defensive organization, the ego ideal and the superego), the defensive organization exerts a particular influence on these forces that is crucial for adaptation. (1971: 451)

From Lichtenberg and Slap, we get the sense of the extent to which the defensive organization – undifferentiated and differentiated states of organization – progresses not only by the creation of new organizations to master developmental and maturational

demands, but also and mainly by new apparatuses emerging, on a higher level, to take on tasks which were presumably performed by a more primitive organic means. And these may or may not exist exclusively at the neurobiological level. We shall see later in this thesis just how important it is to grasp the conceptual implications of defensive organization. Lichtenberg and Slap explain:

The defensive organization is a functional unit, or cohesive set of motives, which crystallizes from the inborn genetically determined tendency to order (regulate) psychic experience. In its most primitive form the defensive organization consists of a readiness to regulate and a readiness to make use of whatever cognitive apparatuses are available. (1971: 454)

Lichtenberg and Slap are speaking directly to an extremely important bio-cognitive position, which is often overlooked or discarded in claims regarding the unconscious and its relation to consciousness. Lichtenberg and Slap's thesis sets the stage for a more in-depth approach to the exploration of intentional unconscious information processing and symbol manipulation and, in so doing, points indirectly to the implausibility of indeterminism. Hence, mind-brain analysis is taken, yet again, to new levels of phylogenetic and ontogenetic conceptualization because evolution-driven mechanisms of defensive adaptation must now be factored into the thematic foci under investigation. I shall explore this in greater detail in a moment.

On the surface, Searle's position regarding the "connection principle" appears airtight and completely plausible. However, there is a fundamental flaw in Searle's understanding of the deep unconscious. While it may perhaps be said for the most part that philosophers, cognitive scientists and dynamic psychiatrists are more or less in agreement with Searle's view that most mental states are unconscious vis-à-vis the shallow

unconscious and can be “thought of as neurophysiological processes capable of causing consciousness” (1990: 588), it can also be said that Searle’s outright denial and dismissal of “intentional unconscious information processing” as a coherent thesis is premature.

The argument can be summarized as follows. The possession of aspectual shape is a necessary condition for being an intentional state according to Searle’s definition. Searle insists that only conscious mental states and the shallow unconscious can possess aspectual shape. Unconscious mental states, he says, consist exclusively in neurophysiological facts which are incapable of possessing aspectual shape, though they can encode aspectual shape. But, Searle claims, there can be no intentional unconscious mental states. Without using the terminology of the connection principle, in his chapter “Cognition as a Mode of Consciousness”, Olsen begins to make room for the possibility of unconscious mental states that are genuinely intentional:

It would be easy to think that most cognition is “unconscious”, as orthodoxy in cognitive science seems to suggest for a different reason; but this trades on a failure to distinguish between non-reflective and reflective consciousness. Odd as it may sound, I am claiming that non-reflective cognition, if it is truly cognitional at all, *is* conscious because it has the features of consciousness even though not at the level of reflective consciousness. (1998: 185)

Drawing from what I (but not Olsen) call the layer-model approach, Olsen goes on to tell his readers:

The basic level manifests only the essential features of subjectivity and intentionality that I take Searle to be building into his notion of “aspectual shape” (1992, pp. 155-164 *passim*). (It may also have the feature of causal efficacy when relevant to action.) It is these two features that I have claimed are present in cognition as a mode of consciousness even if *reflective* awareness is not the particular mode of consciousness. And it is *not* in the case of *unconscious* intentional states. (1998: 195)

Olsen explicitly validates the possibility of non-reflective intentional cognition thus supporting the plausibility of intentional unconscious cognitive mentation. This is precisely where Olsen and Searle part company. Searle advocates a position of unconscious states similar to Freud's "descriptive unconscious" which includes preconscious and dynamically unconscious contents only. Preconscious contents are defined as those that can become conscious with little effort, whereas dynamically unconscious contents are those that can become conscious, *in principle*, only if defenses are removed. But, as I interpret him, Olsen pushes the metabiological envelope and makes a case for the existence of unconscious subjectivity and intentionality. What Searle fails to incorporate into his argument against the plausibility of intentional unconscious information processing, is complex, to be sure. But it primarily falls within the realm of psychodynamic implications of meaning inherent in his usage of 'nonconscious' (neurophysiology) 'unconscious' (involuntary) and 'unconscious' (incommunicable or unavailable to awareness) in speaking about aspects of consciousness and its relation to the unconscious. Defense mechanisms must be taken into account when we are discussing the unconscious and its relation to consciousness because it has direct relevance to the problem of unconscious mentation insofar as it operates on conscious contents in an effort to keep unconscious aspects of mental life from erupting into awareness. Again Eric Gillett captures the distinction between the involuntary act of repression versus defense content which can become conscious.

In situations of intrapsychic conflict, three things are unconscious: the "decision" to activate defense, the operation of defense mechanisms, and the mental content against which the defense is directed. It is only the last of these three that belongs to the experiential unconscious. Neither the decision to activate defense nor the operation of defense mechanisms can become conscious

under any conditions and are, therefore, unconscious in the nonexperiential sense (1996:3)

Eric Gillett pushes the plausibility of intentional unconscious information processing to its extreme and puts forth a broad concept of the unconscious defined as everything mental which is not currently conscious. Included in Gillett's broad concept are several different kinds of "unconscious" corresponding to different reasons why something mental is not conscious. Gillett borrows the term "nonexperiential" from Sandler and Joffe (1969) to refer to what Searle calls the "deep unconscious." Thus Gillett works within a frame of "experiential" and "nonexperiential" realms wherein the experiential includes mental contents which can be conscious or unconscious. The experiential realm of the unconscious is equivalent to Freud's descriptive unconscious, which includes preconscious and dynamically unconscious contents. This is equivalent to Searle's shallow unconscious. Preconscious contents are those that can become conscious by minimal effort, and dynamically unconscious contents are those that can become conscious only if defense is lifted. The connection principle captures only one aspect, an exceptionally critical aspect I might add, of consciousness and its relation to the unconscious. It is only the last of these three that belongs to the preconscious and dynamic unconscious. Neither the decision to activate defenses nor the operation of defense mechanisms and processes can become conscious under any conditions. Therefore, contrary to Searle's position, the thesis of intentional unconscious information processing is not as "incoherent" as suggested. Defensive mechanisms are causally efficacious in producing defensive content. All of this occurs at the level of the deep unconscious. Hence there is more to the story than just pure, raw neurophysiology. The involuntary manipulation of defensive content renders

arguments in support of free will incomprehensible. It only appears on the surface, given what we know about the brain: there is only consciousness and neurophysiology going on, as Searle puts it. One only has to cite the abundant evidence to make the case. Scientific investigation has given us in-depth knowledge about the nervous system and its functions. But not all knowledge can be based on scientific evidence, because that evidence itself must be something which we know. There must be some things which we “know” directly, that is, not on the basis of evidence, because they are too small to reflect light or because we have not discovered the means to know at the time of theoretical considerations. This is the point at which Searle’s argument falls short. Just imagine if Copernicus, Einstein and Darwin dismissed hypotheses on the basis of unbelievability. Searle plays it safe within the language of neurophysiology. Do we have any idea of what the evidence would look like for intentional unconscious information processing? Apparently yes. I would like to offer an extreme example which speaks directly to the highly contentious point at issue and, while it may seem highly speculative, it in no way should take away from its believability.

### *3.3.2 A Case for Intentional Unconscious Information Processing*

On close examination, if what Searle is saying is indeed the case, why is it, when behaviour and actions toward an appropriate progressive discharge are blocked, that dream images become involuntarily distorted, displaced, condensed, and/or reversed into the opposite? Let me explain. There is a pervasive phenomenon in which one can be said to be conscious of one’s thoughts without consciousness having been involved in their formulation.

A dream is the most typical form of conscious experience during sleep, and it is evidently the end-product of a highly flexible and organized processing of



dissociated units or systems of memory and knowledge. In dreaming there is no stimulus to be identified; rather, there are stimuli to be integrated and rendered coherently sensible, even if they are not. Dreaming establishes that highly elaborate conscious contents can be experienced through processing that is wholly nonconscious. (Foulkes, 1991: 678.)

Hence, there does indeed seem to be a case for intentional unconscious information processing which has properties of subjectivity and intentionality and which cannot become conscious: nonconscious processes involve symbolic manipulation into distorted images. It is plausible to conceive of unconscious intentional processing toward coherent and informationally consistent conscious contents to be adaptive. If so, it would seem impossible to turn our minds off. If "intentionality" is defined as "ofness" or "aboutness" as exemplified by beliefs and desires; and if these intentional states can be manipulated subjectively and processed imagistically without being under voluntary control, then it follows, in principle, that an intentional cognitive unconscious exists and is active. Hence, the position of a 'deep unconscious' is completely tenable, although on some interpretations it could lead one (wrongly) into something of a dualistic bind – something occurring not merely at the level of neurophysiology. Let's take a classical example of Freudian dream interpretation. Certainly, this is not the only plausible interpretation. But any one of several interpretations could each illustrate the point I want to make.

In a taped lecture delivered on October 14, 1993, University of Toronto, Professor Charles Hanly, speaking about Freud and Philosophy, indirectly addresses the plausibility of intentional unconscious information processing.

In dreaming, there is an inhibition in the progressive direction of discharge and a regression occurs in excitation, as a result of it having been barred from motor discharge. So there are two factors in operation: (a) senses are dulled; and (b) motor activity is reduced to a minimum which is required for sleep. A

psychological resistance, if you will, known as *dream censorship*, located presumably in the preconscious, prevents motor activity. The excitations are returned in a regressive direction toward the perceptual end of the psychic apparatus where they activate imagistic perceptual processes. So rather than engaging in motor activity that would satisfy one's needs, one now has a scene taking place that offers a disguised form of a wish being satisfied, as actually undergoing gratification, which results in the hallucinatory vividness characteristic of our dream life. (Hanly, 1993).

There's more. Freud adds two characterizations to the psychic apparatus – two types of mental functioning which are critical for grasping the illusory nature of free will: *primary process thinking* and *secondary process thinking*. The former is characteristic of unconscious mental activity, the latter characteristic of conscious thinking. Charles Rycroft explains:

*Primary process thinking* displays CONDENSATION and DISPLACEMENT, i.e. images tend to become fused and can readily replace and symbolize one another, uses mobile ENERGY, ignores the categories of space and TIME, and is governed by the PLEASURE-PRINCIPLE, i.e. reduces the unpleasure of instinctual TENSION by hallucinatory WISH-FULFILLMENT. . . . *Secondary process thinking* obeys the laws of grammar and formal logic, uses bound energy and is governed by the REALITY-PRINCIPLE, i.e. reduces the UNPLEASURE of instinctual tension by adaptive behaviour. Freud believed the primary processes to be ontogenetically and phylogenetically earlier than the secondary processes. . . . The secondary processes developed *pari passu* with the EGO and with adaptation to the external WORLD and have an intimate connection with verbal thinking. The primary processes are exemplified in dreaming, the secondary processes by thought. Day-dreaming, imaginative and creative activity and emotional thinking contain an admixture of the two processes. (1968: 124)

When dreaming, we are in a different mode of consciousness from normal wakefulness and lack volitional control over the decision to activate defense content and the operation of defense mechanisms, such as condensation, displacement and distortion. According to Freudian theory "dreams guard our sleep so we do not wake up" (Hanly, 1993). Failure of distortion, condensation, reversal into the opposite may occur when one awakes from a nightmare because the dream is too disturbing. Hence, there does indeed

seem to be a case for unconscious mentation. It is precisely these processes that support the thesis of intentional unconscious symbol manipulation and information processing. What is more, if these processes occur in dream life then we must wonder about the extent of their involvement in waking life as well. Given our understanding thus far it appears that unequivocal freedom of will is conceptually implausible. Even if we wanted to refrain from or entertain particular thoughts and actions, we would never truly be free to exercise this with any degree of precision because images and the feelings associated with these images surface involuntarily as disguised, condensed and/or reversed into its opposite within layers of conscious–unconscious psychophysical “interaction” (in contrast to supposed Cartesian mind–brain interaction.) To this end, psychic determinism renders free will illusory.

Searle’s connection principle may work beautifully with respect to simplistic dream examples, like the one that follows, but it tends to be vacuous with respect to the complexities inherent within psychodynamic dream formation. It may be useful to look at Olsen’s theoretical framework to get us beyond the shortcomings inherent in Searle’s position. The following dream is a perfect example of the connection principle. Let me explain.

It is well known, for example, from the journals and logs of early Arctic expeditions, that starving men and dieters regularly dream of food and of eating. It is easy to recognize that it is hunger which gives rise to such dreams, and of course the men are quite consciously aware of their hunger when they are awake. But during their sleep, when they are dreaming of gorging themselves at banquets they are not conscious of hunger, but only

of satiation. Thus it can be said that at the time the dream was dreamed, the connection principle is operative because in the dreamer's mind aspectual shape gave rise to the dream images which were consciously experienced. But our dreams are not so simple. And while Olsen's, Gillett's and Lichtenberg and Slap's theses do not explicitly use dream interpretation to make a case for intentional unconscious symbol manipulation, what we can say with confidence about their theoretical framework, is their vision of possibilities.

To illustrate the plausibility of intentional unconscious information processing and symbol manipulation, the following is an example of dream interpretation. However, it must be stated at the outset that there could be strongly competing interpretations. If a man has a dream about the assassination of President Kennedy, we can suggest that the symbolic elements in the dream, such as President Kennedy and his wife Jacqueline, stand for the parents of the dreamer. What is instrumental for our consideration is both manifest and latent aspects of the dream. The manifest content of the dream, the murder of President Kennedy, may be interpreted as the desire to be rid of one's father. Underlying the dream there is an identification with President Kennedy which idealizes Kennedy's power, status and societal privilege. We can understand the connection principle at work, more or less, as the conscious idealization and identification with forms of privilege and power Kennedy possessed; but there is, at the same time, ambivalence.

On the one hand, the dreamer identified with and loved everything the President stood for and owned. On the other hand, the dreamer was envious and wanted everything President Kennedy had, including his beautiful wife. While the dream *ensorship* operates on behalf of conscious functions, insofar as the aspectual shape of what is conscious is

connected to the same aspectual shape which is unconscious, there appears to be something more going on other than the connection between conscious and unconscious content. Searle's connection principle with respect to aspectual shape, while true for the most part, does not address the complexity of ambivalence in terms of defense contents and defense mechanisms. Here, aspectual shapes become distorted, condensed and transformed by way of defense mechanisms.

Let's take the example of the dream of the assassination of President Kennedy, to make the point more obvious. The unconscious identification with Lee Harvey Oswald could presumably be substituted for the identification with President Kennedy, which is a disguise for the actual ambivalent feelings for the dreamer's father. Latent feelings of hate, greed and envy manifest in murder. As a result, President Kennedy's life is taken. In essence, the "dream work" (Freud, 1900/91: 381) presents the former President of the United States as a symbol in consciousness for the dreamer's father wherein old rivalous feelings of ambition, admiration and envy play a part in how a small boy feels toward his father, but which have been repressed for years. These feelings surface in a disguised form and become condensed and transformed. The dreamer, when awake, is a law abiding, intelligent, moral citizen, who would never consciously think of killing anyone; but then he has a dream in which he identified himself with a murderer. This is important because even when we are asleep, when we are at rest, information is being "involuntarily," but intentionally, manipulated, to put it somewhat paradoxically.

For Searle, unconscious brain states cannot determine aspectual shape. But as we have seen in the case of dreams, defense mechanisms, which are considered to be unobservable,

perform equally unobservable mental operations upon defense contents which exist unconsciously in the broad sense of being unable to become conscious but not in the dynamic sense of being repressed. Defense mechanisms participate in the formation of defense contents, and it is only the defense contents that undergo distortion, condensation and displacement. Although many authors would credit dreams with far less psychosocial significance, it is my position that dreams exhibit a case wherein intentional unconscious mind-brain states determine aspectual shape. Moreover, dreams are an extant example of the manipulation of unconscious cognitive content which functions to maintain a state of psychic health and homeostatic balance by finding substitute satisfactions for wishes we would not be satisfied with in waking life. Thus there is more than neurophysiology occurring. If we were to dream about murdering our father we would, more often than not, wake up in a cold sweat, not be able to sleep, and be deeply disturbed. The manifest content is the defense content and illustrates the extent to which intentional unconscious symbolic manipulation is adaptive: it allows us to sleep without interruption.

In *Behavioral and Brain Sciences* "Open Peer Commentary" Hubert Dreyfus, in an article entitled "Searle's Freudian Slip," responds to the Searlean disavowal of the "deep unconscious" by illustrating the perspectival congruence regarding the nature of the unconscious between psychoanalytic and cognitive theoretical contributions. He says:

If Searle accepts the Freudian unconscious, it seems he is committed to the view that it is "in principle" possible for there to be a world in which people have mental states which cause them to behave, talk and perceive without any actual consciousness being involved. The only difference between this view and cognitivism would be that Searle insists that to count as a mental state a brain state must be at least potentially conscious, while cognitivists deny this. (1990: 604)

If there is something that materialism must postulate as occurring in addition to neurobiological processes, Searle would be right when he says that “materialism is thus in a sense the finest flower of dualism. . . .” (1992: 26). Evolutionary ontology allows us to understand defense mechanisms as having an innate basis. These emerge and differentiate through interaction with the environment. Their development depends partly on the process of maturation and, to a greater or lesser extent, this may be strongly influenced by experience. Hartmann theorizes on ways in which “primitive reflexes may give rise to defense mechanisms through a change of function” (1964: 123-6), but there is not much evidence for this as yet. Olsen’s taxonomy, in a similar vein, provides three dimensions which are foundational for further evolution-driven exploration and syntheses. If we push Olsen’s taxonomy to its logical extreme it suggests that there must be some innate basis for the capacity of the mind-brain to perform each of the different types of “dimensions”, rendering free will more metaphysically ideal than real. This point is critical for pushing forward in mind-brain analyses because no matter how important one believes the influence of the environment to be, there must be something innate for experience to interact with.

If we consider the causal chain from the point of view of the distinction between what is *manifest* and *observable* – constructs, mental content, defense content – from what is *latent* and *unobservable* – entities, neurophysiological structures, components, systems and mechanisms – we can infer that the principle of determinism is sufficient to warrant the conclusion that lower level brain events are responsible for higher level mental events. The principle of psychic determinism entails that a mental content must pass through a lawfully

determined sequence of stages within the nonexperiential realm prior to becoming conscious in the experiential realm. It is this sequence that can be viewed as the causal chain which culminates in conscious mental events. One can see how thinking about the relationship of the brain with respect to the antithesis unconscious–conscious helps to conceptualize the problem of free will. The concept of mind–brain may be understood as a hierarchical matrix of systems in which observable constructs and unobservable entities are linked in a causal chain in which one can become conscious only of content which is the result of an intricate causal chain: the working of the mind–brain and not of the mechanistic, highly structured working itself.

Sean Spence, in an article entitled “Free Will in Light of Neuropsychiatry,” presents an argument from the perspective of neuroscience, which pushes the latter to its logical conclusion: if the human nervous system is consistent in its properties, then the only place for free will is in the non-conscious processes which underpin conscious awareness. Spence, like Freud and so many other theorists, sees freedom as a quantity of unbound energy, distinct from action and conscious awareness of events which occur at a finite delay, the period of ‘neuronal adequacy,’ after the events themselves. While suspicions of dualism abound, Spence’s thesis is tenable. Spence explains:

Conscious awareness of events occurs at a finite delay, the period of “neuronal adequacy,” after those events themselves. The point here is that neurochemical events giving rise to phenomenology are likely to require a period of time (no matter how short) for their genesis. The process is “on-line” before we perceive it (a temporal distinction). Thus the “freedom to act,” a “motor process” is necessarily non-conscious at the point of initiation. (1996: 99-100)

Spence’s perspective is interesting insofar as his claims tend to draw our attention to the physiological underpinnings of free will. This is important because his position draws



our attention to the complexities of issues associated with “causal efficacy” within a hierarchical matrix of systems in which observable constructs and unobservable entities are linked in a causal chain. In short, Spence brings theory together with empirical observation. One might ask, if all events have an antecedent cause, how, if at all, can one precisely necessitate the occurrence of another? Christopher Frith suggests a dangerous crossing from physiology to cognition, but is noncommittal on how the cognitive maps onto the underlying physiology:

There is a characteristic change in brain activity several hundred msec before the subject is aware of deciding to act. Therefore the observer knows that the subject is going to act before the subject is aware of making the decision. Either the act is predetermined (because we can predict it from physiology) or the decision to act is made below the level of awareness. (1991: 91)

On the next page he says:

I agree with Spence’s conclusion (following Velmans 1991) that the decisions underlying the experience of free will must be made non-consciously. This is an example of the general principle that we are not aware of cognitive processes, but only the results of these processes (Nisbett and Wilson 1977). In the case of decisions, we are aware of the information on which the decision is based. Following a pause, we are then aware of the action chosen. We are not aware of how we got from the input to the output. However, being unaware of the process by which we choose how to act is not something unique to the problem of free will. It is a general feature of awareness. . . . There seems to be an early physiological event which causes and is followed by a late experiential event. I would prefer a model in which both events were clearly physiological. One of the few things we know about the brain is that the same object or event is represented in many different locations and in many different forms. (1996: 92)

What is important to notice here is the level of interaction between systems of causality. Spence and Frith tend to view unequivocal freedom of will as somewhat illusory, insofar as the conscious decision to act or not to act appears to be itself the result of preceding neural activity. It is interesting to see the direction Spence and Frith are heading

with respect to “potential” evidence regarding intentional unconscious information processing and symbol manipulation. When we get down to the “nitty-gritty” it seems as though they are headed in the direction of neurophysiology. Again, other interpretations may be just as valid, but all would be pointing in the same direction: any theory that claims unequivocal free will falls apart and cannot be sustained. Benjamin Libet, echoing a deterministic commitment to neurophysiology, explains:

I have, of course, no quarrel with the view that a fully voluntary act is unconsciously (non-consciously) [sic; no verb here]. That condition was in fact demonstrated experimentally by us (Libet et al. 1983) when we found that cerebral neural activity (“readiness potential”) precedes the subject’s awareness of his/her wish to act by at least 350 msec. This applied to fully self-initiated acts that occurred without “pre-planning” by the subject of when to move. . . . This argument is based on my own evidence that a period of up to 500 msec. of cerebral activity is required to produce a conscious sensory experience. (1996)

To a great degree, what seems to differentiate determinist claims from compatibilist and indeterminist claims regarding the problem of free will is the depth of explanatory and descriptive analysis. Another example might be helpful to illustrate the reality of psychic determinism. In phantasy life, one would think one has absolute control over one’s choice of “p” in situation “q” experiencing “r”. One would presume that in the most “private” realm of individual life – mind – we would have conscious, rational control. But this analysis is simplistic. Unconscious manipulation and intervention occur at a lower level giving rise to overt manifestations of full blown guilt. There may be pure free object choice combined with a particular quantity of physical energy, but our physical design subsumes unconscious content and mechanisms of defense in terms of censorship, which tends to distort our best efforts to achieve the freedom of unconditional pleasure.

But not to be free within our own mind–brain is hard for some to take. What appears to be the case from the achievements of the sciences, and most importantly the aspiring sciences of human nature, is the fact that human thought, action and everything in nature, occurs within very limited potentials. For the generation of new cognitive scientists, neuroscientists, dynamic psychiatrists, and philosophers, the mind–brain jury is in: determinism appears to be unrelenting, thus rendering free will illusory. But for most individuals free will exists and is real precisely because they have a vested interest in being in control. They offer belief/desire explanations in terms of reasons in place of explanations in terms of lower level causes. And while it is true that we can make choices, the degree and extent to which we have conscious control, act knowingly and freely is limited. If we are free to work out our destinies at all, evolution stacks the dice within exceedingly narrow paths and gets at the heart of the what, where, when, why and how of human nature, given the ontogenetic and phylogenetic constraints of heredity, biology and the environment: the *phenomenological illusion of free will is parasitic on neuro-physiological energy*. That is to say, images, language, ideas and the like, are precisely the result of physical energy and its interrelation to psychical energy. Hence, psychophysical energy is something that works between, among, as well as within distinct individual beings.

## Conclusion

Human nature has more than ever before become the most significant object of inquiry for philosophers, scientists, and social/cultural theorists today. More specifically, the problems of human mental life, understandably, perpetuate the need for several far-reaching scientific, social and philosophical conceptualizations of it. Present-day philosophical and scientific literature, including fiction, are literally full of reflections on the phenomenon of mind-body, describing in detail what precisely this nature is – the possibilities of change, the relations with the world around, our nature and the present and future of the whole of humankind. The point of this thesis has been to draw attention to the broad range of ideological stances, views, and forecasts, some of which are mutually exclusive while others co-inclusive. In the first section, I introduced the problem of causality and discussed the ways in which a unified theory of mind–body could be derivable as related components of one primary system of ideas which conceivably refer to the same constructs and entities known metaphysically as free will and determinism. That is to say, conceptually speaking, conscious awareness, mind, and free will tended initially to be regarded in direct opposition to that which is physical, material and bodily. I introduced theorists such as René Descartes, Benedict de Spinoza, William James and B.F. Skinner, thus setting the stage for the onset of a meta-level approach to mind–body analyses wherein multipartite divisions gave way to interactionist claims. I raised both positive and negative aspects of Cartesian psychophysical dualism, paying particular attention to the overdetermined

nature of consciousness and introduced Spinoza's principle of multiple causality as a conceptual advance in the evolution of mind-body theory.

The second section captured the essence of different but related specialized methodologies regarding mind-body and the problem of free will. I tried to elucidate the extent to which descriptive and explanatory methodologies map directly on to the free will-determinism debate with specific reference to the notion of a causal chain. I pointed to several ways in which the free will-determinism controversy hinged indirectly or directly on action and thought which could be described and explained in two entirely different ways. In arriving at the problem of explanatory and descriptive methodologies, I introduced the overdetermined nature of consciousness, with specific reference to a Freudian model of mind. Using physicalism and dynamic psychiatry as the foundation of all Freudian theoretical contributions, I approached the problem of free will by postulating both physical and psychological realms of determination wherein the analyses of mind-body shifted into mind-brain. Claims substantiating the Freudian model of mind were put forth by Lev Vygotsky, thus demonstrating the parallel shifts in theoretical positions, forging metascientific analyses to new heights of understanding regarding conscious-nonconscious-unconscious dynamics and the problem of indetermination.

In essence, the evolution of ideas regarding mind-body brought with it an advance in understanding regarding the significance of multiple causality. If free will is illusory, as suggested in the second and third chapters of this thesis, the problem is certainly not. I have attempted to explore this illusion by pointing to several major theoretical advances and paradigm shifts in mind-body analyses. What became apparent was the fact that the theme

of human nature has been converted, to a greater or less extent, into a general problem for all sciences, philosophies and of all systems of culture. While it is true that human nature has long been the object of study of philosophy and many concrete sciences (anthropology, ethnography, psychology, biology, physiology, pedagogics, medicine), most of these disciplines are characterized now more than ever by considerably greater diversity of approaches, the singling out of new aspects, and the posing of new problems are pointing to the onset of improved meta-level analyses of an interdisciplinary character.

While we can distinguish the present era by the special depth and dynamism of changes taking place, and the complexity and newness of tasks facing social and scientific cognition, the fundamental problems of human mental life are still being brought to the foreground of philosophical and scientific analyses with unprecedented sharpness.

The third and final section of my thesis began with a summation of the ontological status of consciousness and its relation to the unconscious put forth by several contemporary theorists. I introduced several specific claims as the major theoretical threads contributing to advanced meta-level analyses regarding the unconscious and its relation to consciousness. I put forth several examples of contemporary conceptions of mind–brain exploration using a layer model approach to psychophysical interaction thus strengthening the validity of the determinist stance. Christopher Olsen’s taxonomy seemed to provide the beginnings of a plausible explanatory and descriptive framework for advancement regarding the mind–brain debate because he points to the fact that causal insight into the workings of an organic system cannot be grasped without a full understanding of the

structures, a full understanding of all its parts, and a full understanding of the way in which they emerge and interact.

While it is true that the total volume of scientific and philosophical knowledge of human nature is quite impressive, we are only just beginning to compile an integrated comprehension of it. There tends to be a danger of being buried under the abundance of vocabulary accumulated through studies of the many descriptive and explanatory theoretical models. The point, of course, is not just the growing abundance of the data in philosophy and the special sciences but also, as discussed throughout this thesis, the difficulties of comparing and generalizing them since they relate to different disciplines that employ different vocabularies and methods of research. To a great degree, methodological problems are therefore taking a foremost place today in the analyses of mind–brain. In that connection, the analysis of the specific nature of the various sciences' methods of cognizing what human nature and human mental life are, is acquiring monumental significance, each utilizing a specific relationship and opportunity for synthesizing a complex, comprehensive approach to the study of human nature and world at large. While it is beyond the scope of this thesis to discuss Stephen Hawking's theoretical and scientific contributions, it is of interest to note what a great contemporary physicist has to say about one of the fundamental issues addressed in this thesis. Hawking, in *A Brief History of Time*, explains:

If you believe that the universe is not arbitrary, but is governed by definite laws, you ultimately have to combine the partial theories into a complete unified theory that will describe everything in the universe. But there is a fundamental paradox in the search for such a complete unified theory. The ideas about scientific theories assume we are rational beings who are free to observe the universe as we want and to draw logical deductions from what we see. In such a scheme it is reasonable to suppose that we might progress ever closer toward the laws which govern our universe. Yet if there really is a

complete unified theory, it would also presumably determine our actions. And so the theory itself would determine the outcome of our search for it! And why should it determine that we come to the right conclusions from the evidence? Might it not equally well determine that we draw the wrong conclusion? Or no conclusion at all? (1988: 12)

Hawking's claim is revealing. It points to a domino effect regarding human nature, in that we are so unpredictable we become predictable. Thus following suit, theories are so unpredictable they are predictable. Hence philosophic and scientific truth becomes as good as the most relevant and recently acquired theory. Accordingly, it is becoming more and more obvious that it is impossible to know human nature in all its splendour in any comprehensive way by means of one or more disciplines, and that joint efforts of a whole set of natural and social sciences, sciences of human beings and persons, and the whole system of scientific and philosophical methods, are required.

A comprehensive approach to the study of humanity is undoubtedly opening up significant avenues for deepening our knowledge of *who, what, where, why* and *how* we are, in the diversity of social and natural interconnectedness. Science attempts to explain the laws of higher sciences in terms of lower level sciences, but few maintain that such a reduction results in the replacement of the higher by the lower science. Philosophy, by virtue of its specific methodology, performs the function of a kind of integrator of knowledge. And this is exactly why the antitheses mind–body, free will–determinism, unconscious–conscious, matter. The experience of constructing the theme of who and what we are is integral to understanding our functioning in a system of social, economic, political, ideological, scientific, technological, organizational, and administrative relations. One may inquire whether or not a single all-encompassing theory can be constructed



through the pooling of heterogeneous data. In my view, it is becoming a reality as we move forward in time. But for now, we seem to be just grazing the tip of the iceberg. Humans are far too complex insofar as they can only be studied not by one but by a whole set of social and natural sciences, each of which has its own methods and approaches and its own definite angle of view. The integration of knowledge is not a mutual dissolving or reduction of relevant information, but rather an interaction and mutual enrichment of information which constructs complex problems jointly. To this end, the need for such a general, united conception has gradually evolved, providing a new level of knowledge of human nature which includes well-grounded principles connected with the educating of the individual within an interaction of psychophysical factors.

## Bibliography

- Ayer, A.J. 1978. *William James: Pragmatism and The Meaning of Truth*. Cambridge, MA: Harvard University Press.
- Bernard, Walter. 1977. "Psychotherapeutic Principles in Spinoza's *Ethics*". In Siegfried Hessing, ed., *Speculum Spinozanum 1677-1977*. London: Routledge & Kegan Paul Ltd.
- Bottini, G., E. Paulesu, R. Sterzi et al. 1995. "Modulation of conscious experience by peripheral sensory stimuli." *Nature*. 376: 778-781.
- Churchland, P.M. 1984. *Matter and Consciousness*. Cambridge, MA: MIT Press. A Bradford Book.
- Dennett, Daniel C. 1981. *Brainstorms*. Cambridge, MA: MIT Press. A Bradford Book.
- \_\_\_\_\_. 1984. *Elbow Room: The Varieties of Free Will Worth Wanting*. Cambridge, MA: MIT Press. A Bradford Book.
- \_\_\_\_\_. 1991. *Consciousness Explained*. Boston: Little, Brown and Company.
- Descartes, René. 1641/1986. *Meditations on First Philosophy*. Translated by John Cottingham et al. Cambridge: Cambridge University Press.
- Dreyfus, Hubert. 1990. "Searle's Freudian Slip." *Behavioral and Brain Sciences* 13: 585-642.
- Durant, Will. 1926/61. *The Story of Philosophy*. New York: Washington Square Press.
- Ellenberger, Henri F. 1970. *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry*. New York: Basic Books, Inc.
- Ellis, Ralph. 1986. *An Ontology of Consciousness*. Boston: Martinus Nijhoff Publishers.
- \_\_\_\_\_. 1995. *Advances in Consciousness Research: Questioning Consciousness*. Philadelphia: John Benjamins Publishing Company.
- Erdelyi, Matthew H. 1985. *Psychoanalysis: Freud's Cognitive Psychology*. New York: W.H. Freeman and Company.
- Foulkes, David. 1991. "Dream Processing." *Behavioral and Brain Sciences* 14: 651-726.
- Flanagan, Owen. 1984. *The Science of the Mind*. Second Edition. Cambridge, MA: MIT Press. A Bradford Book.
- Flew, Antony. 1984. *A Dictionary of Philosophy*. Revised Second Edition. New York: St. Martin's Press.
- Freud, Sigmund. 1887/1954. *The Origins of Psychoanalysis: Letters to Wilhelm Fliess, drafts and notes*. "Letter 39" New York: Basic Books.
- \_\_\_\_\_. 1900/91. *The Interpretation of Dreams, Volume 4*. Translated by James Strachey. London: Penguin Books.
- \_\_\_\_\_. 1915/84. "The Ego and the Id". In *On Metapsychology: The Theory of Psychoanalysis, Volume 11*. Translated by James Strachey. London: Penguin Books.

- \_\_\_\_\_. 1915/84. "The Unconscious". In *On Metapsychology: The Theory of Psychoanalysis, Volume 11*. Translated by James Strachey. London: Penguin Books.
- \_\_\_\_\_. 1916/73. "Resistance and Repression". In *Introductory Lectures on Psychoanalysis, Volume 1*. Translated by James Strachey. London: Penguin Books.
- \_\_\_\_\_. 1923/64. "Instincts and their Vicissitudes". In *On Metapsychology: The Theory of Psychoanalysis, Volume 11*. Translated by James Strachey. London: Penguin Books.
- Frith, Christopher D. 1996. "Commentary on Free Will in the Light of Neuropsychiatry". *Philosophy, Psychiatry & Psychology* 3.2: 75-90.
- Gillett, Eric. 1987. "Defense Mechanisms Versus Defense Contents". *International Journal of Psychoanalysis* 68: 261-269.
- \_\_\_\_\_. 1988. "The Brain and the Unconscious". *Psychoanalysis and Contemporary Thought, Volume 11*. 3: 563-577.
- \_\_\_\_\_. 1992. "The Nonexperiential Unconscious". *Psychoanalysis and Contemporary Thought, Volume 15*. 1: 89-96.
- \_\_\_\_\_. 1995. "Levels of Description and the Unconscious". *Psychoanalysis and Contemporary Thought, Volume 18*. 2: 293-316.
- \_\_\_\_\_. 1996. "Searle and the Deep Unconscious". *Philosophy, Psychiatry, & Psychology* 3.3: 191-200.
- Guttenplan, Samuel, ed. 1994. *A Companion to the Dictionary of Philosophy*. Oxford: Basil Blackwell.
- Hall, Calvin. 1954. *A Primer of Freudian Psychology*. 25th Anniversary Edition. New York: The World Publishing Company. A Mentor Book.
- Hanly, Charles. 1993. "Philosophy and Psychoanalysis". *University of Toronto Lectures*. Audio Cassette.
- Hawking, Stephen W. 1988. *A Brief History of Time: A Reader's Companion*. New York: Bantam Books.
- Hendrix, Harville. 1988. *Getting The Love You Want*. New York: Henry Holt and Company.
- James, Henry, ed. 1920. *The Letters of William James, Volume 1*. Boston: The Atlantic Monthly Press.
- James, William. 1890/1976. *The Principles of Psychology*. Cambridge, MA: Harvard University Press.
- \_\_\_\_\_. 1902/82. *The Varieties of Religious Experience*. New York: Penguin Books.
- \_\_\_\_\_. 1897/1979. *The Works of William James: The Will To Believe and Other Essays in Popular Philosophy*. Cambridge, MA: Harvard University Press.
- \_\_\_\_\_. 1978. *Pragmatism and The Meaning of Truth*. Introduction by A.J. Ayer. Cambridge, MA: Harvard University Press.
- Koestler, Arthur. 1960. Introduction to Lancelot Whyte: *The Unconscious Before Freud*. London: Julian Friedmann Publishers.
- Kim, Jaegwon. 1996. *Philosophy of Mind*. Colorado: Westview Press.
- LaPlanche, J. and Pontalis, J.-B. 1973. *The Language of Psycho-Analysis*. New York: W.W. Norton & Company.
- Libet, Benjamin. 1996. "Is Free Will Compatible with Neuroscience?". *Philosophy, Psychiatry & Psychology*.

- Lichtenberg, Joseph and Joseph Slap. 1971. "On the Defensive Organization". *International Journal of Pshcyoanalysis* 52: 451-457.
- Miller, James G. 1942. *Unconsciousness*. New York: John Wiley & Sons.
- Morgan, C.Lloyd. 1923. *Emergent Evolution* New York: Henry Holt and Company.
- Nagel, Thomas. 1974. "What is It Like To Be A Bat?" *The Philosophical Review* LXXXIII: 435-450.
- Nelkin, Norton. 1996. *Consciousness and the Origins of Thought*. Cambridge: Cambridge University Press.
- Olin, Doris. 1992. *William James' Pragmatism In Focus*. New York: Routledge.
- Olsen, Christopher. 1998. *The Janus Character of Mind/Brain: Mental Representation, Cognition and Consciousness*. (unpublished).
- \_\_\_\_\_. 1988. *Knowledge, Mind and Persons*. Chapter 3, "Minds and Persons". (unpublished).
- Rycroft, Charles. 1968. *A Critical Dictionary of Psychoanalysis*. London: Penguin Books.
- Sandler, J. and W.G. Joffe. 1969. "Towards a Basic Psychoanalytic Model". *International Journal of Psychoanalysis* 50: 79-90.
- Searle, John R. 1990. "Consciousness, Explanatory Inversion, and Cognitive Science." *Behavioral and Brain Sciences* 13: 585-642.
- \_\_\_\_\_. 1992. *The Rediscovery of the Mind*. Cambridge, MA: MIT Press. A Bradford Book.
- \_\_\_\_\_. 1997. *The Mystery of Consciousness*. New York: A New York Review Book.
- Skinner, B.F. 1948. *Walden Two*. New York: The Macmillan Company.
- \_\_\_\_\_. 1971. *Beyond Freedom and Dignity*. New York: Bantam/Vintage Books.
- Smith, Peter. 1967. *William James: Essays in Radical Empiricism and A Pluralistic Universe*. Gloucester, MA: David McKay Company.
- Spence, Sean A. 1996. "Response to the Commentaries". *Philosophy, Psychiatry & Psychology*. 3.2: 75-90.
- Spinoza, Baruch. 1677/1982. *The Ethics and Selected Letters*. Translated by Samuel Shirley. Indianapolis: Hackett Publishing Company.
- Vygotsky, L.S. 1925/79. "Consciousness as a Problem in the Psychology of Behavior". *Soviet Psychology* [other information unavailable]
- \_\_\_\_\_. 1934/86. *Thought and Language*. Translated and edited by Alex Kozulin. Cambridge, MA: MIT Press.
- Weiss, Joseph. 1971. "The Emergence of New Themes: A Contribution to the Psychoanalytic Theory of Therapy". *International Journal of Psychoanalysis* 52: 459-467.
- Whyte, Lancelot. 1960. *The Unconscious Before Freud*. London: Julian Friedmann Publishers.