

**The Power of Thought to Heal:
An Ontology of Personal Faith**

by

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Approved by

David Ray Griffin, Chair

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Abstract of the Dissertation

*The Power of Thought to Heal:
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Claremont Graduate University: 1998

This dissertation discusses the philosophical issues involved with psychosomatic healing. It attempts to establish two theses. The first is that psychosomatic healing is a very real, if not common, phenomenon. The second is that it is also a natural process, i.e., it need not involve any supernatural Divine intervention. If it involves God's action at all, then God is acting through natural processes. Evidence from numerous sources, such as the placebo effect, the new science of psychoneuroimmunology, scientific studies and experiments, and historical events, is used to support the first thesis. Although this evidence strongly supports the proposition that thoughts, attitudes and beliefs can significantly affect health, it tells us nothing about the interaction involved, if any, between the mind and the brain.

The apparent mystery of psychosomatic healing can be traced to two underlying philosophical enigmas: the mind-body relationship and efficient causation as real influence, neither of which can be resolved empirically. An overview of the current mind-body debate in contemporary philosophy is presented, in which the dualists and materialists, the two major contenders in this debate, are shown to have succeeded in refuting each other. Accordingly, we must reject both positions. The idealist alternative, the prevailing paradigm among advocates of mental healing, is also examined, and it too is shown to be inadequate.

The apparent mystery of mental healing, as well as the presumption that it must somehow be supernatural, are both attributed to modern philosophy's attempt to understand efficient causation and the mind-body relationship in terms of substance-and-attribute thinking. To understand either efficient causation in general, or mind-body interaction in particular, we must change the context of the discussion from one of substance and attribute to one of process and creativity. Whitehead's philosophical model, in that it addresses this point directly, is therefore an excellent starting point in unraveling the mystery of psychosomatic healing.

Dedication

This dissertation is dedicated to three people who shared with me the risks and sacrifices required to complete it. The first of these was my mother, the late Dr. Margaret Smith (1914–1995), who provided both financial aid and inspiration during my graduate studies. The second is my wife, Robin Smith, who supported us financially during my years of full-time study, and who shared equally with me all the emotional and financial burdens involved. Moreover, her on-going struggle with systemic lupus erythematosus dramatically demonstrated how important and powerful the psychosomatic element in healing can be. The third is my daughter, Ariella Smith, who seems to be growing into a wonderful human being, in spite of the fact that her father was less available than he should have been during the first three years of her life.

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Part I
Introduction to the Project

Chapter 1

Introduction

I. Overview of the Topic

This dissertation is an attempt to take a serious, scholarly, and philosophical look at the power of thoughts and beliefs in healing the human body, as well as at the attempts to apply this power in practice. My aim is to formulate an ontology that explains both the power of the mind and the stubbornness of facts. I intend to establish two theses:

1. That our thoughts and beliefs are a real and potent force in healing wounds and disease.
2. That there is nothing supernatural in this apparently “miraculous” process.

On the contrary, I believe the healing power of thought to be really quite mundane, once we let go of some philosophical assumptions that have dominated nineteenth- and twentieth-century intellectual life, assumptions that I believe are, in any case, long overdue for serious questioning and critical evaluation.

The theory that our thoughts can heal is perhaps as old as the practice of healing itself. In modern times, however, the philosophical inquiry into the phenomenon was initiated by two American spiritual movements that began in the late nineteenth century. One was an organized church that called itself “Christian Science,” the central teachings of which were outlined in *Science and Health* by Mary Baker Eddy, the founder of Christian Science.¹ The other was a loosely organized confederation of religious and quasi-religious organizations that comprised the International New Thought Alliance (INTA). INTA organizations were first inspired by writers such as Horatio Dresser, Ralph Waldo Trine, and (later) Emma Curtiss Hopkins.

The ideology of these two movements was first formulated by a nineteenth-century New England clock-maker named Phinneas Parkhurst Quimby, who taught that the mind has the power to cure disease.² It was this very power of the mind, Quimby proclaimed, that Jesus used in his healing ministry. For Quimby and his philosophical followers, the so-called “miracles” of the world’s great religions never involved the suspension of

¹ Mary Baker Eddy, *Science and Health, with Key to the Scriptures* (Boston: First Church of Christ, Scientist, 1994). First published in 1890.

² Phinneas Parkhurst Quimby, *The Quimby Manuscripts*, Horatio W. Dresser, ed. (New York: T.Y. Crowell, 1921).

natural laws by a Supernatural Deity, but were manifestations of natural metaphysical principles, immutable “scientific” laws, much like those of thermodynamics. However, these “laws” include some very debatable propositions, such as the omnipotence, omnipresence, and omnibenevolence of God and an idealist metaphysical principle called the “law of cause and effect.” This particular rendition of causality states simply that mind is cause and matter its effect. The entire material world is nothing but a projection of our own belief systems. We could all be eternally healthy, wealthy, and wise were it not for our conscious and subconscious beliefs to the contrary. This idea involved a literal interpretation of the Biblical proverb, “So as he thinketh in his heart, so is he” (Proverbs 23:6, KJV), and Jesus' words, “If ye have faith and doubt not... [and] if ye shall say unto this mountain, Be thou removed, and be thou cast into the sea; it shall be done” (Matthew 21:21, KJV). In this metaphysic, *all* physical medical cures, such as drugs, surgery, and even nutrition, are placebos. The real way to “cure” any disease is to become aware of one’s own Divinity and thereby one’s innate wholeness and perfection. Physical cures are really nothing more than ways to convince ourselves that we are already well — even though we may have a fever of 103° and be in considerable pain at the time. The problem is that this entails believing what our senses tell us is contrary to fact. However, if we can somehow come to believe sincerely that our real nature is health, our mind (the true causal agent of the cure) will heal us, and all appearances to the contrary will vanish. The physical treatment is really nothing more than a convincing form of self-hypnosis.³

For over a century this movement, which William James labeled “mind-cure” or “the religion of healthy-mindedness,”⁴ has had its ebbs and flows. Although it has never captured the hearts of the American mainstream, neither has it disappeared entirely. This is as true today as it was nearly a century ago, when James devoted an entire chapter of his *Varieties of Religious Experience* to it.⁵ Cynics and materialists will argue that the only reason these philosophies persist is the unfortunate human tendency towards wishful thinking. However, like James, I find it hard to dismiss them so quickly. There is too much supporting evidence to write them all off as childish dreams. On the other hand, it is equally difficult to argue that mental power is absolute, as Christian Scientists and most New Thought thinkers claim. While faith has in some instances cured cancer and even AIDS, its record of success with broken bones and ruptured appendices,

³ Although this view might appear strange and fantastic to the typical modern mind, it does follow from the basic premise of idealism, which says the material world and everything in it is but a figment of the mind.

⁴ William James, *The Varieties of Religious Experience* in *William James: Writings 1902-1910* (New York: Literary Classics of the United States, 1987) 77-120.

⁵ James, *Varieties*, 77-120

not to mention broken fan belts, is much less impressive. These problems still require a doctor or mechanic, not a minister or psychotherapist. Orthodox believers in Christian Science or New Thought will attribute the failures of mind-cure to a lack of faith. In short, it would seem that there is something obviously wrong as well as something very right with Christian Science and New Thought philosophies.

II. Importance of the Topic

I chose this topic for two reasons — one primarily intellectual, the other deeply personal. Intellectually, I believe it is an important philosophical topic that philosophers are neglecting.

In popular literature, it has recently been a hotly-debated topic for several years. According to one religious historian, the influence of New Thought on American religion is far greater than its relatively small numbers would suggest.⁶ In health care it is already in the spotlight. In alternative medicine its gospel has been preached for decades. Moreover, as the appointment of writer Norman Cousins to the UCLA medical school faculty in the 1980s indicates, it has recently begun to attract the attention of the medical mainstream. Mental health care professionals are also very much interested in its ideas. In my experience attending Religious Science and other New Thought churches, I have observed a relatively large number of psychotherapists of various sorts among its members. Positive-thinking philosophy is perhaps surprisingly well established in the business community. Pragmatic and sometimes materialistic as they are, business people are often quicker than academicians to accept positive-thinking philosophy. The power of positive thinking is now almost orthodox in sales training. Sales trainers from Dale Carnegie to “Zieg” Ziegler have been advocating it since the 1930s — and sales people also attend New Thought churches in disproportionately high numbers. From my own observation, there seem to be more people from sales, in fact, than from any other single occupation in New Thought. Management consultants are also embracing its ideas. I have personally heard speakers at both the Society for the Advancement of Management and the American Society for Training and Development say, “To think is to create.”

Conspicuously absent from the discussion are academic philosophers. At first, this surprised me, because the discussion is philosophical from the outset. Few of the people teaching these concepts have any formal philosophical training and background, and even fewer have undertaken formal graduate study in philosophy. In the entire United States I know of only one active professional academic philosopher, Alan Anderson, of Curry

⁶ Catherine Albanese, *America: Religion and Religions*, Second Edition (Belmont, California: Wadsworth Publishing, 1992), 272.

College in Massachusetts, who attends INTA meetings. This lack of training becomes evident in some of the popular literature, in which some respected and well-known “authorities” on the subject propagate all kinds of hair-brained and fantastic notions. Meanwhile, serious philosophers remain conspicuously silent. In short, a very large segment of the population has a very real philosophical need that serious philosophers are simply ignoring.

One possible reason why philosophers have neglected the topic is suggested by David Ray Griffin, who argues that philosophers, whether they acknowledge it or not, are still trapped in the seventeenth-century Cartesian paradigm of mind and matter as different types of things. Mind is conceived as a thinking, perceiving and feeling substance, and matter is an extended substance that has mass and velocity. Those who explicitly affirm dualism have the problem of explaining how the mind and body interact. The other popular alternative, materialism, is really a form of crypto-dualism, insofar as the body is regarded as devoid of all experience while the reality of what we call the mind's experience cannot help but be acknowledged. Those who adopt any version of materialism still have the problem of explaining how experience could arise from matter. Moreover, insofar as they deny to the mind any autonomy from the brain, they cannot attribute any freedom or efficacy to our conscious experience. While they might be comfortable in intellectually embracing radical determinism and epiphenomenalism, they do not (and probably *cannot*) avoid presupposing in practice some form of free will and causation from the mind to the body.⁷ However, from a materialist perspective, any argument saying that the mind can heal would appear as simply impossible and not worthy of serious discussion.

This dissertation is therefore aimed at two audiences: The first is those who want to take a critical look at theories about the mind's power before or while attempting to apply them. My aim is to provide a resource that people can use to evaluate positive-thinking philosophies — before they have invested too much time and money in them. The second intended audience is composed of fellow philosophers and theologians, who are missing a tremendous opportunity. These are not good economic times for education in general and liberal arts education in particular. I would like to suggest the hypothesis that *maybe our budgets would not shrink so fast if we directed more attention and effort towards serving the actual needs of the community that supports us*. I am not saying that we should cease writing papers in professional journals for review by our peers. But I *am* suggesting that this is not the main reason why the tax-payers and philanthropists fund philosophy and religion departments. We have a

⁷ David Ray Griffin, *Unsnarling the World-Knot: Consciousness, Freedom, and the Mind-Body Problem* (Berkeley, Los Angeles, and London: University of California Press, 1998) especially Chapters 6, 9 and 10.

chance here to breathe new life into public interest in philosophy, and especially the philosophy of religion. *Carpe diem!*

The other reason is personal. The well-known “Serenity Prayer” of Alcoholics Anonymous, originally written Reinhold Niebuhr, reads:

God, give us the serenity to accept what cannot be changed;
Give us the courage to change what should be changed;
Give us the wisdom to distinguish one from the other.⁸

I believe the Stoics were right in saying we have direct control over only two aspects of life: our own thoughts and actions. The motto of the Church of Religious Science is: “Change your thinking, change your life.” If this proposition is true, we may have a tremendous untapped capacity locked up in our belief systems and habits of thinking. Since I first became involved in New Thought over ten years ago, my life has become a testing ground for this very hypothesis. Sometimes its teachings appear true; other times not. However, the nature and extent of their truth is for me a matter of intense personal interest. I have witnessed my wife’s successful use of mental healing techniques to bring herself out of a life-threatening flare-up of systemic lupus, a congenital disease for which there is no conventional medical cure. During this period, moreover, she also came to see how the flare-up itself had originated from her own attitudes and beliefs. I too have used the various techniques of positive-thinking philosophy, such as affirmations, visualizations, and prayer, in all aspects of my life — with varying degrees of success.

III. Overview of My Approach

This essay contains eleven chapters, divided into three parts. Part I, “Introduction to the Project,” introduces the essay and defines both terminology and the criteria for a satisfactory theory. It consists of the following chapters:

1. Introduction (this chapter)
2. Definitions of Terms and of Regulative Principles

Part II, “Empirical Evidence,” presents some of the evidence supporting the thesis that psychosomatic healing occurs. It consists of five chapters:

3. An Overview of the Empirical Evidence
4. Evidence from the Placebo Effect
5. The Nascent Science of Psychoneuroimmunology

⁸ This is Niebuhr’s original wording, but it has other variations. See Richard Fox, *Reinhold Niebuhr: A Biography* (New York: Pantheon Books, 1985), 290.

6. Controlled Statistical Studies of Mental Healing
7. Documented Evidence for Psychosomatic Causation

Part III, “Philosophical Arguments,” investigates the philosophical problems surrounding the subject of mental healing and presents suggestions about how we might begin to resolve them. It consists of the following four chapters.

8. Conclusions from the Evidence
9. Of Ghosts and Machines: Understanding the Mystery of Mind over Matter
10. Whitehead’s Process Model
11. Objections, Replies and Conclusions

In the Chapter 2, I formulate working definitions of basic concepts such as mind, matter, thought, belief, and faith. I pay special attention to the last three, because, although they are not the same, they are easily confused. I also outline the regulative principles that define a satisfactory theory of the power of thought. Finally, I distinguish two forms of mental healing. *Psychosomatic healing* is the ability to heal one’s self via one’s own thinking, and *psychokinetic healing* is the ability of one person to heal another. The scope of this essay is limited to the former.

The next five chapters deal with the empirical evidence supporting the proposition that thoughts can heal. References include works by Michael Murphy, Norman Cousins, Larry Dossey, and Bernie Siegel, as well as other authors to whom they refer. Some examples of this evidence are studies of the placebo effect, hypnosis, biofeedback, mental and spiritual healing, and the infant science of psychoneuroimmunology. These chapters focus on the power of thought to heal or affect bodily functions in unusual ways. The Chapter 3, “An Overview of the Evidence,” discusses the kinds of evidence included and presents an overview of the material covered in the next four chapters. Chapter 4, “Evidence from the Placebo Effect,” covers evidence for the power of mental healing via placebos. Chapter 5, “The Nascent Science of Psychoneuroimmunology,” covers recent discoveries linking the immune system with the nervous and endocrine systems. Chapter 6, “Controlled Statistical Studies of Mental Healing,” reviews some of the controlled empirical studies supporting the proposition that thinking can both cause and cure disease. Chapter 7, “Documented Evidence for Psychosomatic Causation,” moves beyond evidence for mental healing as such to documented evidence for various extraordinary ways in which thinking can affect the body. In all cases discussed, logic and common sense indicate that the probability of any fraud or coincidence is extremely low.

Chapter 8, “Conclusions from the Evidence,” the first chapter in the philosophical part, serves as a transition to the philosophical discussions that follow. It summarizes the immediate implications of the evidence. Because so many have seriously argued that the evidence is not worth examining, the first section of this chapter is devoted to the merits of examining the evidence. The second section explains how the evidence indicates that psychosomatic factors do indeed play a role in causing, preventing, and curing disease. The third section is an overview of the immediate philosophical implications of the evidence.

In Chapter 9, “Of Ghosts and Machines: Understanding the Mystery of Mind over Matter,” I address the philosophical problems involved with psychosomatic healing in greater detail. First, I summarize the philosophical implications of the empirical evidence presented in the previous chapter. Then I trace the origins of the mystery of mind over matter to certain assumptions in Descartes’s philosophy. The third section is an overview of current state of affairs in mind-body philosophy. Drawing heavily from David Ray Griffin's *Unsnarling the World-Knot*, I argue that, in recent times, only two theories of mind and matter have been given legitimacy: Cartesian dualism and monistic materialism.

Epiphenomenalism, a possible third alternative, is a compromise between the other two, but it leans heavily in the direction of materialism. In epiphenomenalism the mind is a mere effect generated by the brain; in materialism it does not really exist as a distinct entity or activity at all. It is extremely difficult to explain *any* power of thought — even the ability to make simple decisions — in terms of any of these three views. According to materialism and epiphenomenalism, mental power is simply impossible, so that any appearances of such must be illusory.

Dualism, the view that mind and matter are both real but totally different types of actualities, can account for the mind's freedom and ability to make decisions, but it cannot explain how mind and matter interact. In dualism, the power of thought to affect the body is mysterious if not supernatural. Mental or spiritual healing is often viewed as a “miracle” effected by the personal intervention of God. I suggest that, if we stop limiting our alternatives to dualism, materialism, and epiphenomenalism, the so-called paranormal effects of mind on matter seem much less bizarre.

The idealist alternative, although out of vogue among academic philosophers, has been the preferred metaphysical view among advocates of mental healing, who generally work outside the academy. Although the idealist model explains mental healing better than dualism or materialism, it fails to explain the limitations of the mind’s power and why psychosomatic healing techniques often fail.

I end Chapter 9 with a general observation about the mind-body problem, which traces its origins back beyond Descartes to the thinking of

Aristotle. I argue that, as long as we attempt to address the philosophical issues underlying the problem of mental healing, i.e., mind-body interaction and efficient causation as real influence, in terms of substances and attributes, then any attempt to understand either mental healing or the underlying philosophical issues is doomed to failure. A radically new way of understanding the world is needed to render these concepts intelligible.

In Chapter 10, "Whitehead's Process Model," I present a philosophical framework that was specifically designed to address the two philosophical issues, efficient causation and the mind-body relationship, which underlie the problem of mental healing. I briefly overview Whitehead's argument that the basic elements of our experience are not the minds and bodies that comprise the subject matter of ordinary conversation, but "actual occasions," moments of experience that are both mental and physical. Next, I outline how he develops his theories of causation and the mind-matter relationship based on this view. Then I show how they apply to the process of psychosomatic healing.

In Chapter 11, "Objections, Replies, and Conclusions," I attempt to anticipate and answer objections that might be raised. I divide the objections and replies by philosophical paradigm, beginning with the likely objections of materialists, moving on to those of dualists and idealists, and then to some general objections against the Process model that anyone could raise. I conclude that, although Whitehead surely does not have the last word on the philosophical issues involved in mental healing, his philosophy certainly is an excellent starting point, in that provides a viable, natural theology of mental healing.

Chapter 2

Definitions of Terms and of Regulative Principles

In this chapter, I formulate the parameters that guide the following discussion, specifically the definitions of several ambiguous terms and the regulative principles that define a satisfactory theory of the power of thought.

I. Definitions of Terms

This discussion deals with general philosophical terms only. In the chapter on Whiteheadian Process Philosophy, I deal extensively with problems in terminology, but that discussion covers problems unique to the process model. The terms are defined as they would apply in Parts I and II of this essay. Some of these definitions are significantly narrowed by implication in Part III, where I take a more definite philosophical stand on the issues. However, for purposes of Parts I and II, the following definitions apply:

Thought

Thought is any mental activity, as ordinary language uses the term “mental.” It includes things such as fantasies, beliefs, ideas, concepts, intentions, volitions, decisions, hallucinations, and ratiocinations. For Parts I and II of this essay, I leave aside the issue of whether thought is accompanied by, caused by, or identical to any corresponding brain activity. On the other hand, I do exclude things that necessarily involve other bodily activities, such as bodily positions, movements, and even sensations. Initially, I leave the ultimate nature of what constitutes thought open. It could be “mental” activity in the Cartesian sense, i.e., an activity of a completely immaterial substance, or it could be no more than the way in which our brain and other bodily states are experienced, as materialists and epiphenomenalists would claim. Under this definition, even materialists can say that we have thoughts, although they would also say that only the corresponding brain states have causal efficacy.

I have chosen to begin with this broad definition for three reasons. The first is that I would like to avoid committing myself, simply by definition, to any particular position on the mind-body problem, such as dualism, materialism, or some version of idealism. I especially want to avoid committing myself to some form of Cartesian dualist interactionism. (I intend to argue, in fact, that the unstated presupposition of Cartesian dualism is what has made mental healing seem so strange in the first place.) The second reason is that if I defined “thought” in a way that presupposes a particular position, then later chose to argue for that

position, I would run the risk of circularity. However, I do indeed address the mind-body problem, it being the central philosophical issue in this essay.

The third reason for adopting a broad definition of thought is to mitigate some of the opposition to mental healing in health care, especially the opposition to examining the data on the grounds that mental healing is “unscientific.” Materialists may argue that the evidence for mental healing is irrelevant, because we are trying to prove the existence of something known to be impossible, namely mental causation. However, this would only be true if mental healing entailed causation by an immaterial substance. Although I am no materialist, I share the materialists’ objections to Cartesian dualist interactionism. By defining “thought” broadly, I am deliberately entertaining the possibility that mental healing may really be just a manifestation of brain and other central nervous system activity, a phenomenon that should be palatable even for materialists. It is probably a vain hope, but I would like to encourage even materialists to examine the evidence for mental healing and mental healing techniques, especially those who are involved in health care and can significantly help or hinder the incorporation of psychosomatic therapy into modern medicine. My motives in making this move may be political, as well as philosophical, but I believe the move to be well worth making and consistent with my arguments.

Belief

For purposes of this essay, the term “to believe” means to hold a proposition, which can be expressed by a sentence, as true or false. Such propositions can be universal or particular, positive or negative. For example, a positive universal proposition would be “All crows are black.” “A crow is white” and “Some crows are white” are positive particular propositions. A negative universal proposition would be “No crows are white.” Negative particular propositions are illustrated by: “Some crows are not black” and “This crow is not black.” For purposes of this discussion, beliefs can include value judgments — even though this kind of proposition may actually say more about the person uttering the statement than about the logical subject. For example, the proposition “California wines are tasty” appears to speak about the qualities inherent in the wine, but my belief in this proposition may in fact say more about my preferences in wine than it does about the characteristics of the wine itself. I make this distinction because some of the kinds of beliefs that deal with the quality of our lives express propositions of this sort. In this essay, we will be looking at the capacity of beliefs in propositions such as “The universe is friendly” to become self-fulfilling prophecies.

Faith

For our purposes, faith constitutes more than belief, in that it also entails an element of decision and commitment. To believe in a proposition is to accept it as true intellectually. To have faith in a proposition is to be willing to act on the presumption of its truth. The strength of faith may or may not correlate with the certainty of a belief. I may, for example, be quite convinced that flying on the airlines is safe. However, I may also, based on a peculiar phobia with respect to flying, refuse to fly. Or, suppose that I am playing a hand of stud poker and holding three aces, while the person across the table from me is showing a hand of four clubs. The odds say that his hold card is of a suit other than clubs, and therefore that he does not have the flush that beats my three-of-a-kind. However, if he throws a \$1,000 bet on the table, his bet suggests otherwise. In this case, I may be very uncertain if he has the flush, but if I call his bet, I am certainly acting on faith that he does not. Of course, faith and belief usually go together. For example, I have talked with people who have done the fire walk, in which they walked barefoot on red-hot coals for a distance of 20 feet or more. All of them have told me that, by the time they actually did the walk, they thoroughly believed that the hot coals would not burn them and felt safe from harm. But there are other times when we have to act on faith with very little sense of certainty, such as in the poker game described above. Of course, one could argue, along with the pragmatists, that any professed beliefs upon which we are not willing to act are insincerely held. My refusal to fly would therefore belie my claim to believe flying is safe. What I really believe may be limited to what I presuppose in practice. For now, I will leave this issue unresolved, allowing for at least the possibility of intellectually believing in some propositions without also having the faith needed to act on them.

Matter

Defining matter is not easy. The definition I learned from high school physics class was “anything that has mass and occupies space.” Even back then I found the definition less than satisfying. For one thing, there were entities like photons that did not fit neatly into this definition, but which could hardly be called immaterial. Also, it was known that matter can be converted into energy and vice versa. Finally, it turned out that matter itself consists of energy. However, energy does not always have mass, nor does it always occupy space. I was left with the rather unsettling conclusion that matter was by definition ultimately not really material!

I must confess that, in the intervening years, I am still unclear on this issue, and I certainly do not intend to provide a definitive solution to the problem here. For purposes of this essay, especially in Parts I and II, I will stick with the commonsense, high-school-physics definition presented

above, with the acknowledgment that the definition ultimately breaks down when one gets really technical.

Two philosophical technicalities, however, need to be addressed: We are not necessarily defining matter in the Berkeleyan sense, as something that exists independently of all perception of it (in which sense Berkeley denied its existence). For purposes of the first two parts this essay, it may or may not exist independently of our perceptions. Secondly, I am not defining matter as something that is necessarily devoid of all experience, as something that can only be “in itself” and never “for itself.” I am, therefore, leaving the door open to the view that, if matter does exist independently of perception of it, this may be because it has a kind of perceptual experience in its own right. In Berkeley’s terms, if the essence of what we call matter is not simply *percipi* (to be perceived), this may be because its essential nature is *perceptere* (to perceive). Such a position might still be called a form of “physicalism” or “materialism” insofar as the inherited sense of the “material” or the “physical” can be modified in this fashion. I discuss this possibility in Part III.

Mind

For our purposes, I will define a “mind” as any enduring entity that has the capacity to have experience. By this definition, all animals — including insects, snails, and possibly even protozoa — have minds, albeit in some cases primitive ones. Plants too may possess minds. However, by our definition minds endure through time. What is called the “mental pole” of a single “occasion” of experience in Whiteheadian philosophy is, accordingly, not a mind by our definition. For the purposes of Parts I and II, I am also setting aside the issue of whether the mind is ultimately identical to the brain. As in the definition of “thought” above, I intend to postpone discussion of this issue until we address the mind-body problem in Part III.

Idealism and Realism

The idealism-realism debate arises from the Cartesian paradigm of mind and matter as two substances that are self-existent but can causally affect one another. Idealists argue that Descartes was right with respect only to minds or Mind. Matter may or may not exist, but its existence depends totally on the existence of a mind to experience it. For purposes of this essay, “idealism” is the claim that fully conscious mind is the only kind of self-existent thing, with everything else being creations of some mind. “Realism” is simply the denial of this claim. Realism holds that there are some entities that can exist independently of a mind’s perception of them. Such entities, be they lifeless matter, or mental-physical entities like Leibnizian monads or Whiteheadian occasions, can exist without some other mind to perceive them. By this definition, idealism is the affirmative

position and is more extreme. Its true counterparts among realist ontologies are epiphenomenalism and materialism, which take the more extreme position that matter-energy is the only fully actual thing, reducing the mind's status to that of a mere effect or property of matter, or else an outright illusion.

Objectivism and Subjectivism

Our definition of objectivism and subjectivism at this stage is preliminary, because it can actually carry several different meanings in a discussion of the mind-body problem. However, for purposes of this essay, the terms "objectivism" and "subjectivism" will have the following meaning, unless otherwise specified. *In an objectivist world, insofar as two experiencing subjects experience the same thing, they do so at least partly on account of the nature of the thing experienced, not just on account of the similarity between the experiencing subjects. In a subjectivist world, the similarities of their experiences are wholly due to the fact that their natures are similar.* By this definition, subjectivists would usually lean towards idealism; objectivists, toward realism.

Psychosomatic Healing

Psychosomatic healing is defined as the healing of one's own body by means of one's own thoughts, beliefs, or other mental states or activities.

Psychokinetic Healing

Psychokinetic healing is defined as the healing of a person by means of the thoughts, beliefs, or other mental states or activities of *another person*.

II. Regulative Principles

By "regulative principles" I mean the guidelines by which one evaluates a theory, i.e., the criteria by which one defines a theory as satisfactory or unsatisfactory. Griffin defines these principles as follows:

All discussions of the mind-body relation presuppose various regulative principles. Some of these are formal, such as..., that a theory should be self-consistent.... Others are substantive, such as the principle that a theory should be compatible with the evolutionary origin of human beings.... Regulative principles, by specifying the conditions to which any theory must conform to be potentially acceptable by the author or community in question, indicate the range of theories that can be eliminated a priori.⁹

The danger in using regulative principles, especially those of the substantive type, is implicitly presupposing the thesis one is trying to prove in the very act of applying the regulative principle itself, which renders one's argument

⁹ Griffin, *Unsnarling the World-Knot*, 22.

circular. However, without using at least some regulative principles, there is no way to distinguish acceptable theories from unacceptable ones. Accordingly, I have attempted to keep them to a minimum here. The regulative principles I use to define an acceptable philosophical theory of psychosomatic healing are as follows:

Adequacy of Explanation

This essay is intended to provide a philosophical explanation of psychosomatic healing — both its successes and its failures. Both Christian Science and New Thought have formulated theories of how mental healing can occur, but neither offers what I consider an adequate explanation of its apparent limitations. Materialists, on the other hand, can tell us why it fails (it is said to be impossible), but not why it sometimes works. A satisfactory theory should explain both the successes and the failures.

I also address the religious implications of the theory. Is it God, or the mere belief in God, that actually heals? Knowing what I do about the placebo effect, I am careful not to underestimate its power. However, although I intend to put forth a naturalist theory of psychosomatic healing, I do not intend to reduce God's role to that of a placebo. I am merely ruling out Divine intervention in the form of suspending the laws of nature or otherwise interrupting the normal causal processes in the world. Psychosomatic healing, as I conceive it, still involves Divine activity, but God is working in and through nature, not contrary to it. This position seems more adequate to both the facts and the implications for religious faith in healing. Indeed, given the fact that prayer for healing does not always result in healing, I hold that my position provides a better basis for sustaining faith than the view that God interrupts or overrides nature.

Rationality

Another criterion is that the theory should be rational, i.e., it should be both self-consistent and compatible with the evidence. Internally inconsistent theories and those that do not square with the evidence must be rejected. This does not mean, however, that the theory will always dictate that one should always be rational. For example, an acute coronary patient may have a better chance of recovery by denying the gravity of the situation or even the heart attack itself. In this case, intellectual integrity can be unhealthy. A theory that says it may be healthier, at times, to be irrational is not necessarily an irrational theory.

“Hard-core” Common Sense

A concept borrowed from David Ray Griffin is the regulative principle of “hard-core” common sense, which says that certain commonsense beliefs, such as the existence of a real world beyond ourselves and consciousness,

should hold the epistemological status of indubitable facts in determining issues of adequacy and rationality. Drawing on arguments made by Thomas Reid, and more recently by Whitehead, Griffin says that we must presuppose these beliefs in practice even if we deny them in theory. Therefore, whenever a theory denies these beliefs, either directly or by implication, then we must reject it as irrational. Insofar as it fails to explain relevant hard-core commonsense beliefs, it is inadequate.

Common sense has been a much-abused term in philosophy. There was a time, for example, when common sense dictated that the earth was flat, as well as a time when going to the moon was the paradigm of impossibility. Griffin refers to these notions as “soft-core” common sense. Soft-core commonsense beliefs can be widely held, or even widely presupposed in practice. However, we need not *necessarily* presuppose them in order to function as human beings. This is the critical difference, according to Griffin, between hard-core and soft-core commonsense beliefs. For example, we presuppose the existence of consciousness whenever we attempt to engage in an intelligent conversation. We presuppose the existence of real objects whenever we pick one up. Hard-core commonsense beliefs can therefore be denied only in hypocrisy or in self-contradiction.¹⁰

We must be careful in applying the hard-core commonsense regulative principle, because it is easy to confuse a hard-core commonsense belief with a particular interpretation or understanding of it. For example, we treat living things differently from non-living ones, self-moving creatures differently from those that cannot move, and most of us treat humans differently from other forms of life. The existence of mentality at various levels would be a hard-core commonsense belief. However, making these distinctions does not necessarily commit us to believing in a world with ghosts in machines. Cartesian dualism is but one particular interpretation or understanding of relating mentality to the body. It is also possible to formulate other theories explaining the differences between the living and non-living, the self-moving and the non-self-moving, and the human from the animal. What hard-core common sense tells us is that we can expect living things to behave differently from non-living ones and humans to behave differently from animals.

Ockham's Razor (Parsimony)

Whenever two theories are equally acceptable according to other criteria, I follow the principle of Ockham's razor and argue for the simpler of the two. Unfortunately, what is “simpler” can depend a great deal on one's perspective. For example, idealism offers a very “simple” explanation of the power of thought: What we call reality is simply what we dream up and

¹⁰ Griffin, *Unsnarling the World-Knot*, 15–21.

believe. It sounds simple enough, but when one takes into account the problem of how two dreamers in the same room have shared experiences of the room, idealism quickly becomes quite complex. For purposes of this essay, I adopt a general bias against ideas that are unnecessarily complex. However, complexity is sometimes necessary to satisfy other criteria, such as rationality or adequacy. Each application of Ockham's razor will, accordingly, need to be discussed individually.

Scientific Bias

Like Ockham's razor, this criterion is applied when choosing the better of two or more alternatives. By "scientific bias," I mean that I prefer theories that fit with other known, empirically-verified explanations of similar phenomena over those that do not. In other words, if I can explain something in terms of chemistry, biology, and physics, I will prefer that explanation over one that involves evil spirits or even benevolent ones.

Ease of Applicability

Finally, I would prefer to develop a theory that ordinary people, who have not been to graduate school in philosophy or theology, can understand well enough to apply in their daily lives. Faith healers themselves are more often than not intellectually unsophisticated. Moreover, I have a personal bias towards pragmatism and prefer theories that work. Note that this does not mean that I expect everybody to follow the logic of how I derive or defend my views. Nevertheless, I would prefer to put forth a theory that is relatively easy to apply, even if its underlying rationale is complex. After all, technically unsophisticated people learn to drive cars and operate personal computers — without understanding any of the inner workings of either.

Part II

Empirical Evidence

Chapter 3

An Overview of the Empirical Evidence

Readers familiar with the subject of faith healing may find references to some of the best-known faith healers, e.g., the seventeenth-century healer Valentine Greatrakes, conspicuously absent here. The reason for this is that most of these healers derived their fame from their ability to heal others, which renders their major achievements psychokinetic and beyond the scope of this project. Nevertheless, there is no shortage of empirical evidence on the psychosomatic side, as this and the following five chapters should demonstrate.

I. Organizing the Evidence

The body of empirical evidence in support of psychosomatic healing is voluminous. I have chosen to divide the discussion of the evidence presented in Part II into six chapters:

1. An Overview of the Empirical Evidence
2. Evidence from the Placebo Effect
3. The Nascent Science of Psychoneuroimmunology
4. Controlled Statistical Studies of Mental Healing
5. Documented Evidence for Psychosomatic Causation

In Chapter 3 (the present chapter), I identify what I consider to be bona fide evidence and the criteria by which it is included. Four chapters that present the evidence itself follow.

Evidence from the Placebo Effect (Chapter 4). This is the phenomenon of healing via a drug or other remedy that the patient believes is efficacious, when in fact the remedy itself is not. The classic example of a placebo is a sugar pill given to someone who has been told he or she is receiving a miracle drug. The placebo effect occurs when the *mere belief in the remedy renders the remedy effective*. It is one of the most extensively documented and widely accepted forms of mental healing. In fact, it may be the only one that mainstream medical research has fully acknowledged. For example, in attempting to prove a new drug effective, researchers conduct “double-blind” studies, in which neither the recipients nor the administrators of the experiment know who is getting the placebo and who is getting the real thing — in order to prevent the placebo effect from invalidating the test.

The Nascent Science of Psychoneuroimmunology (Chapter 5). In recent years, medical researchers have discovered that the nervous, endocrine, and immune systems all interact with one another, suggesting that the brain

may be involved in healing. As we shall see later in this essay, psychoneuroimmunology is a double-edged sword for advocates of mental healing. Although it tells us the role of the central nervous system in healing, it does not tell us if or how thoughts can move gray matter.

Controlled Statistical Studies of Mental Healing (Chapter 6). There are also many controlled studies verifying the effects of one's thinking — both constructively and destructively — on one's health. In this chapter, I review a sample of these studies. Some deal with the overall effect of thought processes on health. Others deal specifically with heart disease and cancer, the first of which takes more American lives than all other diseases combined.¹¹ I also cite a documented case study indicating that AIDS may be subject to mental cure or at least regression.

Documented Evidence for Psychosomatic Causation (Chapter 7). This chapter presents individual cases and experimental evidence demonstrating the extraordinary ways in which thinking can affect the body. Although little of it deals with mental healing per se, it does render the phenomenon of mental healing more plausible. Included in this section are biofeedback experiments and documented case studies of hypnosis. (The section on hypnosis includes cases in which hypnosis alone has successfully anesthetized individuals undergoing major surgery. The biofeedback studies are significant primarily because they proved that processes previously believed to be autonomous could be brought under conscious control. This suggests that we might some day learn to direct our own immune and endocrine systems consciously.) Also included are well-documented individual cases involving saints, mystics, and even a few neurotics. Some involve Indian yogis who survived live burial for days on end. Others describe of the charisms, or the extraordinary events, surrounding the Catholic saints and mystics. Still others document phenomena as bizarre as false pregnancy in men. When compared to these kinds of phenomena, psychosomatic healing seems almost mundane.

II. Selection of the Evidence Presented

What we review here is evidence supporting a causal connection from thought to healing. The kind of causality we are discussing is “efficient” causality, i.e., the influence of an antecedent on a subsequent one.

One of the most common methods of finding a causal connection is by means of controlled statistical studies. These studies use probability theory to show that the correlation of an independent variable (or presumed cause) and the dependent variable (the effect) is stronger than it would be if the two variables were to occur at random. By itself, a statistical correlation

¹¹ Bill Moyers, *Healing and the Mind* (New York: Doubleday, 1995), 94. The book is an edited transcription of a PBS miniseries by the same title recorded previously.

does not identify a causal relationship. It only identifies a risk factor. To determine a causal relationship, a mechanism or formula explaining *how* the independent variable affects the dependent one is necessary. For example, two factors, male homosexuality and intravenous drug use, were both identified as risk factors for AIDS long before its cause, the human immunodeficiency virus or HIV, was found. The identification of the virus, as well as blood contact as the primary means of transmission, also explained the risk factors.

Risk factors do not always indicate causes. They may be merely other effects. As a hypothetical example, if cigarette smoking were found to be higher at lower socio-economic classes, and these same people also suffer from poorer nutrition, a statistical link between smoking and cancer would not demonstrate that smoking causes cancer at all. The real cause of the high cancer rate among smokers might be the poor nutrition suffered by the lower socio-economic classes, who also tend to be chain smokers. (There is the anecdote of the New Yorker who wore a lions-tooth necklace to protect himself from attack by lions. When his friend reminded him that one does not see many lions in the streets of Manhattan, he replied, "It works, doesn't it!") Serious researchers must exercise great care in eliminating extraneous variables from their studies, and how well they have done so is a major topic of debate in medical journals and academic journals in the social and biological sciences.

There are other ways to rule out random chance besides statistics. One of them is deductive logic. For example, if emotional depression adversely affects known immune system functions, and these functions protect us from disease, logic dictates that emotional depression also leads to disease. This relationship can be expressed in a syllogism:

- Major premise:* All immune system functions serve to protect us in some ways from disease.
- Minor premise:* Emotional depression adversely affects at least some of our immune system functions:
- Conclusion:* Therefore, emotional depression adversely affects some of the functions protecting us from disease.

Strictly speaking, more steps may be needed to construct a valid formal proof here in terms of quantifier logic, but the above syllogism should convince anyone who accepts the premises.

Another way to rule out random chance is common sense. For example, it is highly unlikely that the stigmata of Christ's wounds appearing every Good Friday on the hands of a devout Catholic would develop purely at random. That would be like a monkey pounding out the same Shakespeare sonnet on the typewriter week after week by randomly poking at the keys.

Something else is at work here that certainly seems related to the individual's religious convictions. In any case, common sense would rule out a purely random connection.

In short the evidence from the placebo effect, psychoneuroimmunology, controlled studies, and certain kinds of historical and scientific evidence were chosen because they all indicate a genuine causal relationship going from thinking to healing. With that, we now turn to the evidence itself.

Chapter 4 Evidence from the Placebo Effect

I. Introduction

The placebo effect itself is probably the best-documented way in which thoughts are known to affect health. A placebo is a chemically ineffective treatment, such as a sugar pill, given to patients who *believe* it works. The patient's belief itself becomes the healing agent. Historically, the placebo effect has often been regarded more as a hindrance than a help in medical research, misleading researchers into thinking an ineffective drug or remedy works. Outside the field of research, it has also given quacks and charlatans the anecdotal evidence they have needed to peddle their ineffective and often dangerous merchandise.

Researches have combated the problem with “blind” and even “double-blind” studies. In single-blind studies, the experimenters take care to ensure that the subjects do not know whether they are in the control group, i.e., the one receiving the placebo. The problem with single-blind studies is that sometimes the beliefs of the experimenters have contaminated the study. A doctor's enthusiastic endorsement of a cure is contagious. The patient takes advantage of the placebo effect indirectly — by believing in the doctor or, in the case of medical research, the experimenter.

To counteract this effect of the placebo-by-proxy, researchers have resorted to the double-blind study, in which neither the subjects nor the experimenters know which subjects are receiving the placebo. However, according to Dr. Larry Dossey in *Healing Words: The Power of Prayer and the Practice of Medicine*, the placebo effect has contaminated even double-blind studies. For example, researcher Jerry Solvvin conducted three double-blind studies on the effectiveness of vitamin E on heart patients' angina pectoris, the chest pain associated with heart disease.

[A]n enthusiastic doctor who believed in vitamin E found it significantly more effective than a placebo, while two studies conducted by skeptics showed no effect.¹²

Dossey cites other studies dealing with meprobamate, an early tranquilizer of questionable effectiveness, which showed similar results:

Enthusiasts consistently found that it worked, while skeptics could find no effects beyond those of a placebo. To clarify this situation, researchers designed a double-blind study in which one of the physicians had a

¹² Larry Dossey, *Healing Words: The Power of Prayer and the Practice of Medicine* (San Francisco: Harper San Francisco, 1993), 135.

“skeptical, experimental” attitude toward the drug, while the other had an “enthusiastic, therapeutic” attitude toward it. They were totally unaware which pills were which, meprobamate or placebo. The patients also were in the dark; they did not even know they were involved in an experiment. The results: meprobamate proved significantly more powerful than the placebo — but only for the physician who believed in it. There was no drug effect for the skeptical physician's patients.

This study was repeated, conducted simultaneously at three metropolitan psychiatric outpatient clinics. The results were replicated in two of the three clinics.... Thus Solfvin concludes,

“...As a general rule, the double-blind cannot any longer be assumed to guarantee the exclusion of the nonspecific effects of the treatment, especially when the actual treatment has a weak or variable effect.”
[Emphasis in the original study cited by Dossey.]¹³

This suggests the existence of something truly extraordinary: Experimenters' and physicians' beliefs about a remedy can be communicated to their subjects or patients subliminally, if not telepathically.

In any case, the placebo effect points directly towards my first major thesis: that thoughts do in fact heal. The very existence of this effect, especially to the extent that researchers must take great pains to work around it, proves that some kinds of thoughts, namely the belief in the efficacy of a cure, can and do heal. Faith in the cure was one of the essential elements in healing in statements attributed to Jesus (Matt: 17:20, 13:58, and Mark 6:6).

II. The Power of the Placebo Effect

Michael Murphy, in *The Future of the Body*, a comprehensive treatise on extraordinary human abilities, devotes an entire chapter to the placebo effect. Some of the studies he cites are summarized below:

Angina Pectoris. This is a chest pain normally associated with heart disease. In the early 1950s, it was a common practice in the United States to perform a ligation of the internal mammary artery to relieve pain and improve coronary blood flow. In the late 1950s, two researchers performed a double-blind experiment. Each patient received a skin incision, but only in randomly selected cases was the ligation actually performed. The researchers found no significant difference in the improvement rates of those patients who received the ligation and those who received a simple skin incision. The ligation procedure was subsequently abandoned.¹⁴

Warts. The placebo effect, using some of the most outrageous remedies, has worked exceptionally well with warts. In 1934, a physician conducted a

¹³ Dossey, *Healing Words*, 135–6.

¹⁴ Michael Murphy, *The Future of the Body* (Los Angeles: Jeremy P. Tarcher, 1992), 249–50.

double-blind study showing that placebos worked almost as well as sulpharsphenamine, the drug commonly used to treat warts at the time. Another physician was able to cure 44% of his patients of one kind of wart, and 88% of those with another kind, using suggestion alone. Studies like these led psychiatrist Montague Ullman to conclude in the 1950s that suggestion, when compared against X-ray, drugs, and surgery, was the most important factor in curing warts.¹⁵

Asthma. One study showed that 19 out of 40 subjects developed asthmatic symptoms after inhaling a saline solution they believed to be allergenic. Twelve developed full-blown wheezing and bronchial spasms, which disappeared completely three minutes after receiving another saline solution placebo. The same researchers induced bronchospasms in 15 out of 29 subjects who were told that the saline solution they inhaled contained allergenic agents. The researchers concluded that suggestion played a significant role in precipitating asthmatic attacks.¹⁶

Pain Relief. In 11 double-blind studies conducted over a 15-year period, a researcher found that 36% of 908 subjects who received placebos achieved at least 50% reduction in various kinds of pain. The results match a 35% rate in another similar study.¹⁷

Arthritis. Arthritic patients who received placebos experienced the same levels of relief as those who took conventional antiarthritic drugs. Subjects noted improvement in eating, sleeping, elimination, and swelling.¹⁸

Medication Side Effects. In another study, published in 1955, researcher Henry Beecher showed that placebos could produce symptoms such as nausea, dry mouth, heaviness, headache, concentration difficulties, drowsiness, fatigue, and unwanted sleep.¹⁹ In a study of the drug mephenesin, researchers found that placebos produced “combinations of weakness, palpitation, nausea, rash, epigastric pain, diarrhea, urticaria, and swelling of the lips that mimicked known side effects of the drug.”²⁰ Mexican researchers found that placebos could induce some of the known side effects of contraceptives.

Cancer. Statistical studies of placebo treatments for cancer are also rare, which is understandable, considering the risks of belonging in the control group. However, in his book *Meaning and Medicine*, Dr. Larry Dossey gives an anecdotal account that strongly suggests that placebos can cure cancer in some cases:

¹⁵ Murphy, 250

¹⁶ Murphy, 251

¹⁷ Murphy, 251

¹⁸ Murphy, 251

¹⁹ Murphy, 253

²⁰ Murphy, 253

A man with an advanced cancer was no longer responding to radiation treatment. He was given a single injection of an experimental drug, Krebiozen, considered by some at the time to be a “miracle cure.” (It has since been discredited.) The results were shocking to the patient's physician, who stated that his tumors “melted like snowballs on a hot stove.”

Later the man read studies suggesting the drug was ineffective, and his cancer began to spread once more. At this point his doctor, acting on a hunch, administered a placebo intravenously. The man was told the plain water was a “new, improved” form of Krebiozen. Again, his cancer shrank away dramatically. Then he read in the newspapers the American Medical Association's official pronouncement: Krebiozen was a worthless medication. The man's faith vanished, and he was dead within days.²¹

One of the most spectacular demonstrations of the placebo effect occurred during a high school football game. It is described by Norman Cousins in *The Healing Heart* as follows:

The item, which appeared on the front page [of the *Los Angeles Times*], concerned an episode that occurred at a Monterey Park, California, football game. What had happened was that four persons had to leave their seats during the game because of severe nausea and dizziness. Questioning on the spot by school officials established the fact that the ill persons had consumed soft drinks from a dispensing machine under the stands. Syrup had been mixed with water out of the local piping system. Was the culprit the syrup or the water? In the latter case, had copper sulfate from the pipes infiltrated the water? If the former, had bacteriological organisms contaminated the syrup?

The football stadium lacked loudspeaker facilities. The cheerleaders were therefore directed to make a public announcement requesting that no one consume any soft drinks from the beverage-dispensing machines until the precise cause of the sudden illness affecting several persons could be ascertained. The immediate effect of the announcement was that the stadium became an arena of fainting and retching people. One hundred and ninety-one persons had to be hospitalized. Local ambulances and private cars plied back and forth between the stadium and five hospitals in the area. Emergency-room physicians reported that the symptoms of food poisoning were genuine. No one knows how many persons at the game went to their own physicians.

Laboratory analysis showed there was nothing wrong with the water or the syrup. This fact no doubt figured in the subsequent and sudden improvement of all those who had become ill during the game.²²

The incident was admittedly not a systematic experiment conducted by trained researchers, but it qualifies as one of those cases where common sense is sufficient to rule out chance or coincidence.

²¹ Dossey, *Meaning and Medicine* (New York: Bantam Books 1992), 203. The same incident is also discussed in Dr. Bernie Siegel's *Love, Medicine, and Miracles*, (New York: Harper Perennial, 1990), 34-5.

²² Norman Cousins, *The Healing Heart* (New York: Avon Books, 1983), 171-2.

Placebos have their drawbacks. In addition to their capacity to work destructively, placebos almost necessarily involve an element of self-deceit, or at least some degree of ignorance. They all work via false beliefs.

Placebos also work best under proper social conditions, which Michael Murphy summarizes as follows:

- Enlarging patient groups in which treatments are administered can improve responses to placebos, probably because the power of suggestion is increased by the greater number of participants.
- A placebo's effectiveness depends to a large extent upon the physician's interest in the patient involved, interest in the treatment, and concern about the treatment's results.
- A placebo's power is increased by experimental studies that impart a sense of interest and care to their subjects.
- Placebo effects in most treatments are increased when the treatment has a good reputation.²³

Relationships with others are an important element in reinforcing the beliefs.

III. Conclusion

The placebo effect offers some of the most convincing evidence there is for the existence of psychosomatic healing, and for two reasons:

1. It is overtly acknowledged, and almost universally presupposed in practice, by mainstream medical research.
2. Its effects can be quite dramatic.

Accordingly, it not only demonstrates the reality of psychosomatic healing, but it also demonstrates the extent of the mind's power in effecting it. Hence, it poses a very serious problem for anyone who would deny either the reality or the significance of the power of thought to heal.

²³ Murphy, 254.

Chapter 5

The Nascent Science of Psychoneuroimmunology

I. What Psychoneuroimmunology Is

Psychoneuroimmunology is the emerging science of the interaction between the nervous, endocrine, and immune systems. The way in which the nervous, endocrine and immune systems are linked should be easy enough to understand — at least to anyone who has studied recent military history. The lopsided victory in the Persian Gulf War was largely due to the fact that the allies had effectively knocked out the Iraqi system of command and control with air strikes, preventing Saddam Hussein from ever mounting a well-coordinated resistance. The immune system is, in effect, the body's military, and, like any other military, it needs a system of intelligence, command and control. (In fact, the HIV or AIDS virus uses similar tactics: It disrupts the production of Helper T cells, which function primarily as messengers.²⁴)

Because the nervous system is the body's normal means of command and control for other systems, such as the skeletal-muscular, digestive and circulatory systems, it would be economical for the immune system to utilize the same communications infrastructure. This is in fact what it does. However, according to earlier twentieth-century medical dogma, it did not. The immune system, about which very little was known, was presumed to be autonomous, having its own communications network — even though that network had never been discovered.²⁵

In *Head First*, Norman Cousins describes psychoneuroimmunology as follows:

A biology of the emotions is coming into view. For example, discoveries have been made that both the neuroendocrine and immune systems can produce identical substances (peptide hormones, or neuropeptides) that influence both neuroendocrine and immune activity. The two systems also share the same array of receptors with which these substances can interact and transmit their messages.²⁶

Cousins depicts how the immune system responds to an attack by a cold or flu virus. Viruses infect us by injecting their DNA into a cell, which in turn replaces the original DNA of the cell. Instead of performing its normal function, the cell metabolism begins replicating the virus within itself, until

²⁴ Cousins, *Head First: The Biology of Hope and the Healing Power of the Human Spirit* (New York: Penguin Books, 1990), 76.

²⁵ Moyers, 215.

²⁶ Cousins, *Head First*, 37

it finally bursts and releases the new viruses to infect other cells. This process would always be lethal were it not for the immune system, which can destroy viruses. Here is Cousins's play-by-play description of the immune system's defense against these invaders:

1. The race is on. **Viruses** [Cousins's emphasis] try to replicate before the immune system can gear up. Two [in Cousins's graphic] have already taken over cells in the body.
2. **Macrophages** [cells that engulf invaders in much the same way that the amoeba eats] quickly recognize the viruses as a foreign threat. They begin destroying viruses by engulfing them.
3. Stimulated by the release of interleukins from macrophages, Helper T cells, and interferons. **Natural Killer cells** join the attack on virally infected cells. They also fight cancer cells.
4. **Helper T cells**, the battle managers of the immune system, emit signals to B cells and cytotoxic T cells to join the attack.
5. **B cells** (produced in bones) mature into plasma cells, which in turn produce antibodies.
6. **Antibodies** are proteins designed specifically to recognize a particular viral or bacterial invader. Antibodies bind to the virus and neutralize it.
7. **Cytotoxic T cells** wage chemical warfare on virally infected cells by firing lethal proteins at them.
8. As the body begins to conquer the viruses, **Suppressor T cells** help the immune system gear down. Otherwise it might attack the body.
9. As the viruses are being defeated, the body creates Memory T and B cells that circulate permanently in the bloodstream, ensuring that next time, the particular virus will be swiftly conquered.²⁷

According to Cousins, we have only very recently had sufficient knowledge of the immune and nervous systems to begin learning how they interact. What has been discovered is that the immune system is not confined to any particular bodily location or process. Therefore, when asked what sorts of things can influence the immune system, Cousins replies:

Practically everything. The immune system can be affected by biochemical changes in the body, by an invasion of microorganisms, by toxicity, by hormonal forces, by emotions, by behavior, by diet, or by a combination of all these factors in varying degrees. The immune system is a mirror to life, responding to its joy and anguish, its exuberance and boredom, its laughter

²⁷ Cousins, *Head First*, 36.

and tears, its excitement and depression, its problems and prospects. Scarcely anything that enters the mind does not find its way into the workings of the body. Indeed, the connection between what we think and how we feel is perhaps the most dramatic documentation of the fact that mind and body are not separate entities but part of a fully integrated system.²⁸

II. The Development of a New Branch of Science

Medical history is filled with breakthroughs that began as accidents. Alexander Flemming was not the first to notice that mold spoils bacteria cultures. In fact, pathologists and researchers had been cursing this phenomenon for years. However, he raised some unusual questions with respect to this that led to the discovery of antibiotics. Jenner noticed that milk maids did not get smallpox. His speculation, that their exposure to cowpox, a much milder relative of the disease, seemed to coincide with their apparent immunity to smallpox, led to the development of immunization — as well as scathing criticism of Jenner by his medical contemporaries.

Psychoneuroimmunology had similar beginnings. In an interview with television commentator Bill Moyers, Dr. David Felten, one of the pioneers in the field, explained how he made his first major discovery:

FELTEN: [It happened] almost by accident. I came to it [psychoneuro-immunology] with an M.D. and a Ph.D. directed toward neurosciences.... One day I was looking through a microscope at tissue sections of liver in order to identify nerves that travel alongside blood vessels. I was having trouble seeing what the cells really looked like, so I said, "Let's go to the spleen. Everybody knows what the spleen looks like." So I started looking at blood vessels and some of the surrounding areas in the spleen. And there, sitting in the middle of these vast fields of cells of the immune system, was a bunch of nerve fibres. I looked at them and thought, what is this? Nerve fibers aren't supposed to talk to cells of the immune system. What are they doing here?

So we cut some more sections, and looked — and there they were again. We tried other blocks of tissue, and there they were again. They kept showing up again and again. We and others eventually discovered nerve fibers going into virtually every organ of the immune system and forming direct contacts with the immune system cells.

MOYERS: What was the significance of this?

FELTEN: Well it suggested that the nerves might influence the immune system.

MOYERS: So when you were looking into that microscope, were you seeing something about the healing process for the first time?

²⁸ Cousins, *Head First*, 35 and 37.

FELTEN: I didn't realize it at the time, except that I was struck by the possibility that the nerves might be controlling some aspect of the immune response. A student of mine, John Williams, carried out some of the first studies demonstrating this. But in those days it was almost dogma that the immune system is autonomous and doesn't have any outside controls. We were almost afraid to tell anyone for fear people would say: "Oh, jeez, don't you know the work of Blutz and colleagues?" — or they'd come up with some reference that we had never found and make us look like a bunch of dufuses because we didn't know what we should have known. So we scoured the literature and searched high and low and tried to find every citation on the subject. And the more we looked, the more we realized that if you looked carefully at some of the photographs in other people's publications, you could see nerve fibers sitting out among the lymphocytes — but nobody ever commented on it.

When we went to the immunology literature, we found that the immunologists had discovered receptors for neurotransmitters sitting on the surface of cells of the immune system, but they couldn't quite make sense of it. Why would a lymphocyte have a receptor for a neurotransmitter? The question just fell by the wayside. Nobody really put two and two together and tried to make a story about the brain having a direct influence on the immune system.

So we joined some of our colleagues, who are immunologists, and started studying immunologic changes that occur when you use drugs to affect the neurotransmitters or when you take the nerves away. Much to our surprise, we found that if you took the nerves away from the spleen or the lymph nodes, you virtually stopped immune responses in their tracks.²⁹

The discovery of receptors for neurotransmitters on immune cells was just the beginning. Other research revealed receptors for methionine enkephalin, a natural opiate produced by the body, on T-cell lymphocytes.³⁰ Enkephalins and endorphins were previously believed to function primarily as natural anesthetics, i.e., nervous system activity suppressers. It is highly unlikely that these receptors exist on immune cells for decoration. It made more sense that they be there to decode messages distributed by the nervous system.

Still other studies have revealed more connections between the immune and nervous systems. Dr. Branislav Jankovic of the University of Belgrade conducted studies showing the effect of brain lesions on immune responses.³¹ Dr. Rudy Ballieux of the University of Utrecht (the Netherlands) showed that immune responses can be proportionately reduced with the power of an electro-shock.³² Two Swiss doctors, Walter Pierpaoli and Georges J. M. Maestroni, conducted experiments showing ongoing control of the immune system by the neuroendocrine system. For example:

²⁹ Moyers, 213–4.

³⁰ Michael Murphy, 20.

³¹ Cousins, *Head First*, 273.

³² Cousins, *Head First*, 274.

[I]nterference with the cyclical release of the hormone melatonin (released by the pineal gland) profoundly handicaps immunity. Pierpaoli's research has also shown that the immune system has important regulatory effects on the neuroendocrine system.³³

Another Swiss researcher described a feedback loop between the immune system and the brain:

[A]ctivated monocytes and macrophages produce interleukin-I, which in turn increases corticotropin-releasing factor activity in the hypothalamus, which results in an increase in adrenocorticotrophic hormone and corticosterone blood levels, and decreased immune activity.³⁴

Disorders in the brain, such as schizophrenia, have also been linked to decreased immune system activity.³⁵ Sometimes playing with the immune system affects the nervous system. For example, the thymus gland, an immune system organ, secretes a substance that affects the nervous system.³⁶

III. Conclusion

In one sense, the discovery of the connection between the nervous and immune systems has explained how thoughts can heal. Although a direct link between the system that thinks and the one that heals has been firmly established, the discovery raises more questions than it answers. The set of feedback loops between the immune, endocrine, and nervous systems is enormously complex. In fact, each system individually is extremely complex. The more we study the interactions among them, the more we discover how little we know. Few, if any, questions can be answered by a simple formula, at least at the biochemical level.

On the macrobiotic level, we have known how it works for centuries: It simply follows the GIGO (garbage-in-garbage-out) principle: Thoughts of sadness, guilt, depression, fear, and despair tend to make us sick. Thoughts of joy, hope, forgiveness, humor, and enthusiasm tend to make us healthy. Some emotions, such as anger, can affect health in either direction. Up until recently, medical doctors viewed these principles as common knowledge.

However, here it must be emphasized that psychoneuroimmunology begs the question with respect to the mind-body issue of philosophy. What it shows is a *brain-body* connection. Recent scientific investigations into brain functions have revealed that the brain actually functions as a gland,

³³ Cousins, *Head First*, 275–6.

³⁴ Cousins, *Head First*, 276.

³⁵ Cousins, *Head First*, 297.

³⁶ Murphy, 20.

secreting, combining, and regulating the levels of chemicals, such as endorphins and enkephalins, that serve not only to control pain but also to regulate the immune system and tumor growth. Thus, the brain appears to have regulatory functions along with cognition. Norman Cousins makes this point:

Ever since scientific investigators have begun to probe the structure and function of the human brain, the main research has been connected to consciousness and cognition. Just in the past half-century, as stated elsewhere, new findings have emphasized the glandular role of the brain.³⁷

All that psychoneuroimmunology has shown us is that the nervous system, of which the brain is an important part, can be an agent in the maintenance and recovery of health. It never attempts to address the philosophical issue of the relationship between brain activities, on the one hand, and thoughts and emotions, on the other.

The evidence from psychoneuroimmunology is a double-edged sword for advocates of mental healing. Although I believe it provides some convincing evidence for the value of mental healing *therapies*, it may turn out to be just the excuse materialist skeptics need to continue to ignore the data. Although these skeptics may now have more reason to recognize the value of affirmations and imagery, the effectiveness of these therapies may no longer serve as a counterexample to materialism. All that data, which they have chosen to ignore over the years, may have no philosophical significance anyway. We now have a “natural” explanation of faith healing: The brain is doing it. “Yes,” the materialist skeptic can now say, “You should affirm and visualize positive and healing thoughts whenever you are sick, and probably when you are healthy as well. Just do not kid yourself into believing that some purely spiritual entity, such as a soul or God, is involved in the process. As it turns out, what you have called ‘mental and spiritual healing’ is no more mental or spiritual than the simple act of raising one’s right arm. It is the brain within that does the work.”

My answer to this argument is that this healing is also no *less* mental and spiritual than raising an arm. From a philosophical perspective, what psychoneuroimmunology has accomplished is to toss the whole subject of mental healing into the arena of the mind-body debate — and, as I shall argue later in this essay, rightfully so. The philosophical issue now is not whether psychosomatic healing occurs, but whether what we have called mental healing is really mental at all, and if so, how so.

³⁷ Cousins, *Head First*, 74.

Chapter 6

Controlled Statistical Studies of Mental Healing

For most of the twentieth century, mainstream medical research never addressed a phenomenon that many practicing clinicians routinely observed: Attitudes, beliefs, and ideation all play a significant role in health. Since the 1970s, however, this has changed, and the research over this relatively short period has produced a gush, not a trickle, of evidence in support of psychosomatic healing. To reduce the job of reviewing these studies to a manageable size, I have chosen to focus on cancer and heart disease. Although cancer may be the more frightening of the two diseases, heart disease alone kills more Americans than all other diseases combined.³⁸ I will also cite an account of remission from acquired immune deficiency syndrome, or AIDS, primarily for the sake of public interest in the disease. However, we will first review some of the some of the studies relating to the overall effect of thinking on health, as well as evidence of the effectiveness of imagery practice, the best-known mental healing technique.

I. General Effects of Thinking on Health

The great Hasidic sage Rebbe Nachman of Breslov (1722 – 1810) once made this generalization about disease and health: “All the illness that afflicts people comes only because of a lack of joy... And joy is the great healer.”³⁹ Dr. Bernie Siegel offers a more contemporary perspective in referring to the “contentment factor.” Siegel cites a long-term study dealing with the death rate among Harvard graduates, in which:

Those who were extremely satisfied with their lives had one-tenth the rate of serious illness and death suffered by their thoroughly dissatisfied peers... even after the effects of alcohol, tobacco, obesity, and ancestral longevity were statistically eliminated.⁴⁰

The two best-known mental and emotional factors that adversely affect health are stress and grief, especially if the latter is accompanied by loneliness. In the first half of this century, Walter Cannon discovered that heightened emotional states could stimulate the spleen, an organ that was later found to play a major role in the immune system.⁴¹

³⁸ Dossey, *Meaning and Medicine*, 167.

³⁹ R. Nachman of Breslov, *Likutey Moharan II*, 24, in Avraham Greenbaum, *The Wings of the Sun: Traditional Jewish Healing in Theory and Practice* (Jerusalem, Israel and Monsey, N.Y.: Breslov Research Institute, 1995), 5.

⁴⁰ Siegel, 76.

⁴¹ Cousins, *Head First*, 76–7.

One study showed that medical students have diminished immune system functioning at exam time. Activities of natural killer T-cells and levels of interferon were both found to be lower during that period. Students also reported higher incidents of coughs and colds.⁴²

According to Larry Dossey, grief, especially when accompanied by loneliness, can also adversely affect the immune system. In a 1977 study of the immune systems of widowed people in Sydney, Australia, researchers found that the bereaved showed significantly less immune activity than the control group. Another study, conducted at Ohio State University, found that medical students who had the highest scores on tests for loneliness and stress also had the lowest levels of natural killer T-cells.⁴³

Of course, illness itself can lead to the same loneliness that aggravates the disease. In one study, conducted over nine years in Alameda County, California, death rates in a group of 7,000 people were correlated with indicators of social interaction, such as church membership, marital status, and other indicators of social activity. Death rates were found to be highest among those who had the fewest relationships — even when factors such as socioeconomic status, cigarette smoking, and other health-related factors were taken into consideration. Isolation was linked to higher death rates from heart disease, cancer, and all other illnesses, as well as suicide and accidental death. Of course, the study naturally raises the question of whether the diseases caused the isolation, or vice versa. According to Dossey, the cause was the loneliness. Another study, conducted in Tecumseh, Michigan, “confirmed that increased loneliness and absence of social networks were the cause and not the result of disease and illness.”⁴⁴ Dossey is quick to point out that nonetheless the culprit is not the experience of being alone per se, but the meaning ascribed to the isolation. Other researchers performed a follow-up of the Alameda County study, in which:

Women who had many social contacts but felt isolated had 2.4 times the normal risk of dying from hormone-related cancers (breast, uterine, and ovarian). And those women who had few social contacts and felt isolated were five times as likely to die from such cancers.

Interestingly, social ties did not seem to affect whether men got cancer in general, but among those who developed cancer, death was sooner in those who were socially isolated.⁴⁵

If, as recent breakthroughs in psychoneuroimmunology suggest, the immune, nervous, and endocrine systems are all highly interrelated, then it

⁴² Dossey, *Meaning and Medicine*, 84.

⁴³ Dossey, *Meaning and Medicine*, 94.

⁴⁴ Dossey, *Meaning and Medicine*, 70.

⁴⁵ Dossey, *Meaning and Medicine*, 94.

would follow that tampering with the immune system might have emotional side effects. One study has corroborated this theory:

If the approach to treating cancer involves the immune system, the brain should manifest alterations as well. In support of this hypothesis, it was pointed out that scientists are now finding that the administration of interferon (an immune regulator that also inhibits viral cell growth) promotes severe depression in AIDS patients.⁴⁶

Given some of the studies cited earlier, one has to wonder if the side effects of the cure could actually exacerbate the disease.

Finally, we cannot ignore the effect of doctor-patient relationships, a subject that has been the focus of three of the most commonly cited authors in this essay, Cousins, Dossey, and Siegel. Cousins, arguing that “a very simple effort to improve patient-physician interactions can result in significant improvement in a patient's condition,” cites a series of four studies of ulcer, hypertension, diabetes, and breast cancer patients, conducted by Drs. Sheldon Greenfield and Sherrie Kaplan of the UCLA School of Public Health. In these studies, the control group was given only general information on self-observation and care, while the experimental group was given a full, twenty-minute training session on how to be more active in their treatment. The researchers found that the increased level of patient control, as well as the greater interest shown by physicians towards their patients, both positively correlated with improved health. Cousins infers that:

Research such as Drs. Kaplan and Greenfield's project suggests that a more active patient role helps to foster a greater sense of control over illness, better health outcome, more rapid recovery, and greater compliance with treatment. Dr. Rose Maly of the UCLA School of Public Health utilized a simple technique to improve patient interactions with their physicians. The study observed corresponding attitudinal, behavioral, and health status changes in patients, as well as attitudinal changes in physicians....

Preliminary results indicate a significant improvement in the functional status of those who experienced the enhanced interaction with their physician — the benefits having their greatest impact on individuals over age sixty.⁴⁷

These studies all suggest that physicians should encourage their patients to take a more active role in their treatment, which has two important implications. The first is that patients have an opportunity to take a more active role in their own healing by monitoring and directing their thinking. The second is that the very sense of being more in control is in itself

⁴⁶ Cousins, *Head First*, 200.

⁴⁷ Cousins, *Head First*, 234–5.

conducive to better health. Studies dealing with heart disease and cancer, to which we now turn, corroborate this theory.

II. The Effectiveness of Mental Healing Techniques

As interest in the subject of mental healing grows, a variety of different techniques may evolve. As of today, however, the technique of imagery, or visualization, stands out as the most prominent. It actually consists of nothing more than rehearsing the experience you want to have in the imagination — with the express purpose of directing the subconscious mind to bring the experience into reality. Siegel, who used visualization extensively with cancer patients, explains how it works with respect to healing in analyzing its effectiveness in training the highly-successful athletic teams of the former Soviet bloc:

Visualization takes advantage of what might almost be called a “weakness” of the body: it cannot distinguish between a vivid mental experience and an actual physical experience....

Eastern European trainers often have their students and athletes lie down and listen to calming music... Then the athlete visualizes, in full color and complete detail, a winning performance. This is repeated until the physical act becomes merely a duplication of a mental act that has already been successfully visualized. Soviet research indicates that athletes who spend as much as three-fourths of their time on mental training do better than those who place more emphasis on physical preparation.⁴⁸

If mental rehearsal can train the body in athletics, it can at least theoretically train it to fight disease. (If this seems farfetched now, our upcoming discussion of biofeedback may render it less so.) Dossey cites the following documented success story:

Dr. G. Richard Smith and his colleagues at the University of Arkansas College of Medicine reported what is perhaps the first fully documented case of a human being intentionally changing the immune system. It involved a thirty-nine-year-old woman who was able to change her positive skin test for varicella zoster (the chicken pox virus) at will — from positive toward negative, and then toward positive, a feat she repeated six months later. She used a rather specific form of imagery, imagining the redness and swelling surrounding the skin test getting smaller and smaller, while sending “healing energy” to the area.⁴⁹

Dossey elaborates, citing the Achterberg and Lawlis studies and others as evidence of the effectiveness of visualization in altering the immune system. Achterberg collaborated with Mark S. Rider in an experiment that measured the effects of visualization in white blood cell count. The subjects

⁴⁸ Siegel, 153–4.

⁴⁹ Dossey, *Healing Words*, 106.

were divided into two groups. Each group was asked to visualize images of the shape, location, and movement of one of two types of white blood cells, neutrophils or lymphocytes. Blood counts were taken both before and after each twenty-minute visualization sessions:

Results showed that the neutrophils (but not the lymphocytes) decreased significantly in the neutrophil group, while the lymphocytes (but not the neutrophils) decreased significantly in the lymphocyte group. The authors concluded that the highly directed imagery was cell-specific; that is, it affected the cells toward which it was intended or directed, and not others.⁵⁰

Siegel cites a study in which imagery increased the count of platelets, a third kind of white blood cell.

In 1980... psychologist Alberto Villoldo of San Francisco State College showed that regular meditation and self-healing visualization improved white-blood-cell response and improved the efficiency of hormone response to a standard test of physical stress — immersing one arm in ice water. The subjects trained in meditation withstood the pain of the test far better than those who did not meditate, and two-thirds of them were able to stop bleeding immediately after a blood test merely by focusing their minds on the vein after the needle was removed.⁵¹

Finally, Siegel cites a 1976 study, conducted by Gurucharan Singh Khalsa, founder of Boston's Kundalini Research Institute, showing that: “[R]egular yoga and meditation increased blood levels of three important immune-system hormones by 100 percent.”⁵²

The proven effectiveness of imagery in healing the body has two important implications. The first is that it corroborates other evidence that thinking can heal. The second is that mental healing is not a process entirely out of reach for most of us. Although people may vary in their ability to visualize, most can apply this technique to some degree. Effective mental therapy already exists and is available to just about anyone who wants to use it.

III. Heart Disease

We turn now to the leading cause of death by disease in twentieth-century America, heart disease. Before we look at the mental factors that might be involved with it, we must look at the physical factors. With heart disease, there are both long- and short-term causes. The long-term causes deal with the general deterioration of the circulatory system in and around the heart, which usually consists of some sort of constriction (commonly

⁵⁰ Dossey, *Healing Words*, 105–6.

⁵¹ Siegel, *Love, Medicine and Miracles*, 150–1.

⁵² Siegel, 150–1.

called “hardening”) of the coronary and associated arteries. This restriction of the blood flow weakens the heart and sometimes causes infarction, necrosis, or death of heart tissue. Short-term causes, such as anger, excitement, or excessive physical activity, place demands on the weakened heart that it cannot accommodate. In the case of infarction, the heart can rupture, causing instant death. Or, it can fibrillate, i.e., simply vibrate instead of pumping blood. Fibrillation can also be fatal, but it can sometimes be arrested with cardiopulmonary resuscitation (CPR). Milder heart attacks result in simple spasms, with symptoms such as dizziness, nausea, and chest pains (angina pectoris). Vigorous physical exercise can therefore be fatal to a person with an already weakened heart — even though in the long run it can also prevent heart disease by improving circulation. Exercise is therefore both a short-term cause of, as well as a long-term check against, heart disease.

There are, correspondingly, both long- and short-term mental causes of heart attacks. The short-term cause is the fight-or-flight syndrome, i.e., panic, extreme excitement, rage, or other forms of autonomic arousal. The long-term causes are persistent mental attitudes. The short-term causes are easier to understand from a commonsense point of view. Both folklore and fiction are filled with tales of death by “heart failure,” but can an individual in otherwise good cardiac health succumb? Norman Cousins argues that it is indeed possible, citing numerous studies in the medical literature to support his position. The heart, he argues, is a muscle, and all muscles can spasm. A sudden heart spasm can result in fibrillation and near-instantaneous death, if not arrested by CPR.⁵³

An interesting and relevant statistic is that people are more prone to die of heart attacks on certain days of the year and during certain times of the day. For example, if you are Christian, you are most likely to die of a heart attack the day after Christmas, but if you are Chinese, the day after the Chinese New Year.⁵⁴ Even better documented is the “Black Monday syndrome,” the fact that both heart attacks and strokes occur most frequently on Monday morning at about 9:00 a.m. According to Dossey, researchers had originally attributed these findings to biochemical factors, such as circadian rhythms, bodily cycles that occur over a twenty-four-hour period. However, circadian rhythms did *not* account for the greater occurrences of these maladies on Monday. Dossey attributes the Black Monday syndrome more to emotional factors:

Emotions can trigger biochemical changes of their own, which might act in concert with circadian flows. Studies of subordinate primates — for example, male baboons forced by dominant males into inferior roles —

⁵³ Cousins, *The Healing Heart*, 52–4.

⁵⁴ Moyers, 191, quoted from Candace Pert.

show that chronically stressed animals indeed have higher elevations of certain stress hormones that can have negative effects on heart function. Platelet aggregation or stickiness also is known to increase in persons under psychological stress, which might be more pronounced on Monday in someone returning to a job they dread.⁵⁵

From personal experience, I have generally found that the stress of returning to work is greater than the stress of remaining at work. Any problems, such as mechanical breakdowns, the failure of co-workers, employees or vendors to come through, or a boss having a temper tantrum or making impossible demands, all seem to be more painful when they hit early Monday morning. Like a loud noise on a quiet night, the sudden surge of irritation and anxiety are exacerbated by a sense of shock.

Machines, too, are subject to a kind of Black Monday syndrome. Light bulbs are far more likely to go out when you first hit the switch. In delving into this topic, I asked a co-worker, a former mechanical engineer who designed gears, if machines also tended to break down more frequently on Monday morning. Although he himself could cite no statistics in this area, he did speak of the “80-20 rule” of engineering, which says that 80% of mechanical failures will occur during a 20% time segment of a machine’s life, i.e., during peak loads or whatever time period when the machine is subject to maximum stress. Two known laws of physics can explain why there might be greater stress on machines during start-up. The first is the law of inertia. It requires more energy to move something at rest than something already in motion. The second is that the friction of rest is greater the friction of motion. Both of these principles suggest that there is more stress involved in getting things moving than in keeping them moving.

The same holds true for the human body. Athletes in training will always take time to do “warm-up” exercises before beginning their more rigorous training. Failure to do so can result in serious injuries. The same may also hold true for the body-mind in general. That sudden jolt of reality that hits when one returns to a stressful job after a relaxing weekend can put the body into a fight-or-flight state of emergency when it is not ready for it. Heart rates go up before blood vessels dilate. Muscles tighten before circulation rates increase, forcing them to work anaerobically. People may tend to get heart attacks and strokes Monday morning for the same reason that athletes tend to injure themselves when they train without warming up.

Dossey attributes Black Monday syndrome to the meaning, or lack of it, involved in the contemporary work place:

What does one's job mean to the patient — satisfaction, loathing, dread, a challenge, or something else; and how do these perceived meanings affect

⁵⁵ Dossey, *Meaning and Medicine*, 63-4.

the body to contribute to heart attacks on Monday morning? Another valid question is, What does the heart attack that occurs on Black Monday mean? What does it symbolize or represent — job dissatisfaction, unhappiness, “something physical,” or perhaps nothing at all? However meaning is approached, the answers are almost always laden with emotion.⁵⁶

The meaninglessness and long-term dissatisfaction experienced at the workplace, however, pertains to the short-term causes of heart attacks as well as the long-term ones. Although the meaninglessness of one’s work is often a chronic condition, the very context of that condition can exacerbate the experience of shock described above. If one’s job is a private hell, the return to it from a period of respite becomes that much more traumatic.

The correlation between mental attitude and the long-term causes of heart disease is even stronger. One of the best-known predictors of heart disease is the “Type-A” personality.⁵⁷ Type-A personalities are driven to succeed and are prone to perfectionism. They also tend to be irritable and aggressive when frustrated. Although their ambition often drives them to positions of power and wealth, it also renders them more susceptible to heart disease.

Occupation can also be a predictor of heart disease. However, contrary to the stereotype, the high-powered executive or professional worker is not the most susceptible. According to Dossey, some of the more susceptible workers are “waiters, gasoline station attendants, and certain data processors.” Dossey elaborates:

In these jobs, the worker is powerless to control the work load. No matter how high the volume, one can only struggle harder to cope with it. If the work load is excessive and protracted, the situation begins to resemble the “learned helplessness” situation described by researchers in animal behavior.

It is not difficult to understand how any employee could develop an indwelling sense of entrapment and helplessness in a similar situation, especially if controlled by supervisors who are insensitive to these issues.⁵⁸

Dossey goes on to suggest that it is the sense of helplessness in the face of responsibility, as opposed to the position of responsibility itself, that causes the heart disease. It is not the situation itself, but our reaction to it, that kills us. Dossey cites a study of executives during the AT & T breakup, in which those who developed heart problems were compared with those who did not:

⁵⁶ Dossey, *Meaning and Medicine*, 14.

⁵⁷ Moyers, 206, quoted from Margaret Kemeny.

⁵⁸ Dossey, *Meaning and Medicine*, 65-6.

Those who stayed healthy judged their stresses differently and responded to them differently than the illness-prone group. The healthy individuals possessed what the psychologists called a capacity for “optimistic cognitive appraisal,” meaning that they had a way of “seeing the cup half-full rather than half-empty.” When stressful events occurred, they did not regard them as the end of the world but as a natural and inevitable part of their lives. This allowed their bodies to respond to stress differently, averting injurious biochemical responses. In effect these people could control their body's reaction to stress. They also interpreted stress differently by regarding it as a challenge, an opportunity to learn, grow, and become a wiser, better manager. Not only were the healthy executives deeply involved in their work, they had a strong commitment to their families and to life in general off the job.⁵⁹

In other words, the healthy ones were those who confronted their problems with the belief that they could be solved, that what they were facing was an adventure, not imminent doom. Their bodies responded accordingly, reacting more as though they were competing in an athletic event than engaging in mortal combat. The results were lower blood pressure and less likelihood of heart spasm.

Stress is not the only important factor in job-related heart disease. Citing a 1972 study by the U.S. Dept. of Health, Education, and Welfare, Dossey argues that:

[T]he best predictor for heart disease was not any of the major physical risk factors (smoking, high blood pressure, elevated cholesterol, and diabetes mellitus) but job dissatisfaction. And the second best predictor was what the researchers called “overall happiness.” This finding fits with the fact that most persons below the age of fifty in this country who have their first heart attack have none of the major physical risk factors for coronary artery disease.⁶⁰

Dossey's argument here is reminiscent of Rebbe Nachman's cited above. It seems, for example, that although job dissatisfaction and overall unhappiness may themselves cause heart attacks, these factors, in turn, stem from a deeper cause, the sense of helplessness and powerlessness over one's destiny. However, we must be careful not to oversimplify the matter. Neither unhappiness nor job dissatisfaction is a simple phenomenon; each can stem from many different and often concurrent causes. What is important here is that both can be profoundly connected to the way one thinks about one's job or overall position in life.

There may also be a mental-emotional component to some of the physical causes of heart disease, e.g., atherosclerosis and blood cholesterol levels. A 1979 study showed that “tender loving care” could reduce

⁵⁹ Dossey, *Meaning and Medicine*, 67.

⁶⁰ Dossey, *Meaning and Medicine*, 63.

atherosclerosis and the corresponding risk of heart attacks by 50% among rabbits fed large amounts of cholesterol.⁶¹ Dossey cites other studies suggesting that cholesterol levels themselves can be affected by the way we think about stress and by applying mental disciplines:

Dr. Herbert Benson of Harvard Medical School has shown that the ability to maintain a healthy cholesterol level is directly related to the ability to handle stress through relaxation.... Studies of people who meditate regularly have shown that their physiological age is much lower than their chronological age.⁶²

Dossey suggests here that, with a properly-designed program of meditation and exercise, we can teach hard-driving, success-oriented (Type A) persons to avoid heart attacks — without losing their achievement-oriented behavior. In fact, he cites another study, this one taken over five years, in which “Type A” heart patients were divided into three groups. The first group received advice on diet and exercise, as well as a comprehensive program of psychological counseling, biofeedback training, and individual and group education, on how to alter their Type A behavior. What the experimenters found was that:

During this time some of the subjects had recurrent heart attacks, some of which were fatal. Others died suddenly, ‘dropping dead’ from cardiac arrest presumably due to their heart disease. It was found that the circumstances most often preceding these events were emotional crises, excessive physical activity, consumption of a large fatty meal, or some combination of these circumstances.

When the statistics were examined at the end of one year, the rates of nonfatal heart attacks were lowest in the group given in-depth instruction on modifying their Type A behavior. In contrast, the group receiving the typical advice about diet, weight, and exercise had three times, and the control group four times, as many nonfatal heart attacks. In addition, the in-depth group had less than half the number of fatal heart attacks as the control group.⁶³

In interpreting the study, Dossey concludes that the patients had undergone a kind of “meaning therapy,” a means of re-evaluating the unpleasant or traumatic events in their life in ways that reduced their physical and emotional impact:

With the creation of new meanings, the body responds in healthier ways. The “adrenaline rush” that is felt in a crisis is blunted, along with the rise in heart rate and blood pressure. The diffuse anxiety and hostility Type As feel throughout the day abates, and the body’s “emergency” apparatus, the

⁶¹ Siegel, 183.

⁶² Siegel, 74.

⁶³ Dossey, *Meaning and Medicine*, 168.

sympathetic nervous system, is quieted. One of the primary benefactors of these changes is the heart. This important study shows that

- meanings can be changed,
- the significance that life events hold for us is not absolute, and
- as the meanings change to a more positive outlook, the rate of recurrent heart attack declines.⁶⁴

To support his argument, Dossey cites another study by cardiologist Dean Ornish, who taught stress management techniques such as meditation, imagery, and relaxation exercises to cardiac patients. The participants in his stress management training were able to increase the duration of their exercise by 44 percent, and the total work performed, as measured by heart function, by 55 percent. Moreover, cholesterol levels dropped by 20 percent and angina attacks were reduced by 90%.⁶⁵ This study strongly suggests that mental activities, such as meditation and visualization, can have a positive effect in alleviating the physical causes of heart disease.

Heart disease has been positively correlated to emotional states. Dossey cites a survey that showed that men who experienced their wives as loving and supporting had 50 percent fewer episodes of angina pectoris than men who did not.⁶⁶ He cites other studies correlating heart disease and social isolation — even among non-human primates:

[I]n groups of baboons living in the wild, life for low-ranking, low-status animals is often miserable. It consists of hard-earned, stolen meals and harassment by dominant males that can be life-threatening. The low-ranking male, even if he never picks a fight, is in constant danger of being assaulted and must always be on guard. In short, his entire life is spent with little control. These social stresses correlate with pathological biochemical changes internally. Subordinate baboon males have the type of physiology found in stress-related diseases. Their blood level of hydrocortisone, a hormone secreted during stress, is high and remains elevated even after a stressful event is over. Low-ranking males have lower concentrations of high-density lipoproteins (HDL), which are known to carry the “good” type of cholesterol and protect against heart disease. They have weaker immune systems, with fewer circulating lymphocytes to detect invading pathogens. And during stress they cannot maintain adequate levels of testosterone, the sex hormone that is valuable for muscle metabolism and aggression.⁶⁷

Dossey speculates that humans in similar predicaments have similar health problems:

⁶⁴ Dossey, *Meaning and Medicine*, 168–9.

⁶⁵ Dossey, *Meaning and Medicine*, 167–9.

⁶⁶ Dossey, *Healing Words*, 109.

⁶⁷ Dossey, *Meaning and Medicine*, 72.

This scenario is similar to the experience of poorly educated or illiterate persons.... They have little autonomy or control over what happens to them, which often leads to a chronic and debilitating sense of despair, futility, and anger.... When an illiterate person resigns himself or herself to never learning to read and write, an authentic “no exit” or impasse situation is in place.⁶⁸

Other studies have shown that heart disease, especially when fatal, tends to correlate inversely to education levels. Dossey argues that it does so only indirectly, via its direct bearing on isolation and stress, factors that we have already shown to affect adversely health in general and heart disease in particular. He cites two studies in support of this view. In a 1984 study of 2,320 male heart attack survivors, Dr. William Ruberman and colleagues found that those participants who were isolated and stressed had four times the risk of death than those with lower levels of isolation and stress. Ruberman was careful to control for extraneous factors such as smoking, hypertension, cholesterol, diabetes and other factors. Ruberman also found an inverse correlation between education levels and heart attacks. This led Dossey to another chicken-or-the-egg question: Was the controlling factor the education level or the isolation and stress? Again the researchers were able to “tease apart” these factors:

They concluded that poor education was only a stand-in or “proxy” for stress and loneliness — that is, low education actually did its damage through the stress and social isolation to which it led....⁶⁹

However, there is one point here that Dossey seems to neglect: A chicken-or-the-egg question may also exist with respect to education levels and social skills. People with poor social skills, for whatever reason, may also do poorly at school, becoming easily discouraged and dropping out early. Both the education levels and the levels of loneliness and stress could be attributed to a general inability and lack of confidence in coping with life. For our purposes, the ultimate question raised here is not whether the lack of education causes loneliness and stress, but the extent to which beliefs and attitudes cause loneliness and stress. The studies cited above do not address this question.

However, there are other studies that do, one of which was the study of executives during the AT & T breakup cited by Dossey above. In the findings in that case, it was the attitude towards the stressful situation, as opposed to the situation itself, that caused the health problems.

Some studies have shown that maintaining a positive mental attitude is healthy even if it entails engaging in what most of us would call an

⁶⁸ Dossey, *Meaning and Medicine*, 72.

⁶⁹ Dossey, *Meaning and Medicine*, 70-1.

intellectual (and possibly moral) vice: denial. However, denial is only beneficial in the short-term. Like avoiding exercise, avoiding the truth is a short-term cure, not long-term prevention. Says Dossey:

Nowhere is the value of denial more apparent than in the coronary care unit following heart attack, where it has been shown that the higher the denial, the lower the mortality. Persons who deny being frightened, who minimize the seriousness of their illness, and who give the appearance of generally being unruffled tend to survive the CCU experience in larger numbers than those who are appropriately worried or who are unable to deny their distress. These findings led Dr. Thomas P. Hackett of Harvard Medical School, a pioneer in this research, to observe that “While denial can play the role of the enemy to the myocardial infarction victim in delaying his arrival in the emergency ward, it can also serve as an ally in the CCU.”

However, Dossey adds that the denial must be genuine:

[W]e cannot consciously fool ourselves into not believing something exists, once the belief is already lodged in consciousness. Thus it is useless for the heart attack victim who finds himself in the coronary care unit to say to himself, “Statistics show that if I deny my heart attack, I’ll have a better chance of surviving. So I’m going to close my eyes, lie back, and start denying!”⁷⁰

Evidently, the self-deceit involved in denial is effective under the same circumstances as the deceit involved with placebos: It works only when the patient really believes the falsehood. Once again, this underscores a basic principle of mental and spiritual healing that dates back at least to Jesus and is strongly emphasized in New Thought: Sincere belief is a critical element in the power of thought to heal.

IV. Cancer

With respect to this dreaded disease, I have divided the topic into two subtopics: the role of the mental in causing cancer and the role of the mental in curing it.

The Role of the Mental in Causing Cancer

With respect to cancer, many physicians believe that the disease itself is caused by a breakdown in the immune system. Under this theory, anything that adversely affects the immune system — including some kinds of brain activity — can be carcinogenic. In Bernie Siegel’s words:

One of the most widely accepted explanations of cancer, the “surveillance” theory, states that cancer cells are developing in our bodies all the time but are normally destroyed by white blood cells before they can develop into

⁷⁰ Dossey, *Meaning and Medicine*, 220-1.

dangerous tumors. Cancer appears when the immune system becomes suppressed and can no longer deal with this routine threat. It follows that whatever upsets the brain's control of the immune system will foster malignancy.⁷¹

This theory could explain why so many substances have been linked to cancer. Anything that interferes with the functioning of the immune system can be carcinogenic.⁷² A study conducted at the Albert Einstein College of Medicine in the Bronx found that children with cancer had had twice as many recent crises as other children, who were similar except for their disease. Another study showed that 31 of 33 children with leukemia had suffered traumatic losses within two years of the onset of the disease.⁷³

Mental and emotional factors have been tied to cancer in several important ways. Like heart disease, cancer correlates positively with stress. Siegel cites two studies. In the 1970s, a study of mice bred to develop breast cancer, the cancer rate varied from 92 percent, for mice that were subject to stress, to 7 percent, for those that were not. In another experiment, in which rats injected with tumor cells and then given electric shock, 73 percent of the rats that could not escape the shock developed cancer. Of those that could, only 37 percent developed the disease, doing slightly better than the rats that received no shocks at all.⁷⁴

Although it might be argued that stress itself is not due to thinking and beliefs, but to external circumstances, Siegel argues otherwise. Referring to a 1961 study by L. E. Hinkle, he concludes that stress comes not from events but in the way in which we interpret them. Situations such as poverty, bereavement, and alcoholism in the family, which might seem to be incredibly stressful to the observer, were not associated with the illnesses by the patients who did not report them as stressful. Conversely, events one would ordinarily consider to be not very stressful can be experienced as traumatic, especially in the case of children, who have been known to commit suicide for having received a B on a report card.⁷⁵

Cousins cites a study by David M. Kissen indicating similar results. In this study of cancer patients, Kissen's research "suggested that an

⁷¹ Siegel, 68

⁷² It also suggests that studies testing various substances for carcinogenic effects, specifically those that involve the injection, ingestion, or other form of exposure to massive quantities of the substance, might not be reliable with respect to more moderate amounts. Moderate exposure may well not adversely affect the immune system, while exposure to the massive quantities used in the tests does. Claims concerning the carcinogenic effect of "second hand smoke" have come under attack for precisely this reason.

⁷³ Siegel, 75.

⁷⁴ Siegel, 72-3.

⁷⁵ Siegel, 72.

individual's emotional response to a life event was more critical than an event itself in the genesis of cancer."⁷⁶ This evidence is consistent with that found in similar studies cited above, with respect to heart disease.

Dossey cites one example of a researcher who found that mental factors are heavily involved in cancer — even though he was trying to prove otherwise.

Professor David Spiegel, a psychiatrist and researcher at Stanford University Medical School, set out to refute the idea that mental factors were important in the course of diseases. Like many clinicians, he felt that assigning a role to the mind in cancer was not only erroneous but potentially destructive as well. (Many believe this idea generates guilt on the part of the cancer patient because it suggests that he or she was somehow responsible for causing the disease.) Spiegel followed eighty-six women with breast cancer for a period of ten years. Those who received group therapy and lessons in self-hypnosis lived an average of twice as long as those who were given only traditional medical treatment. Spiegel described himself as “stunned” at this finding, which contradicted his expectations.⁷⁷

One of the more striking discoveries in the research of mental factors in causing cancer is that, “When combined with other psychological tests, mental imagery often is more useful than laboratory tests in assessing the patient's prospects.” Siegel describes a study suggesting this:

Work done by the Simontons, Jeanne Achterberg and G. Frank Lawlis compared the predictive value of psychological factors and blood chemistry in 126 patients with extensive cancer. Virtually every psychological test showed a statistical relationship to one or more blood components. The patients who did most poorly were those who were very dependent on others — such as the doctor — for motivation and esteem, who used psychological defenses to deny their condition, and who visualized their bodies as having little power to fight the disease. Compared with patients who did well, those whose disease progressed fastest were more conformist to sex-role stereotypes and developed images that were more concrete and less creative or symbolic. The researchers concluded that “blood chemistries offer information only about the current state of the disease, whereas the psychological variables offer future insights” and that “the imagery was found to be the most important in predicting subsequent disease states.” By analyzing drawings made by two hundred patients, Achterberg later achieved 95 percent accuracy in predicting who would die within two months and who would be in remission.⁷⁸

⁷⁶ Cousins, *Head First*, 291.

⁷⁷ Dossey, *Meaning and Medicine*, 131-2.

⁷⁸ Siegel, 116-7.

One of the best-known mental predictors of cancer is the “cancer personality type.” Cousin cites the work of psychologist Lawrence LeShan, an early pioneer in this field:

LeShan..., research psychologist of the Institute of Applied Biology in New York, conducted extensive pioneering work regarding the cancer-prone personality that led him to identify several psychological characteristics that seemed to typify cancer patients (including such factors as the inability to express aggression and disruption of a parental relationship in early childhood). He concluded that personality factors have some bearing on the observed association between traumatic life events (most notably, the loss of a significant emotional relationship) and the development of cancer, and he speculated that specific psychological attributes could be linked to particular types and locations of cancer.⁷⁹

One of the more important traits of the cancer personality type is an inability to express emotions. Siegel, who calls it an inability to “be your own person,” says:

As Elida Evans observed in her groundbreaking 1926 study of the cancer personality, “Development of individuality is a safeguard to life and health. It lifts a person out of the collective authority.” I find in rural or rugged areas the percentage of exceptional patients is higher. They are independent, self-reliant people to begin with. Becoming your own person releases your creativity.⁸⁰

Cancer patients tend to be “nice” people possessing low self-esteem and an exaggerated desire to please others. Several studies have shown that cancer patients can often be identified by their psychological profile. Siegel cites several:

By using a simple psychological test on a large group of women, some of whom had cervical cancer, Arthur Schmale was able to pick out 36 of the 51 who had malignancies (already diagnosed but unknown to him), by looking for hopelessness and a recent emotional loss. Other research groups have since gotten even better results. Marjorie and Claus Bahnson have developed a questionnaire that is 88 percent accurate in identifying those who turn out to have a biopsy-confirmed cancer. Most of these psychological tests are now more accurate than physicians' physical exams....

Some of the most valuable work has been done by Dr. Caroline Bedell Thomas of Johns Hopkins University Medical School. Beginning in 1946, she took personality profiles of 1,337 medical students, then surveyed their mental and physical health every year for decades after graduation. Her goal was to find psychological antecedents of heart disease, high blood pressure, mental illness, and suicide. She included cancer in the study for the sake of comparison, because she originally thought it would have no psychological

⁷⁹ Cousins, *Head First*, 291.

⁸⁰ Siegel, 167

component. However, the data showed a “striking and unexpected” result: the traits of those who developed cancer were almost identical to those of the students who later committed suicide. Almost all the cancer patients had throughout their lives been restricted in expressing emotion, especially aggressive emotions related to their own needs. She also found that, using only the drawings they made as one of the tests, she could predict what parts of their bodies would develop cancer.⁸¹

Dr. Fawzy Fawzy at the UCLA medical school conducted a study about the role of emotions in the levels of Leu-7 cells, one of the “natural-killer” T-cells. The study, which lasted over a year, compared levels of Leu-7 cells of an “experimental group” that had been able to “reduce anxiety about their illness and cope with life stresses more effectively” with a control group that had not. Cousins quotes Fawzy’s account of the results:

The mean change scores showed that the control group's cells had actually decreased while the experimental group showed the desired increase in these cells at six weeks. By six months the control group had managed to return to close to baseline while the experimental group had continued to increase their Leu-seven cells. This trend continues in many of the other important cell categories.⁸²

Grief also can have a profound impact on the development of cancer-fighting immune cells. Dossey cites the following study:

Steven J. Schleifer and his colleagues at New York's Mount Sinai Hospital... studied the immune function of fifteen men whose wives had terminal breast cancer. Of interest were the T- and B-lymphocytes, the body's two main immune cells. Prior to the death of the wife, the researchers found that these cells functioned normally. But beginning shortly after the wife's death, and extending for many months in the period of grief, the cells, though normal in number, stopped working. They could not even be made to work when extracted from the blood of the men and exposed in test tubes to chemicals that ordinarily “turn them on.”⁸³

Divorce has even worse effects, according to Siegel, because “...it's harder to accept that the relationship is really over.”

Indeed, divorced people have higher rates of cancer, heart disease, pneumonia, high blood pressure, and accidental death than married, single, or widowed persons. Married men also have one-third the lung-cancer incidence of single men and can smoke three times as much with the same cancer incidence as single men.⁸⁴

⁸¹ Siegel, 94-5.

⁸² Cousins, *Head First*, 264-5.

⁸³ Dossey, *Meaning and Medicine*, 93.

⁸⁴ Siegel, 74-5.

Depression can also suppress immune cell activity, as well as the production of antibodies, which can both aid in the suppression of cancer. What is equally important is that some of these deleterious effects can be mitigated with relaxation and creative imagination exercises. Cousins cites a series of studies:

Drs. Sandra M. Levy and Ronald B. Herberman of the University of Pittsburgh and the Pittsburgh Cancer Institute observed that depressive behavior (fatigue, listlessness, apathy) was associated with diminished natural-killer (NK) cell activity and accelerated tumor spread in breast cancer patients. [Cousins then cites the Schlieffer study mentioned above.] To confirm the relationship between severity of depression and suppressed immunity, the investigators conducted a series of studies comparing individuals hospitalized for depression with those not hospitalized and those hospitalized for other reasons. They concluded that the severity of depression was associated with reduction of T and B cells and their activity. This conclusion was strengthened by their observation that relief from depression is paralleled by changes in the immune system.

Drs. Janice Kiecolt-Glaser and Ronald Glaser, of Ohio State University, found that highly depressed nonpsychotic psychiatric in-patients had significantly poorer DNA (genetic) repair in immune cells exposed to irradiation than did less depressed patients; and that both depressed groups fared significantly worse with regard to DNA repair than the psychologically healthy, nonpsychotic group. All group differences were sustained through the final measurement point, five hours after irradiations time period in which DNA repair is expected to recover to pre-irradiation levels. This finding suggests... that emotional stress may contribute to the incidence of cancer by directly causing abnormal cell development or by indirectly diminishing immune surveillance or competence.

By the same mental processes, however, the immune response can be strengthened or restored. Use of relaxation exercises and creative imagination were found to be helpful in a study of cancer patients by Dr. Barry L. Gruber of the Medical Illness Counseling Center in Chevy Chase, Maryland, in collaboration with Dr. Nicholas R. Hall of George Washington University and later of the University of South Florida. For one year, the patients were asked to imagine the forces in their immune systems being fully engaged in a war against the cancer cells.

The investigators found that these exercises had the effect of stimulating lymphocytes and increasing the production of antibodies and interleukin-2 cells, enhancing NK-cell activity and augmenting the effectiveness of the cytotoxic T cells. The pattern of immune changes corresponded to the level of relaxation and imagery. Equally interesting was the fact that the patients clearly showed intense determination to overcome their disease.⁸⁵

With respect to the same study, Siegel adds the following comments:

⁸⁵ Cousins, *Head First*, 85–7.

[The exercises also affected] the levels of thymosin-alpha-1, a hormone especially important to the auxiliary white cells called T helper cells. Thymosin-alpha-I also helps produce feelings of well-being, showing that the immune system can directly affect one's state of mind, as well as vice versa.⁸⁶

Cousins elaborates on these studies, with respect to the problem of emotional inhibitions:

Both Dr. Temoshok's and Dr. Levy's studies linked emotional inhibitions to impairment in immune activity. This may explain the link between emotional suppression, such as passivity or stoicism, and the progression of cancer.⁸⁷

Evidently, the adverse effects on the immune system brought about by depression are worse when the depression is coupled with the lack of an emotional outlet. LeShan drew the distinction between the psychological condition of "depression" and that of "despair."

LeShan conducted personality studies of 455 cancer patients and in-depth therapy of 71 "terminal" cases. He found that this condition of "despair" (so named to distinguish it from the more commonly recognized form of depression) was reported as predating the disease by 68 of his 71 cancer patients in therapy, but by only 3 of 88 other clients who did not have cancer.⁸⁸

While both depression and despair are unhappy emotional states, despair entails the sense of helplessness that we found was so important in the link between stress and heart disease. That sense of helplessness may in fact be mitigated for those who can express emotions. Siegel cites two more studies:

[O]ver thirty years ago... internist D. M. Kissen studied a group of smokers, comparing those who had lung cancer with those having other diseases. Based on personality tests, Kissen found the cancer patients had poorer "outlets for emotional discharge," and concluded that, the more repressed a person was, the fewer cigarettes were needed to cause cancer.

Working with breast-cancer patients, Mogens Jensen of the Yale psychology department showed that "defensive-repressors" die faster than patients with a more realistic outlook. These are the smiling ones who don't acknowledge their desperation, who say, "I'm fine," even though you know they have cancer, their spouses have run off, their children are drug addicts, and the house just burned down. Jensen feels this behavior "disregulates"

⁸⁶ Siegel, 152.

⁸⁷ Cousins, *Head First*, 216.

⁸⁸ Siegel, 80.

and exhausts the immune system because it is confused by the mixed messages.⁸⁹

In his conversations with Bill Moyers, Michael Lerner, co-founder of the Commonweal Cancer Help Program, cites a study by Lydia Temoshek, whose work was also cited by Cousins earlier, of patients with malignant melanoma:

Temoshek looked at the difference between patients who expressed their feelings and those who didn't, and discovered that the ones who expressed their feelings had more immune activity at the site of their lesions. They also had thinner lesions than the people who did not express their feelings.⁹⁰

As with heart disease, denial can also have a healing influence on cancer. According to Dossey, there are definitely times when deluding one's self can in fact heal, because it can help maintain a more positive mental attitude. Tactics such as denial, making excuses, and comparing one's self to only the worst off among other victims, in order to look good by comparison, all tend to promote healing:

Researcher Keith W. Pettingale and his colleagues at King's College School of Medicine and Dentistry in London studied the psychological response of women three months after mastectomy. At a five-year follow-up, they found that the rate of recurrence-free survival was significantly higher among patients who had reacted to their cancer either with a fighting spirit or with denial than among those who had reacted with stoic acceptance or feelings of hopelessness and helplessness.... After a follow-up period of ten years, the outcome was the same: those patients demonstrating a fighting spirit or denial did better and had higher rates of survival....

Another strategy used by most cancer patients, [psychologist Shelley E.] Taylor found, is to make selective comparisons with other persons with the same disease. Women with breast cancer tended to compare themselves with other women with cancer who were doing poorly, which enhanced their estimation of their own strengths.... Summing up, Taylor states, "The effective individual in the face of threat... seems to be one who permits the development of illusions, nurtures those illusions, and is ultimately restored by those illusions."

Another device used by the secret helper is excuses.... Research by psychologists C. R. Snyder and Raymond Higgins at the University of Kansas has shown that persons who offer themselves plausible excuses have greater self-esteem, better health, and perform better on all sorts of cognitive, social, and physical tasks than people who put the blame on themselves when things go wrong.... They help preserve a sense of self-worth and personal integrity — as when we say that we flunked a test because we didn't study hard enough, not because we weren't intelligent enough.... Excuses give them time to marshal additional psychological resources for

⁸⁹ Siegel, 80.

⁹⁰ Moyers, 332.

the next challenge.... Snyder and Higgins conclude that excuses are far from the “simple, silly and ineffective ploys” most people consider them to be and are, in fact, necessary illusions.⁹¹

Dossey may well have exposed a conflict between moral and physical health here.

If intellectual dishonesty is sometimes helpful, emotional dishonesty is not. People who express their negative emotions tend to do better. Being ornery and cantankerous pays more often than not. Siegel, who calls this expression “fighting spirit,” says:

Psychologist Leonard Derogatis, in a study of thirty-five women with metastatic breast cancer, found that the long-term survivors had poor relationships with their physicians — as judged by the physicians. They asked a lot of questions and expressed their emotions freely. Likewise, National Cancer Institute psychologist Sandra Levy has shown that seriously ill breast-cancer patients who expressed high levels of depression, anxiety, and hostility survived longer than those who showed little distress. Levy and other researchers have also found that aggressive “bad” patients tend to have more killer T cells, white cells that seek and destroy cancer cells, than docile “good” patients. A group of London researchers under Keith Pettingale recently reported a ten-year survival rate of 75 percent among cancer patients who reacted to the diagnosis with a “fighting spirit,” compared with a 22-percent survival rate among those who responded with “stoic acceptance” or feelings of helplessness or hopelessness.⁹²

Siegel elaborates on fighting spirit, with respect to the Derogatis study:

His work stands as excellent scientific support for a group of researchers nearly three decades earlier, who were “impressed by the polite, apologetic, almost painful acquiescence of patients with rapidly progressive disease as contrasted to the more expressive and sometimes bizarre personalities” of those who lived longer.⁹³

Cousins cites another study that supports Siegel’s contention:

Dr. G. Nicholas Rogentine, Jr., and colleagues of the National Cancer Institute recruited patients who had been successfully treated for malignant melanoma. The patients were asked to rate the amount of “adjustment” they required in order to cope with their illness. Participants who reported that they reconciled themselves to their illness were more prone to recurrence than those who resisted the idea of adapting to cancer.⁹⁴

⁹¹ Dossey, *Meaning and Medicine*, 221-4.

⁹² Siegel, 25.

⁹³ Siegel, 104-5.

⁹⁴ Cousins, *Head First*, 217.

Anything seems to work better than resignation. Cousins, citing the Temoshok study mentioned earlier, argues that “passive” emotional states are the most dangerous:

[Lydia Temoshok’s] structured interview with patients measured emotional, behavioral, physical, and mental reactions to events. These measurements revealed that malignant melanoma patients whose attitudes and emotions were active instead of passive exhibited better immune function and slower tumor growth.⁹⁵

Dossey is more specific. According to his interpretation, the following studies indicate some specific thoughts that are associated with both defeatism and suppressed immune system activity:

When people learn... to be genuinely helpless, they tend chronically to react to their problems with the classic triad of “I caused it,” “It’ll always be this way,” and “This is going to spoil everything else I do.” This point of view seems actually to be channeled into the body. It creates physiological changes that set the stage for bad health. When Seligman and his colleagues rated 172 undergraduates for the presence or absence of this explanatory style, they accurately predicted which students would be sick the most; the predictions held both one month and one year later. In another study involving 13 patients who had malignant melanoma, absence of this style of explanation was a better predictor of survival than even the level of activity of natural killer cells, a type of white blood cell crucial in the immune response.⁹⁶

In sum, the studies indicate that despair, a profound feeling of sadness coupled with a sense of resignation to conditions, is the attitude that is least healthy when attempting to recover from cancer. Secondly, the social style of not expressing one’s negative emotions, especially if it stems from an exaggerated fear of others’ disapproval, seems to describe the personality profile of those most likely to get cancer in the first place.

The Role of the Mental in Curing Cancer

Having seen how thinking patterns can exacerbate or lead to cancer, we can now turn to the various forms of mental therapy that seem to work. Without advocating specific techniques, Siegel cites five characteristics, outlined by Dr. Kenneth Pelletier, that are typical of cancer patients who survive against the odds;

⁹⁵ Cousins, *Head First*, 216. The spelling of the researcher’s last name is different here (Temoshok) from that in Moyers (Temoshek) cited earlier. I am not sure which spelling is correct, but the two citations appear to refer to the same work.

⁹⁶ Dossey, *Meaning and Medicine*, 30.

1. Profound intrapsychic change through meditation, prayer, or other spiritual practice.
2. Profound interpersonal changes, as a result: Their relations with other people had been placed on a more solid footing.
3. Alterations in diet: These people no longer took their food for granted. They chose their food carefully for optimum nutrition.
4. A deep sense of the spiritual as well as material aspects of life.
5. A feeling that their recovery was not a gift nor spontaneous remission, but rather a long, hard struggle that they had won for themselves.

Then, Siegel adds:

In 1977 a research group led by Dr. Edward Gilbert of Denver's Presbyterian Medical Center completed one of the first controlled tests of psychological treatment of cancer patients. Gilbert and his co-workers asked independent physicians to examine a group of forty-eight patients and predict how long they could expect to live using standard medical treatments. The patients entered an eight-week program of individual and group therapy, biofeedback, and training in meditation and visualization. Then the patients were tested by independent psychiatrists to see which ones had made the most positive changes in their lives. Five patients were graded as having changed most significantly and four of these far exceeded medical expectations. Of the other twenty-five then remaining in the group, only one outlived the initial prognosis by a similar margin.⁹⁷

Siegel cites the techniques of “individual and group therapy, biofeedback, and training in meditation and visualization,” but he also notes that these methods are most effective when, coupled with the experience of the disease itself, they result in profound transformation in the afflicted individual's character.

For me, the diagnosis of cancer was a terrifying experience — and mine was one of the more readily “curable” varieties. Moreover, the primary weapons modern medicine uses to fight cancer, surgery, radiation and chemotherapy (or as some have put it, “slash, burn, and poison”) often cause more discomfort than the actual disease itself. It is, therefore, understandable, why a protracted battle with cancer can in itself bring about depression, the very mental condition that tends to bring on cancer or make it worse. Recognizing this, Cousins decided to look for ways to combat the depression, with the aim of improving the physical condition as a result. He organized and led a group of cancer patients called the “Society of Challengers,” who met weekly for a six-week period. During that time

⁹⁷ Siegel, 184–6.

they received “education information about their cancer and about nutrition” and were “taught various relaxation techniques as well as positive coping strategies and problem-solving techniques.”⁹⁸ As one might expect from Cousins, the therapy also included healthy doses of humor.⁹⁹ There was, of course, a control group that received nothing but standard medical therapy.

To measure the potential effectiveness of his techniques, Cousins used two standard psychological tests to measure levels of depression: the Profile of Mood States (POMS) and the psychosocial adjustment to illness (PAIS) test. Standard medical tests (LEU 7 and LEU II) were used to measure the immune system. When comparing the scores of both kinds of tests, in both the Challengers and control groups, Cousins found that not only did the Challengers group fare better than the control, but also that the measures of mental well-being correlated positively with the levels of immune system activity.

After six weeks, Cousins found that the experimental group showed a significant decrease in depression (as measured by the POMS), while the control group showed only a slight decline. The trend continued. After six months, the decline in depression accelerated for the Challengers group and actually increased for the control. Moreover, a dramatic difference in PAIS scores between the two groups had appeared, with the control group showing a slight decrease in distress and the experimental group showing a more marked decrease. Says Cousins:

The reeducation of the patients, apparently, was having its effects. The growth in confidence; the increasing knowledge by patients about the nature of their own resources; the enhancement of life-style; the decline in feelings of helplessness — all these were reflected in the POMS and PAIS measurements of the research group.

Most exciting of all, however, was that the decline in depression was accompanied by an increase in certain immune cells, or activating forces, within the immune system. The conclusion was inescapable: If you can reduce the depression that almost invariably affects cancer patients, you can increase the body's own capacity for combating malignancies. This becomes especially important in view of the fact that chemotherapy, which is often used in the treatment of cancer, can have deleterious effects on the immune system.

The data on which his conclusions are based appear on the next page:

⁹⁸ Cousins, *Head First*, 254.

⁹⁹ Cousins, *Head First*, 258.

How Depression and Quality of Life Affect the Immune System

PROFILE OF MOOD STATES (POMS)

Mean Change Scores

		SIX MONTHS POST-TREATMENT
TENSION-ANXIETY	POST-TREATMENT	
Control	0.15 P<.012*	0.04 P<.007*
Experimental	-4.06	-4.34
DEPRESSION-DEJECTION		
Control	-0.58 P<.049*	0.04 P<.003*
Experimental	-3.89	-4.71

PSYCHOSOCIAL ADJUSTMENT TO ILLNESS (PAIS)

Mean Change Scores

PSYCHOLOGICAL DISTRESS		
Control	(PAIS test not administered at this point)	-1.46 P<.043*
Experimental		-5.77
TOTAL PAIS		
Control		-1.35 P<.007*
Experimental		-6.91

QUALITY OF LIFE

Mean Change Scores

Control	-1.65 P<.024*	-0.23 P<.035*
Experimental	7.60	8.34

IMMUNE CELLS (in the NK cell family)

Mean Change Scores

LEU 7		
Control	-0.85 P<.032*	0.04 P<.044*
Experimental	1.06	2.09
LEU II		
Control	0.50 P<.740	0.12 P<.014*
Experimental	0.80	2.89

*P is the level of statistical significance between the experimental and control groups. P<0.05 is considered to be statistically significant. All statistically significant figures have been asterisked.¹⁰⁰

¹⁰⁰ Cousins, *Head First*, 259–261.

The results of Cousins's own study would seem to indicate that the psychotherapeutic techniques used produced statistically significant differences in both the patients' emotional sense of well-being and their immune system responses.

Cousins cites another study, conducted by Dr. Herbert Benson of the Harvard Medical School, whose work was also previously cited by Dossey, in which "relaxation response" training had a positive effect on cancer patients. Benson found that patients undergoing meditation, relaxation, and guided imagery therapy

reported significant improvements in quality of life, including increased vigor and fighting spirit, along with a decrease in hopelessness, tension, depression, anxiety, and somatization. Dr. Benson also found relaxation response training effective in moderating the adverse physical effects of chemotherapy.

Preliminary results have shown that the gains made as a result of participation in the relaxation response group endure over time and that patients with more advanced cancer who rated highly on "fighting spirit" survived significantly longer.

Cousins's concludes that intelligence and free will can both combat existing diseases and help prevent future ones.¹⁰¹

Other studies support his view. Two of the early pioneers among mainstream physicians in applying mental healing techniques with cancer patients were physician O. Carl Simonton and psychologist Stephanie Matthews (Simonton's wife at the time). Siegel describes their initial studies on the effectiveness of imaging techniques on "terminal" cancer patients as follows:

Of their first 159 patients, none of whom was expected to live more than a year, 19 percent had gotten rid of their cancer completely, and the disease was regressing in another 22 percent. Those who eventually did succumb had, on the average, doubled their predicted survival time.¹⁰²

Dossey makes a similar point in citing two other studies, including the Achterberg and Lawlis studies cited earlier.

[T]here is ample solid scientific evidence that directed, highly specific imagery can bring about changes in the body. For instance, Dr. Howard Hall of Pennsylvania State University has shown that subjects, using hypnosis, can generate a more active immune response when they imagine their white blood cells as "strong and powerful sharks." Working with 126 cancer patients, psychophysicist Jeanne Achterberg and psychologist G. Frank Lawlis demonstrated that the patients' clinical response — future tumor

¹⁰¹ Cousins, *Head First*, 235–6.

¹⁰² Siegel, 18

growth or remission — was directly related to the specificity, vividness, strength, and clarity of their mental imagery. The work of Achterberg and Lawlis, pioneers in the clinical use of imagery, thus offers another side to the debate over whether directed or nondirected imagery and prayer strategies work best.¹⁰³

Hypnosis too has been beneficial in treating cancer patients, especially in the area of relieving pain. Murphy cites two studies:

In a series of articles published during the 1950s, physician Byron Butler reported the successful reduction of pain in cancer patients and gave a history of cancer treatment by hypnosis going back to 1980. More recently, V. W. Cangello gave posthypnotic suggestions for pain reduction to 73 cancer patients and found that 30 of them reported excellent to good results. His deeply hypnotizable patients generally experienced more relief than the others, though about half of his less susceptible subjects were also helped. The results of these studies, wrote Ernest and Josephine Hilgard, “show a relationship between hypnotic responsiveness and success in pain reduction. The figure that commonly emerges — about 50 percent of the cases showing substantial improvement — is close to that reported by other clinicians.¹⁰⁴

Though Murphy cites no similar studies with respect to hypnosis curing cancer, Siegel makes a qualified argument that cancer *can* be cured by mental activities. Apparently the tabloid *The Midnight Globe* ran a headline quoting him as saying the mind can cure cancer. Siegel describes his reaction as follows:

I thought it [the headline] was simplistic and misleading. The more I worked with patients, however, the more I came to see that the statement was correct. Now I consider those omnipresent supermarket newspapers to be important medical journals. (I say this tongue mostly in cheek.) The mind can cure cancer, but that doesn't mean it's easy.¹⁰⁵

Later, he describes some of the hurdles involved:

I have collected 57 extremely well documented so-called cancer miracles. A cancer miracle is when a person didn't die when they absolutely, positively were supposed to. At a certain particular moment in time they decided that the anger and the depression were probably not the best way to go, since they had such a little bit of time left, and so they went from that to being loving, caring, no longer angry, no longer depressed, and able to talk to the people they loved. These 57 people had the same pattern. They gave up,

¹⁰³ Dossey, *Healing Words*, 105.

¹⁰⁴ Murphy, 325.

¹⁰⁵ Siegel, 98–9.

totally, their anger, and they gave up, totally, their depression, by specifically a decision to do so. And at that point the tumors started to shrink.¹⁰⁶

The “cancer miracles” mentioned by Siegel here are called “spontaneous regression of cancer” or SRC in medical jargon. SRC does occur, but according to Dossey it is “uncommon, to say the least.” Opinions as to how rare vary, but he cites one study in which the researchers simply concluded that when it did occur, it was a fluke:

Researchers T. C. Everson and W. H. Cole collected 176 case reports from various countries around the world on spontaneous regression of cancer (SRC), and concluded that SRC occurs in one out of 100,000 cases of cancer. Other authorities believe the incidence may be higher, perhaps one in 80,000 cases....

These researchers concluded that, since almost any treatment seemed to work occasionally but not consistently, all these measures were equally worthless and that SRC is purely a random event entirely beyond the control of an individual patient. According to this point of view, the disappearance of St. Peregrine's cancer had nothing to do with prayer; it would have happened anyway for reasons that are essentially obscure and unpredictable. The saint was simply one of the lucky ones. And in any case, these events are too rare to hold out as hope to people suffering from cancer, especially since they cannot control them.¹⁰⁷

Dossey, however, does not concur with this conclusion. Citing five carefully controlled case studies conducted in 1975 by physician Yujiro Ikemi at Kyushu University's medical school in Fukuoka, Japan, Dossey maintains that that attitudes such as “prayerfulness” can make a significant difference:

Ikemi and his co-workers... did not “skim off the top,” picking only cases that conformed to their expectations and preconceived ideas. The reports are scientifically precise and include biopsy confirmation of all the cancers in question. On balance these remarkable cases seem to contradict the idea that SRC is accidental, random, and beyond the effects of a patient's thoughts, attitudes, and feelings. They strongly suggest that there is a profound effect of prayerfulness and an indwelling spiritual sense on the cancer process.¹⁰⁸

Dossey believes, evidently, that “spontaneous” regression of cancer, although rare and apparently random, may be less “spontaneous” than it might seem. However, he is somewhat more cautious than Siegel in his position on whether we can call prayer an outright “cure” for cancer. Citing a study by Michael Lerner, special consultant to the U. S. Office of

¹⁰⁶ Siegel, 202

¹⁰⁷ Dossey, *Healing Words*, 29.

¹⁰⁸ Dossey, *Healing Words*, 30.

Technology Assessment, in preparing a report on unconventional cancer treatments, Dossey expresses the following reservation:

So far no one has been able to demonstrate that cancer or any other disease will predictably disappear by using prayer, meditation, or any psychological or spiritual method whatever.... Lerner has concluded that although there is plenty of anecdotal evidence that many such therapies improve the quality of life, he has not found any cure for cancer among the many unconventional methods he examined, and little scientific evidence that such methods extend life beyond what could be achieved with conventional treatments.¹⁰⁹

The exact extent to which prayer or mental therapy can work with cancer is not yet known. Cousins unexpectedly found himself under attack by people in the news media, when physician Barrie Cassileth published a paper, "Psychosocial Correlates of Survival in Advanced Malignant Disease," in the *New England Journal of Medicine*, in June 1985.¹¹⁰ In spite of the controversy in the news media that ensued, Cassileth had no intention of discrediting Cousins's work. Her intent was to prevent people from misinterpreting it to mean that anybody could simply laugh their cancer away. Cousins's and Cassileth's subsequent discussion of the matter resulted in the following joint statement:

Some of the reports and comments incorrectly interpreted the [Cassileth] study's results to mean that positive attitudes have no value in a strategy for effective treatment of illness.

Cassileth's study, however, was not concerned with disease in general but with advanced cancer in particular. Cassileth wrote: "Our study of patients with advanced, high-risk malignant diseases suggests that the inherent biology of the disease alone determines the prognosis, overriding the potentially mitigating influence of psychosocial factors."

This means that in advanced cancer, biology overwhelms psychology. It does not mean that emotions and health are unrelated. It does not mean that emotions and attitudes play no role in the treatment or well-being of ill people....

The reciprocal mind/body relationship is complex. We must be aware equally of both the potential power and the limitations of attitudes in their effects on health and disease.¹¹¹

This statement probably best sums up the clinical aspects of applying mental therapy to the disease called cancer.

¹⁰⁹ Dossey, *Healing Words*, 35.

¹¹⁰ Cousins, *Head First*, 210 – 213.

¹¹¹ Cousins, *Head First*, 213 – 215.

V. Acquired Immune Deficiency Syndrome (AIDS)

Due the highly charged political and social controversy surrounding AIDS, no discussion of healing in the 1990s is complete without some investigation into it. Siegel gives the following account of an individual who experienced a “spontaneous” regression of the disease, which is generally regarded as always fatal:

Hope instilled that kind of courage in William Calderon, who achieved the first documented recovery from Acquired Immune Deficiency Syndrome (AIDS). Calderon was diagnosed in December 1982. His doctors told him he would probably be dead in six months. Understandably, he became depressed and hopeless. Almost immediately Kaposi's sarcoma, the type of cancer that most often accompanies AIDS, appeared and began spreading rapidly on all areas of his skin and throughout his gastrointestinal tract. Soon Judith Skutch, co-founder with astronaut Edgar Mitchell of the Institute of Noetic Sciences and now President of the Foundation for Inner Peace, arrived at Calderon's hair-styling salon for her regular appointment. Noticing by his eyes that he had been weeping, she got him to tell her the reason. Her next words turned out to be the key to saving his life. She said, “William, you don't have to die. You can get well.”

Skutch described the Simontons' work with cancer patients. With unwavering love and support from her and from his lover, Calderon came to believe in his own survival. By continuing at the job he loved, he refused to give in to the disease. Instead he began meditating and using mental imagery to combat it. He worked to restore strained relationships with his family and achieved peace of mind by forgiving people he felt had hurt him. He loved his body with exercise, good nutrition, and vitamin supplements. And from that point on his immune system showed increased response and his tumors began to shrink. Two years after the diagnosis, Calderon showed no signs of AIDS.¹¹²

While this is only a single instance, it is, to use William James's terminology, the one white crow that refutes the proposition that all crows are black. Moreover, practitioners of Religious Science, some of whom I knew personally when I was active in the church in the 1980s, reported witnessing similar accounts. However, the medical doctors involved in the cases dismissed them all, saying simply that the original HIV positive test results for these patients must have been false. That conclusion, however, is debatable. We simply do not know enough about AIDS to know that it is always fatal.

VI. Summary and Conclusion

The evidence for psychosomatic healing is not merely anecdotal. Reputable researchers have systematically investigated psychosomatic disease and healing using controlled statistical studies. The fact that a

¹¹² Siegel, 39-40.

significant psychosomatic element was found in the genesis and treatment of both heart disease and cancer, the leading causes of death by disease in contemporary America, underscores the importance of these findings.

Chapter 7

Documented Evidence for Psychosomatic Causation

At the risk of sounding trite, let me reiterate that life holds many mysteries, of which the phenomenon of mental healing is but one. However, mystery does not always evoke skepticism. Today, nobody fully understands photosynthesis, but no one doubts that it occurs. Closer to our topic, nobody fully understands intentional bodily motion, yet all of my grade school teachers asked me to raise my hand when I wanted to speak. Psychosomatic healing is arguably no more mysterious than either of the preceding examples. The question is, Why the skepticism?

In researching the topic of mental healing, I have encountered two kinds of skeptics. One is the materialist philosopher. As people in the advertising business would say, most materialist philosophers are probably “unreachable.” True ontological materialists have to deny the reality of mental healing, because under their worldview, mental events in themselves can never be causes. Not even in the simple action of raising one’s arm can the causal sequence actually begin with a purely mental event. Presenting evidence in the hope of convincing skeptics of this kind that mental healing occurs would be like presenting evidence that the earth is flat. The materialists would reply that I am simply introducing evidence for a conclusion already known to be false. The only way one could ever hope to convince skeptics of *this* kind that mental healing occurs is to introduce a philosophical argument sufficiently cogent to get them to rethink their materialist position. Empirical evidence presented in this and the previous chapters, therefore, is not directed towards skeptics of this kind. If they are to be convinced at all, it will be in Chapter 9, when I discuss the mind-body problem.

However, there are skeptics of another kind, who simply find the whole notion of mental healing too bizarre or spooky to believe. While they may believe the mind can cause me to raise my arm, believing that it can cure or even significantly alleviate cancer is another matter. For them, the problem is not based on any philosophical paradigm. Instead, it is the mystery, along with its strangeness or unfamiliarity, that makes it hard to believe. Moreover, these skeptics may also have, for whatever reason, a general bias against anything that has been labeled “psychic” or “spiritual.” They might be convinced by evidence of the type presented thus far. They might also find mental healing more believable when presented with evidence of *other, even more extraordinary* ways in which thinking can affect the body. Compared to some of the phenomena described in this chapter, mental healing might begin to seem much less bizarre, thereby, easier to believe.

Much of the evidence presented in this chapter falls into the strange-but-true category. *The point of my discussion here is to show some of the extraordinary ways in which the mind can influence the body, many of which are far more commonplace than most of us would imagine.* My ultimate aim is to show that mental healing itself does not seem so bizarre in comparison to some of the other ways that thinking can affect physiology. In fact, it may even seem relatively mundane.

I. Hypnosis

Especially in the nineteenth century, hypnotists repeatedly accomplished some amazing feats using hypnotism as anesthesia for surgery. It blocked pain unaided by chemical anesthesia in a wide variety of procedures, some of which would ordinarily be excruciating. Murphy cites the following account:

In a preface to his book *Mesmerism in India*, he [British physician James Esdaile] presented this list “showing the Number of painless Surgical Operations performed at Hooghly during the last eight months”:

Arms amputated	1
Breast amputated.....	1
Tumor extracted from the upper jaw.....	1
Scirrhus testium extirpated.....	2
Penis amputated.....	2
Contracted knees straightened	3
Contracted arms straightened	3
Operations for cataract.....	3
Large tumor in the groin cut off.....	1
Operations for hydrocele	7
Operations for dropsy	2
Actual cautery applied to a sore	1
Muriatic acid applied to a sore	2
Unhealthy sores pared down	7
Abscesses opened.....	5
Sinus, six inches long, laid open	1
Heel flayed.....	1
End of thumb cut off	1
Teeth extracted.....	3
Gum cut away	1
Prepuce cut off	3
Piles cut off.....	1
Great toe nails cut out by the roots	5
Large tumor on leg removed.....	1
Scrotal tumors, weighing from 8 lb. to 80 lb.....	14. ¹¹³

Esdaile wrote in the mid-nineteenth century. Murphy cites other similar accounts a recorded century later:

¹¹³ Murphy, 297-8.

Ernest and Josephine Hilgard compiled the following list of operations between 1955 and 1974 during which hypnotic pain reduction was used without chemical analgesics or anesthetics:

- Appendectomy
- Caesarean section
- Gastrostomy
- Mammoplasty
- Breast tumor excision
- Breast tissue excision
- Skin grafting, debridement, etc.
- Cardiac surgery
- Cardiac excision
- Fractures and dislocations
- Cervical radium implantation
- Curettage for endometritis
- Vaginal hysterectomy
- Circumcision where phimosis present
- Prostate resection
- Transurethral resection
- Oophorectomy
- Hemorrhoidectomy
- Facial nerve repair
- Thyroidectomy
- Ligation and stripping
- Removal of tack from child's nose
- Repair of lacerated chin in child
- Removal of fat mass from arm¹¹⁴

He also mentions some of the cases cited earlier in this essay, in which hypnosis has alleviated pain and suffering among cancer patients.

It has been suggested that hypnotic pain-reduction stems from stimulating the production of endorphins, natural opiates produced by the body itself to reduce pain. However, Murphy suggests that this is not so:

Ernest Hilgard and associates tested the possibility that hypnotic analgesia might act in the medial centers of the brain by releasing endorphins or similar substances. They did this by administering naltrexone, an endorphin-blocker, to subjects given suggestions for pain reduction. Because their subjects' analgesia was not significantly affected by the drug, it seemed that hypnotic suggestion was mediated by mechanisms other than endorphins. Hilgard's results were supported by further experiments by David Spiegel and Albert Leonard in which naloxone failed to reverse the alleviation of chronic pain by hypnosis. Results such as Hilgard's and Spiegel's indicate that physiological mechanisms mediating hypnotically induced pain reduction are quite complex. Indeed, some researchers doubt that all of

¹¹⁴ Murphy, 325-6.

them can ever be mapped, given the immense flexibility and redundancy of the human organism.¹¹⁵

Murphy also argues that hypnotic analgesia cannot be reduced to anxiety reduction:

In a study by Ronald Shor, subjects who simulated hypnosis by appearing to be relaxed were compared to a group of hypnotized subjects to see how they responded to electric shock. The simulation worked so well that judges could not tell the two groups apart, yet during the postexperimental inquiry, which emphasized honest reporting, the hypnotized subjects reported that they had felt no pain while the simulators said that they had. Relaxation by itself, while helpful in reducing discomfort, did not completely remove the pain the simulators felt. Commenting on Shor's study, Ernest Hilgard wrote: "The conclusion [of this experiment] is clear: the analgesic effect of hypnotic suggestion is not to be confused with the relaxation or anxiety-reduction effect."¹¹⁶

The studies cited above show how effective hypnosis can be as an anesthetic. However, it has also proven effective in occasionally curing disease. One such example is fish-skin disease, an ailment that most medical texts had deemed incurable. Murphy describes its successful treatment by hypnosis, documented in the *British Medical Journal* in 1952:

Fish-skin disease is characterized by thick, black, horny skin (often as hard as fingernails and numb for a depth of several millimeters) that cracks when bent so that it sometimes oozes a blood-stained serum.... English physician A. A. Mason described his successful treatment of the condition through suggestions that his patient's horny skin would fall off. Another English doctor, C. A. S. Wink, reported similar results with two sisters, aged six and eight. In 1966 C. Kidd reported a 90 percent improvement in one patient, and J. M. Schneck a 50 percent cure in another.¹¹⁷

Other skin diseases have been likewise treated:

Inspired by Mason's first report about his hypnotic treatment of fish-skin disease, Mullins, Murray, and Shapiro used the same approach with a similar congenital affliction, pachyonychia congenital characterized by thickened skin and enlarged nails on the hands and feet. Their patient, an 11-year-old boy who needed crutches or crawled before they treated him, learned to walk with only slight impairment and stood without pain for the first time he could remember.¹¹⁸

Herpes, psoriasis, and contact dermatitis have been treated with hypnosis:

¹¹⁵ Murphy, 331.

¹¹⁶ Murphy, 328.

¹¹⁷ Murphy, 328.

¹¹⁸ Murphy, 332.

Herpes simplex and psoriasis have been relieved or eliminated through hypnotic suggestions of strong cell structure, healthy skin, hormonal balance, cleanliness, or cool sensations. And rashes produced by various plants have been either reduced or induced by hypnosis. For example, 13 Japanese boys who were told that harmless leaves rubbed against their arms were from a tree to which they were sensitive showed some dermatitis; while 11 of the same group who were told that leaves of the offensive tree that were rubbed on their arms were harmless did not react with their accustomed itching or blisters.¹¹⁹

Hypnosis has, like the placebo, worked well with warts:

In his book *Illustrations of the Influence of the Mind upon the Body in Health and Disease Designed to Elucidate the Action of the Imagination*, published in 1872, D. H. Tuke described a cure for warts that included rubbing the skin with beef stolen from a butcher's shop. The vivid imagery triggered by this dramatic treatment, Tuke suggested, contributed to the patient's cure. A Zurich physician, B. Bloch, treated the affliction with another highly suggestive procedure, a "wart-killer" with noisy motor, flashing lights, and fake X ray. Of 179 patients, Bloch reported in 1957, 31 percent lost their warts after a single treatment with the fearsome machine. Interpreting remissions produced by such procedures to be the result of strongly held images, many physicians have treated warts by hypnotic suggestion. In 1942 R. H. Rulison reviewed 921 cases, and in 1960 M. Ullman and S. Dudek noted many more in which warts were relieved or eliminated through hypnosis.¹²⁰

An area where hypnosis has been surprisingly effective is in preventing blood loss during surgery.

In 1975 Thomas Clawson and Richard Swade described several injuries and diseases in which blood flow was either increased, reduced, or stopped by hypnotic suggestion. One dental surgeon, for example, inhibited bleeding in 75 hemophiliac patients during tooth extraction through suggestions that emphasized tranquillity; and another reduced blood loss in nine normal patients during dental surgery with a similar procedure. Suggestion has also been used to control gastrointestinal bleeding and to alleviate hemophiliac bleeding after injury.¹²¹

Researcher Theodore Barber drew the following inferences from the above study:

These results... [have] vast implications for immunology, since it indicates that at least some immune responses, such as the T-cell mediated skin response to an allergen, may be much more influenced by emotionally

¹¹⁹ Murphy, 334–5.

¹²⁰ Murphy, 332–3.

¹²¹ Murphy, 333–4.

tinged feelings-thoughts-imaginings-beliefs than has heretofore been supposed?¹²²

Hypnosis has also alleviated asthma:

In the *British Medical Journal* of October 12, 1968, a subcommittee of the British Tuberculosis Association reported their favorable assessment of hypnotic treatment for asthma. The subcommittee accepted 252 patients for study, dividing them into one group given monthly hypnosis treatments and taught autohypnosis and another given exercises in progressive relaxation. Independent judges considered the patients' asthma to be improved in 59 percent of the hypnosis group and 43 percent of the control group.¹²³

Finally, hypnosis has been helpful in enlarging women's breasts:

A number of researchers and clinicians have produced breast enlargement in women through hypnosis, usually by promoting blood flow in their subjects' breasts through images of sunshine upon them, or the reinstatement of tender, swelling feelings typical of puberty, or the induction of pulsing, tingling sensations associated with sexual arousal. Some 70 participants in five hypnosis experiments experienced an average bust increase of 1.5 inches, while some women's measurements increased by 3 inches or more. In most of these studies, measurements were carefully made, with consideration of weight changes and the menstrual cycle.¹²⁴

Were there any chemical component of hypnosis, these studies would hold little significance for this discussion. Although hypnosis does have a physiological component, in that the body is in a very relaxed state, the hypnotic suggestions that produced the effects are in themselves thoughts.

II. Spiritual Practice

The Roman Catholic Church has hardly escaped criticism for being unscientific, e.g., for its reaction to Galileo's advocacy of the heliocentric view of the solar system. Yet, in deciding who will and will not be canonized as a saint, it employs rigorous standards of investigation. The Church does not take sainthood lightly, conferring the its status on only the most extraordinary individuals. One of the criteria under consideration is the authenticity of the "miracles," allegedly brought about by candidates being considered for sainthood. Only after the systematic, and in fact scientific, examination and elimination of all known natural explanations of the event do the Church authorities certify that event as a miracle. Murphy describes the scientific rigor employed:

¹²² Theodore Barber in Murphy, 335.

¹²³ Murphy, 335-6.

¹²⁴ Murphy, 336-7.

The rules of evidence ...distinguish physical and mental agencies that mediate unusual cures. They discriminate between different classes of charism and describe the role of imagination in sickness and health. They... distinguish authentic mystical experience from false enthusiasms.... [T]hey have been adapted to modern explanations of cures that once seemed miraculous, to psychiatric insights about the hysterical symptoms exhibited by some ecstasies, and to discoveries of psychical research that bear upon extranormal phenomena. With them, the Congregation of Rites can study potential saints using insights and methods of contemporary science while drawing on the church's long experience with many kinds of religious experience. The evidence... has been tested for exaggeration, fraud, and delusion, even if it has been interpreted by church authorities in ways we do not agree with. Considered in its entirety, this body of evidence has been winnowed more thoroughly than has the anecdotal material provided by other religious traditions.¹²⁵

Murphy lists some of the “charisms,” extraordinary events surrounding the saints and mystics, as enumerated in *The New Catholic Encyclopedia*:

- *Visions*, the perception of normally invisible objects
- *Locutions*, interior illuminations by means of words or statements, sometimes accompanied by a vision and seeming to proceed from the object represented.
- *Reading of hearts*, telepathic knowledge of secret thoughts or mood without sensory cues.
- *Incendium amoris*, burning sensations in the body without apparent cause. These include interior heat, usually a sensation around the heart, which gradually extends to other parts of the body; intense ardors (when the heat becomes unbearable and cold applications must be used); and material burning that scorches clothing or blisters the skin.
- *Stigmata*, the spontaneous appearance of wounds and bleeding that resemble the wounds of Christ.
- *Tears of blood and bloody sweat (hematidrosis)*, the effusion of blood from the eyes, as in weeping, or from pores of the skin.
- *Exchange of hearts*, the appearance of a pronounced ridge of flesh on a finger, representing a ring designating mystical marriage with Christ.
- *Bilocation*, the simultaneous presence of a material body in two distinct places at once.
- *Agility*, the instantaneous movement of a material body from one place to another without passing through the intervening space.

¹²⁵ Murphy, 481.

- *Levitation*, elevation of the human body above the ground without visible cause and its suspension in the air without natural support. It may also appear in the form of ecstatic flight or ecstatic walk.
- *Compenetration* of bodies, when one material body appears to pass through another.
- *Bodily incombustibility*, the ability of bodies to withstand the natural laws of combustibility.
- *Bodily elongation or shrinking*.
- *Inedia*, abstinence from all nourishment for great lengths of time.
- *Mystical aureoles and illuminations*, radiance from the body, especially during ecstasy or contemplation, which is considered to be an anticipation of the Glorified Body.
- *Blood prodigies, bodily incorruptibility, and absence of rigor mortis* in human cadavers.¹²⁶

For our present purposes, one of the important phenomena is the stigmata, or extraordinary changes in the body experienced by these saints and mystics. The most common of these stigmata is the unexplained appearance of Christ's wounds. Murphy cites the following account by Thomas of Celano, whom Pope Gregory IX commissioned to document the life of St. Francis of Assisi:

And while [Francis] continued without any clear perception of its meaning (i.e. the vision of the seraph), and the strangeness of the vision was perplexing his breast, marks of nails began to appear in his hands and feet, such as he had seen a little while before in the Man crucified who had stood over him. His hands and feet seemed pierced in the midst by nails, the heads of the nails appearing in the inner part of the hands and in the upper part of the feet and their points over against them. Now these marks were round on the inner side of the hands and elongated on the outer side, and certain small pieces of flesh were seen like the ends of nails bent and driven back, projecting from the rest of the flesh. So also the marks of nails were imprinted in his feet, and raised above the rest of the flesh. Moreover his right side, as it had been pierced by a lance, was overlaid with a scar, and often shed forth blood so that his tunic and drawers were many times sprinkled with the sacred blood.¹²⁷

Another well-known stigmatic was Sister Anne Catherine Emmerich. Vicar General von Droste, accompanied by two physicians, described the sister's wounds in 1813:

¹²⁶ Murphy, 483.

¹²⁷ Murphy, 485–6.

I examined the blood-crust of the left hand with a magnifying glass and found it very thin and a little rugose, or plaited like the epidermis when seen under a lens.

The cross on the breast did not bleed, but appeared of a pale red color caused by the hood under the epidermis. I examined also the lines forming a cross, as well as the skin around them, and I could distinctly see that they did not break the skin. The epidermis over the lines and the skin surrounding them to some distance was unbroken and, through the glass, appeared as if peeling off a little.

The wound on the right side was not bleeding, but the upper part of it was encrusted with dried blood, as might be produced by extravasated blood just below the epidermis.

The cross on the breast was red with blood. I washed the upper part and examined it again. Had the skin been broken I should certainly have remarked it. I think there was near the cross a short streak which seemed to be a depression filled with blood.

Her hair being very thick, it was impossible to examine the punctures around her head. She consented to have it cut close, though not so close, however, as to allow the blood instantaneously to soak her head dress and pillow. She requested this for the sake of neatness. The blood being washed away, a number of fine bloody marks could be seen with the naked eye scattered irregularly over the forehead and extending from the middle of it almost to the top of the head.¹²⁸

The scalp wounds, of course, were similar to those made by a crown of thorns.

In his biography of another stigmatic, Gemma Galgani, Father Germano di S. Stanislao gives the following account:

From this day forward the phenomenon continued to repeat itself on the same day every week, namely on Thursday evening about eight o'clock and continued until three o'clock on Friday afternoon. No preparation preceded it; no sense of pain or impression in those parts of the body were affected by it; nothing announced its approach except the recollection of spirit that preceded the ecstasy. Scarcely had this come as a forerunner than red marks showed themselves on the backs and palms of both hands; and under the epidermis a rent in the flesh was seen to open by degrees; this was oblong on the backs of the hands and irregularly round in the palms.

Sometimes the laceration appeared to be only on the surface; at other times it was scarcely perceptible with the naked eye; but as a rule it was very deep, and seemed to pass through the hand — the openings on both sides reaching the other. I say seemed to pass, because those cavities were full of blood, partly flowing and partly congealed, and when the blood ceased to flow they closed immediately, so that it was not easy to sound them without a probe.... In her feet, besides the wounds being large and livid around the edges, their size in an inverse sense differed from those of her hands; that is, there was a larger diameter on the instep and a smaller one on the sole; furthermore, the wound in the instep of the right foot was as

¹²⁸ Murphy, 487.

large as that in the sole of the left. Thus it must certainly have been with our Savior, supposing that both His Sacred Feet were fixed to the Cross with only one nail.¹²⁹

Gerald Molloy, a theologian and rector of University College, Dublin, who observed Louise Lateau at firsthand, wrote the following account of her. According to Molloy, when a quantity of blood had exuded from her wounds, spectators wiped it away so that:

[her] stigmata were then more distinctly seen. They are oval marks of a bright red hue, appearing on the back and palm of each hand about the centre. Speaking roughly, each stigma is about an inch in length and somewhat more than half an inch in breadth. There is no wound properly so-called, but the blood seemed to force its way through the unbroken skin. In a very short time, sufficient blood had flowed again to gratify the devotion of other pilgrims, who applied their handkerchiefs as had been done before, until all the blood had been wiped away a second time. This process was repeated several times during the course of our visit.

According to her family and friends, Louise Lateau bled through her wounds on every Friday but two after she was stigmatized on April 24, 1868, until her death on August 25, 1883.¹³⁰

The stigmatic Marie-Julie Jahenny was observed by the bishop of Nantes, who gave the following description of her stigmata in 1894:

On the 21st March, 1873, she received the marks of the five wounds; the crown of thorns followed on Oct. 5th; on the 25th of November appeared an imprint on the left shoulder, and on the 6th of December the dorsal stigmata in hands and feet. On Jan. 12th, 1874, her wrists showed marks corresponding to those which the cords must have produced when our Savior's arms were bound, and on the same day a sort of emblematic pattern developed in front of her heart. By Jan. 14th stripes had appeared on her ankles, legs and forearms in memory of the scourging, and a few days afterwards there were two weals on her side. On the 20th of February a stigmatic ring was seen on the fourth finger of the right hand in token of her mystic espousals; later on there appeared various inscriptions on the breast, and finally on Dec. 7th, 1875 the words O Crux Ave with a cross and a flower.¹³¹

The spontaneous appearance of Latin inscriptions on the body would be most difficult to explain in terms of mere random physiological processes.

Murphy gives the following account of Padre Pio, a turn-of-the-century Italian priest born Francesco Forgione:

¹²⁹ Murphy, 488.

¹³⁰ Murphy, 489.

¹³¹ Murphy, 491.

In 1907 he [Padre Pio]... showed puncture wounds in his hands to a parish priest, but they disappeared after his prayers for their removal.... On August 5, 1918, he saw an apparition of a celestial person who hurled a spear at him. On September 20 he had the same vision, and found visible stigmata on his hands, feet, and side. Nine days later his fellow friars learned of his wounds when they discovered his blood-stained bedding....

In May [of 1919] he was examined by a Dr. Luigi Romanelli at the request of the Capuchin order, and in July the Holy Office sent Professor Amico Bignami, an agnostic pathologist of the Roman University, to study his wounds. In a formal report, Professor Bignami described superficial scars on the monk's hands and feet, plus a cross upon his left breast. These marks were extremely sensitive, but the professor did not consider them to have been artificially produced. He characterized them instead as "a necrosis of the epidermis of neurotic origin." He considered their symmetrical arrangement to be caused by "unconscious suggestion."¹³²

It is interesting to note here that the pathologist, while skeptical about any divine origin of the stigmata, nonetheless attributed them to mental activities.

Murphy gives the following account of the stigmatic Theresa Neumann:

During the Lenten season of 1926, she received five of the stigmata, first on her side, then on her hands and feet, sometimes in the midst of religious visions. In November 1926 she began to feel Christ's crown of thorns, and two weeks later eight pronounced wounds on her head started bleeding. On Good Friday, 1927, the wounds on her hands and feet appeared to work their way through to the palms and soles, while her eyes bled until they were swollen shut and encrusted. In 1929 a lesion appeared on her shoulder in the place she imagined Christ's wound to be from carrying the cross to Golgotha. For the rest of her life she suffered intermittently from one or more of these stigmata. The consistency and volume of testimony regarding Theresa Neumann's wounds establishes their authenticity beyond reasonable doubt. If she sometimes manipulated her stigmata, as some skeptics maintained, she also frequently experienced spontaneous bleeding, according to numerous witnesses.¹³³

For now, we will leave the less-known stigmatics aside, along with the debate about the Divine origins of the saints' stigmata. What the stigmata do show, however, is the extent to which thoughts can effect changes in body chemistry. If thoughts can cause Latin inscriptions to appear on the skin, it should be equally possible for them to increase the production of antibodies and T-cells.

As mentioned earlier, the stigmata are only some of charisms found among Catholic saints and mystics. Murphy gives examples of others, such as inedia:

¹³² Murphy, 493.

¹³³ Murphy, 495.

Saint Lidwina of Schiedam (d.1433), it is alleged, ate nothing for 28 years; Venerable Domenica dal Paradiso (d.1553) for 20 years; Blessed Nicholas Von Flue (d. 1487) for 19 years; Blessed Elizabeth von Reute (d. 1420) for 15 years; and Louise Lateau (d. 1883) for 12 years. The historians Caroline Bynum and Rudolph Bell have documented such claims, as well as the intermittent bingeing, or bulimia, that typically accompanies heroic fasting. Bell, for example, traced the stages by which Saint Catherine of Siena gave up normal sustenance. In her late teens she lived — intermittently — on bread, water, and raw vegetables. At about age 3 she gave up bread, surviving on Communion wafers, cold water, and bitter herbs that she either sucked and spit out or swallowed and vomited. In January 1380, when she was about 33 years old, she abstained from water for a month in expiation for a crisis of the church in Italy.¹³⁴

Another charism is the stereotypical luminous aura or “halo.” Murphy gives the following account from Herbert Thurston, who is generally acknowledged to be a leading academic authority on the subject of the charisms:

There are so many stories of holy priests who lit up a dark cell or a whole chapel by the light which streamed from them or upon them, that I am strongly inclined to adhere to the more literal interpretation [of them]. For example, we read of the fourteenth-century Carthusian, John Tornerius,... that when he did not arrive in time to celebrate his first Mass, the sacristan went to his cell to fetch him, and found that the little room was radiant with light which seemed to be diffused all round the good Father. Similarly, in the process of beatification of... Thomas da Cori, witnesses stated that the whole church on a dark morning was lit up by the radiance which glowed in the Father's countenance. Further, we learn... of Blessed Giles of Assisi, that in the nighttime on one occasion “so great a light shone round him that the light of the moon was wholly eclipsed thereby.” So again, that the house of Blessed Aleidis of Scarbeke seemed to be on fire when she, with a radiant countenance, was praying within; or ... that the cell of St. Lewis Bertrand “appeared as if the whole room was illuminated with the most powerful lamps.”¹³⁵

Another charism is *incendium amoris*, or intense bodily heat, about which Murphy gives the following account:

This charism involves great bodily heat associated with ecstatic devotion. Saint Catherine of Genoa, for example, was said to have warmed the things she touched in extraordinary fashion. The Venerable Serafina di Dio, a Carmelite nun of Capri who died in 699, warmed those near her, “even in winter time.” The Dominican nun Sister Maria Villani of Naples, who died in 1670 at the age of 86, had to drink three gallons of water a day, it was said, to cool her internal fires. And Orsola Benincasa, a sixteenth-century Italian

¹³⁴ Murphy, 502–3.

¹³⁵ Murphy, 506.

ecstatic, sometimes needed basins of cold water to relieve her ecstasy. Each of these women had a contagious vital force that impressed friends and confessors. Like Saint Philip Neri, who did not need a shirt in the wintertime and vitalized others by his presence..., they had a prodigious warm-bloodedness that was triggered by their passion and discipline.¹³⁶

Another charism is the odor of sanctity, or a sweet aroma emitted from the bodies of the saints:

Since the first centuries of Christian history, people have claimed that the bodies of certain martyrs and saints have an extraordinary fragrance. It was said that Saint Polycarp, who was martyred in 155; Saint Simeon Stylites, the fifth-century anchorite; Saint Guthlac, an Anglo-Saxon hermit; and other notable figures of the early church filled the air with sweetness, sometimes imbuing entire buildings with the smell of the "herb ambrosia." Saint Teresa of Avila, a skeptic about many religious claims, believed that holy living could produce an odor of sanctity.¹³⁷

Another related stigma is the incorruption of the saint's body after death:

The cadavers of many Catholic religious have partially or entirely resisted decay, sometimes for centuries. Thurston listed the following phenomena associated with such incorruption: a fragrance perceived near the body of the deceased, which sometimes persists for months or years; bleeding of the cadaver weeks, months, or even years after death; the exuding of an oily, often fragrant fluid from some cadavers; and, less frequently, the persistence of warmth in the cadaver after life has ceased.¹³⁸

One of the most bizarre of the stigmata is bodily elongation. Murphy gives the following account from Thurston, taken from proceedings for the beatification of Sister Veronica Laparelli, a nun who died in 1620 at the age of 83. Thurston quotes a sister Margherita Cortonesi:

"[W]hen [Sister Veronica] being in a trance state was reciting her Office alternately with some invisible being, she was observed gradually to stretch out until the length of her throat seemed to be out of all proportion in such a way that she was altogether much taller than usual. We, noticing this strange occurrence, looked to see if she was raised from the ground, but this, so far as our eyes could tell, was not the case. So, to make sure, we took a yard-measure and measured her height, and afterwards when she had come to herself we measured her again, and she was at least a span (ten inches or more) shorter. This we have seen with our own eyes, all of us nuns who were in the chapel."

In 1629, a Donna Hortenzia Ghini stated under oath that

¹³⁶ Murphy, 509.

¹³⁷ Murphy, 508.

¹³⁸ Murphy, 511.

“Sister Lisabetta Pancrazi, formerly a nun in the same convent, told me that... Sister Veronica when in ecstasy seemed taller than in her normal state, [and] took a yard-measure and measured her height, and that after the said Sister Veronica came to herself she measured her again with the said yard-measure, and she found that she was half an arm's length shorter.”¹³⁹

The saints of the Roman Catholic Church are not the only people in the Christian tradition that have demonstrated extraordinary physical capabilities and other phenomena. Early Christian contemplatives (sometimes called the “Christian desert fathers”) during the Third and Fourth centuries became famous for both their holiness and ascetic heroism. Murphy describes their experiences and capabilities:

According to the Abbe Duchesne's history of the early church, Macarius of Alexandria “could never hear of any feat of asceticism without at once trying to surpass it.” When some monks went without sleep, Macarius kept himself awake for 20 nights. For an entire Lent he stood upright, eating nothing but cabbage once a week. And according to the historian W. E. Lecky, Macarius slept in a marsh for six months, constantly exposing his body to poisonous insects. For some 40 years, the monk Bessarion never lay down while he slept; and Pachomius, the famous founder of monasteries, did not lay down for 50 years. Simeon of Stylites, it was said, often went without food for the full Lenten season. In 422, at Kalat Seman in northern Syria, he lived on a six-foot column, then built taller ones, until he made his permanent home on a pillar some 60 feet high. Though the circumference of its platform was little more than three feet (with a railing to keep him from falling), Simeon lived on the column without interruption for 30 years. From this prominent vantage point he preached sermons, condemned the unfaithful, performed cures, played ecclesiastical politics, shamed moneylenders into reducing their interest charges, and intimidated countless pilgrims. His example helped create a fashion of ascetic pillar hermits that lasted for 12 centuries and persisted in secularized form into the twentieth century.¹⁴⁰

Holy men of other religions have demonstrated abilities to manage their bodies in ways normally deemed impossible. One of these is the ability to endure extremes in temperature, attributed to Eskimo shamans. Although one might expect these people to endure extreme cold, they have also endured extreme heat. Murphy writes of a Yakut shaman named Mytchyll, who was known to have outdone much younger men in athletic contests, as well as performed such feats as gashing himself with a knife, eating sticks, and eating burning coals.¹⁴¹ Murphy describes other feats by Eskimo and other shamans:

¹³⁹ Murphy, 516.

¹⁴⁰ Murphy, 465.

¹⁴¹ Murphy, 467.

Shamanic virtuosity was evident, too, in a young Labrador Eskimo who remained for five days and nights in the sea so that he was given the title *angalok*, his people's equivalent of shaman. Eliade equated the power to survive so long in icy water with the Tibetan *tumo* (see 5-4), the ability of Manchu initiates to swim under ice in freezing seas, and the Rig Veda's *tapas*. The mastery of internal heat noted by Eliade, which has been attributed to yogis, Eskimo *angaloks*, and Tibetan lamas, has also been observed among shamans of the Solomon Islands, Sumatra, the Malay archipelago, and various North American Indian tribes. Pavioso shamans of North America, for example, put burning embers in their mouths and touch red-hot irons. Kung bushmen dance ecstatically in the flames of their campfires. Araucanian shamans of Chile have walked barefoot on fire without burning their limbs or garments.¹⁴²

As often pointed out by its proponents, the newly-rediscovered “firewalk” experience is nothing new.

Murphy goes on to describe other shamanic powers, including but not limited to psychokinesis:

Several anthropologists have watched shamans perform ritual surgeries. Waldemar Bogoras, for example, observed a Chuckchee [Native American] shamaness open her son's abdomen with a knife, thrust her hand into the wound, then close it without sutures so that Bogoras could not detect any scar afterward. Another Chuckchee shaman, after drumming to inspire freedom from pain, cut his own abdomen open for others to see. Bogoras also reported the following incident. As a Chuckchee shaman drummed and sang to induce a trance in which he would descend to the underworld, voices were heard from several directions, some of them seeming to come from a distance. Apparently possessed by a spirit, the shaman spoke in falsetto while the tent shook and pieces of wood flew through the air. Another student of Siberian shamanism, Sergei Shirokogoroff, reported similar phenomena he had witnessed among the Tungus, including apparent spirit-voices and telekinesis.¹⁴³

Hindu Yogis have also demonstrated extraordinary physical capabilities. One of the best-documented incidents was the burial of Yogi Haridas. The emergence of the yogi from what appeared to be a state of suspended animation, after being buried alive for six weeks in a 4 foot by 3 foot box, was described as follows:

The legs and arms of the body were shriveled and stiff, the face full, the head reclining on the shoulder like that of a corpse. I then called to the medical gentleman who was attending me to come down and inspect the body, which he did, but could discover no pulsation in the heart, the temples, or the arm. There was, however, a heat about the region of the brain, which no other part of the body exhibited....

¹⁴² Murphy, 467.

¹⁴³ Murphy, 468–9.

A few minutes afterwards the eyeballs became dilated, and recovered their natural color, when the fakir [Haridas], recognizing Runjeet Singh sitting close to him, articulated in a low sepulchral tone, scarcely audible, "Do you believe me now?"...

From the time of the box being opened, to the recovery of the voice, not more than half an hour could have elapsed; and in another half-hour the fakir talked with myself and those about him freely, though feebly, like a sick person; and we then left him, convinced that there had been no fraud or collusion in the exhibition we had witnessed.¹⁴⁴

During the time he had been buried, there was cotton and wax stuffed in the Yogi's nose and ears, and his tongue was set back into his throat, blocking all air passages. The nineteenth-century Vedantic yogi Ramakrishna is also said to have undergone extraordinary physical transformations:

While worshipping Rama as his devotee Hanuman, the monkey chieftain of the Ramayana, his movements resembled those of a monkey. "His eyes became restless," wrote the Vedantic scholar Swami Nikhilananda. "He lived on fruits and roots. With a cloth tied around his waist, a portion of it hanging in the form of a tail, he jumped from place to place instead of walking." In his biography of Ramakrishna, novelist Christopher Isherwood paraphrased the saint's own description of his strange behavior: "I didn't do this of my own accord; it happened of itself. And the most marvelous thing was — the lower end of my spine lengthened, nearly an inch! Later, when I stopped practicing this kind of devotion, it gradually went back to its normal size."

...In his ecstasies he shed tears, trembled convulsively, bled through his pores, felt his joints loosening or locking, perspired heavily, and felt burning sensations. Like... Theodore Barber's exceptional hypnotic subjects..., he was prey to suggestions from his environment. Upon one occasion, for example, clots of blood appeared on his lips after a cousin said he would bleed from his mouth. The suggestion took root strongly, but Ramakrishna was restored when a *sadhu* prompted him to stop his bleeding by exercising self-control. But the famous saint would not use his self-transformative powers to try to save himself from cancer. When a friend suggested he remove his illness through yogic concentration, he rebuked him, asking how he could withdraw his mind from God and turn it to "this worthless cage of flesh." Like many ascetics, he did not deem his body's restoration to be a worthy cause.¹⁴⁵

The extraordinary capabilities of Indian yogis have been subjected to extensive scientific study. Murphy describes some of the findings of these studies:

The instrumented study of yogic functioning was expanded by Bagchi, Wenger, and Anand, who was then chairman of the Department of

¹⁴⁴ Murphy, 474. Account given by Sir Claude Wade, a British resident of the court of the Maharaja Runjeet Singh.

¹⁴⁵ Murphy, 476.

Physiology at the All-India Institute of Medical Sciences in Delhi.... For five months in 1957, Bagchi and Wenger traveled through India with an eight-channel electroencephalograph and accessory instruments to record respiration, skin temperature, skin conductance, and finger blood-volume changes.... Among the subjects they examined, one could perspire from his forehead upon command in his freezing Himalayan retreat; a second could regurgitate at will to cleanse himself. Three others altered their heartbeats so that they could not be heard with a stethoscope, though EKG and plethysmographic records showed that their hearts were active and their pulses had not disappeared. In tests to compare relaxation in a supine position with seated meditation, Bagchi and Wenger found that four yoga students had faster heart rates, lower finger temperatures, greater palmar sweating, and higher blood pressure during meditation, though their respiration rates were reduced. Five yogis given similar tests exhibited even faster heart rates, lower finger temperatures, greater palmar conductance, and higher blood pressures during meditation than the students, though their breathing was slower. Such differences suggested that for these yogis meditation was an active rather than a passive process.¹⁴⁶

Similar phenomena were witnessed by Western observers.

Elmer and Alyce Green, with their colleagues at the Menninger Foundation in Topeka, Kansas, also observed exhibitions of yogic heart control. Their subject Swami Rama, while sitting perfectly still, produced an atrial flutter of 306 beats per minute that lasted for 16 seconds. During a fibrillation of this kind, a section of the heart oscillates rapidly while its chambers do not fill and its valves do not work properly, but Swami Rama gave no sign that the maneuver caused him any pain or heart damage. The swami also produced an 11° difference between the left and right sides of his right palm. While he did this, the left side of his palm turned pink and the right side gray.¹⁴⁷

The following phenomena were observed when another yogi consented to be buried alive in an experiment:

During a remarkable experiment...., a yogi was buried for eight days in an earthen pit and connected by leads to an EKG in a nearby laboratory. After the pit was boarded up, the subject's heart rate sometimes went as high as 250 beats per minute, until a straight line appeared on the EKG tracing when the yogi had been in the pit for 29 hours.... Suspecting that their EKG leads had been deliberately or accidentally disconnected, they checked their machine and continued to monitor its tracings. To their astonishment, it started to register electrical activity some seven days later, about a half hour before the yogi's scheduled disinterment.... When the pit was opened, the yogi was found sitting in the same posture he had started in, but in a stuporous condition.... If the machine had malfunctioned in some way they could not ascertain; it seemed an extraordinary coincidence that it started

¹⁴⁶ Murphy, 528–9.

¹⁴⁷ Murphy, 532.

again just a half hour before their subject's scheduled release. Apparently, the yogi was operating with some kind of internal clock that did not depend upon the daily cycles of light and darkness, for the most likely cause of the straight line on his EKG tracing was a dramatic decrease in his heart's activity. Kothari and his colleagues finally could not account for this remarkable cardiac record.¹⁴⁸

Finally Indian researchers have also conducted studies according to the rules of scientific rigor demanded by major Western universities:

In 1931 Koor Behanan, an Indian graduate student in psychology at Yale, was awarded a Sterling Fellowship to study yoga.... During 72 days of experiments at Yale, he found that one breathing exercise, or *pranayama*, increased his oxygen consumption by 24.5 percent, a second by 18.5 percent, and a third by 12 percent.... Unlike many tales by travelers to the East, Behanan's straightforward, well-observed account of his laboratory research was free of exaggeration and mystification.¹⁴⁹

III. Hysterical Psychosomatic Phenomena

Extraordinary psychosomatic phenomena are not restricted to saints and spiritual adepts. Neurotics and psychotics have had similar bizarre experiences. We will examine two: hysterical stigmata and false pregnancy. I include these phenomena in the discussion because they show that it is not necessary to be a spiritual adept in order to have thoughts that profoundly affect metabolism.

Murphy cites several accounts of hysterical stigmata. In one he quotes psychiatrist Joseph Lifshutz:

When she was 13, [her] father scratched her down her back with his fingernails, leaving three long scars. These healed over in time. Four years later, at the age of 17, she had left home because of her father's brutality, and was living in the country with her brother.... Somehow [he] found out where she was, and announced he would pay a visit. The patient reports now that as the time of the visit approached, her old back scars, which had been healed for four years, would redden and bleed.... This reddening and bleeding of the three old healed scars would recede spontaneously, but these episodes recurred several times, each with the anticipation of a visit from her father.¹⁵⁰

Murphy continues:

[Psychotherapist] Helene Deutsch described similar skin changes that appeared to express sexual impulses. "I have often seen cases," she wrote, "in which the patient's hand would swell up and become red whenever his associations led him to memories of repressed masturbation.

¹⁴⁸ Murphy, 534–5.

¹⁴⁹ Murphy, 527–8.

¹⁵⁰ Murphy, 234.

A more elaborate set of stigmata was described by psychiatrist Ernest Hadley, whose patient, a 24-year-old man, bled from his left armpit during four- to five-day periods through at least seven regular monthly cycles.... The fact that such bleeding occurred on something like a menstrual cycle led Hadley to believe it represented his patient's identification with the female character. Menstruation symbolized both defense against sexual assault and female innocence, he suggested, for his patient had identified the armpit with the vagina since his childhood.

But psychogenic stigmata can also symbolize difficulties that are not primarily sexual. Psychiatrist Robert Moody, for example, described a man treated for attacks of somnambulism who exhibited indentations on his arms that resembled rope marks. These appeared when he was reliving an episode during which he had been tied in bed to inhibit his sleepwalking.... Though it was conceivable, Moody wrote, that his patient might have tied a rope around himself to cause the first set of indentations, "on the second occasion strict observation made trickery impossible; so it is difficult to see how the occurrence can be explained in any way other than as a genuine psychosomatic phenomenon."¹⁵¹

Murphy cites other phenomena observed by Moody and other psychotherapists in their practices.

During catharsis, a patient once buried by a bomb explosion exhibited a swelling on his left ankle where he had been struck, and a second on his head where he had been hit during the same incident. The abreaction of a merchant seaman who had fallen into an icy sea precipitated a localized inhibition of blood flow to his extremities. And a woman who relived a riding accident exhibited psychogenic bruising on her right side where she had fractured some ribs in her fall....

Moody described a female patient who had exhibited several psychogenic marks. These included a red mark on her shoulder that appeared as she relived a beating in which a whip had caught her on the very spot; a swelling of her right wrist after she recalled an accident in which the wrist had been fractured; red streaks on her legs that corresponded to wounds caused by yet another accident; and the appearance of a bruise that resembled the imprint of an elaborately carved stick her father had used to beat her. Moody also described an experiment he had conducted with the same patient.... After recalling an incident in which she had been struck across the hands, she exhibited red streaks where her father's whip had left bloody marks. Moody then encased her right hand in a firm plaster bandage, which he removed the following morning in the presence of his colleague to find "obvious bloodstains on the dressing immediately covering the weals."...

Some stigmata reflect several traumas and conflicts at once. For example, a 27-year-old man exhibited weals along an elaborate tattoo of a dagger that resembled a female with tapering legs and a penis-like protuberance. As a number of aggressions, fears, guilts, and neurotic compliances, some of them related to the patient's transvestism, were brought to consciousness by psychotherapy, only the dagger tattoo among

¹⁵¹ Murphy, 234–5.

several on his body swelled. "The symptom," suggested therapists Norman Graff and Robert Wallerstein, "served to... resolve and thus lessen the danger of eruption of a whole complex of hostile, erotic, exhibitionistic impulses combined with self-punishing needs."...

In 1955, Frank Gardner and Louis Diamond of Harvard University proposed that some people develop a sensitivity to their own red blood cells that causes bruising in response to trivial injury. They tested their hypothesis by injecting patients who suffered from recurrent spontaneous bruising with small amounts of their own blood, and found that pain and discoloration often appeared around the injected areas.... But in reviewing 27 such cases that had been studied at Case Western Reserve University, Oscar Ratnoff and David Agte found that psychological trauma also contributed to the affliction. Injections of saline solution and other substances produced the same kind of bruising in some of these patients that injections of their own blood had caused, and their complaints read "like a table of contents of a monograph on hysteria."... Their striking symptoms led Ratnoff and Agte to believe that emotional issues either caused or influenced their spontaneous bruising, even when they were reactive to their own blood.¹⁵²

Another hysterical somatization is false pregnancy or pseudocyesis. Murphy describes some of the symptoms:

The pseudocyesis cases reviewed by Biven and Klinger and by Fried involved the following symptoms, in the order of their frequency: (1) partial or complete disappearance of menses, usually lasting for nine months; (2) abdominal enlargement; (3) breast changes, including swelling and tenderness; secretion of milk and colostrum, pigmentation; and enlarged papillae; (4) sensations of "fetal movements"; (5) softening of the cervix and enlargement of the uterus; (6) nausea and vomiting, sometimes with aberrations of appetite; and (7) weight gain, usually greater than in pregnancy....¹⁵³

Murphy goes on to list some of the psychogenic causes:

...narcissistic self-involvement, by which a woman liberates herself from undesirable burdens by unconsciously simulating pregnancy; the desire to stabilize marriage with a husband who wants a child; the desire for affection, attention, and care that pregnancy might bring from husband, parents, friends, or doctors; a compensatory reaction against deep fears of pregnancy; symbolic compensation for imagined or real loss; a desire for the physical fullness and sense of completeness that pregnancy often confers; the alleviation of emotional emptiness and numbness; the overcoming of physical inadequacy through a swollen abdomen and larger breasts; the desire for perfection or rebirth that a new child suggests; the wish to stop menstruation because it symbolizes disintegration and loss of boundaries; the need to prove one's identity as a woman with reproductive

¹⁵² Murphy, 236-7.

¹⁵³ Murphy, 239.

abilities intact; a desire for power over husband, children, parents, friends, or circumstances, by forcing or stabilizing a marriage, perhaps, or by showing superiority over other females; a need for self-punishment caused by forbidden thoughts or guilt-provoking deeds, particularly those associated with sexual experience; a need to experience pain and suffering; and the recurrent, compulsive need to prove oneself creative and fertile.¹⁵⁴

Strange as it may sound false, pregnancy occasionally occurs in males. In defending the psychogenic origins of the condition, Murphy cites two accounts:

A 33-year-old merchant seaman described by psychiatrist James Knight, for example, had expanded five inches at the waist even though he had gained little weight, suffered from no organic disorder, and exhibited no hormonal abnormalities. This patient, who according to Knight appeared to be "strong, healthy, and masculine," had suffered from morning nausea, apparent abdominal movements, and increased appetite following the onset of his stomach's swelling, all of which had convinced him that he was pregnant. His physical symptoms subsided as he gained insight into the needs and conflicts that had precipitated his strange conditions.

Psychiatrists Dwight Evans and Thomas Seely also described a case of male pseudocyesis, in a... [patient who] was hospitalized for depression and persecutory delusions. After eight days of treatment, the man said he wanted to have a child by impregnating his wife, in part because his five-year-old daughter "was no longer a baby." During his second week of hospitalization his abdomen began to swell, even though he gained no weight, and he experienced nausea and vomiting. On his fourteenth day of treatment, he felt something moving in his stomach, "like a baby." In the weeks that followed, he gained 6 pounds while his abdomen continued to grow.... After eight weeks of hospitalization, the man was discharged, though his abdomen was still swollen. Subsequently his mental state improved, and with lithium carbonate treatment his signs of pregnancy vanished.¹⁵⁵

The above examples were not included in this overview for entertainment, though they could easily serve as such. What they show us is that, like spiritual inspiration, neuroses too can effect extraordinary physiological changes. The next question is whether ordinary, mentally-healthy people can also take advantage of the power of psychosomatic medicine. The evidence from biofeedback studies would indicate an affirmative answer. Research in biofeedback, to which we turn next, shows the extent to which ordinary people, with ordinary thought processes, have learned conscious control of metabolic processes hitherto believed to be out of reach for the conscious mind.

¹⁵⁴ Murphy, 239–40.

¹⁵⁵ Murphy, 241.

IV. Biofeedback Studies

The significance of biofeedback research lies not only in its demonstration of the mind-body connection but also in its demonstration that mind-body interactions can be learned and, to some extent, consciously controlled. Ordinarily, the body regulates physiological processes such as blood pressure and skin temperature without conscious intervention or even awareness. Biofeedback brings normally unconscious processes before consciousness. By itself, it provides nothing more than what is stated in its name: feedback regarding biological processes.

In a biofeedback exercise, machines are used to “feed back” data about metabolic processes that are normally unknown to the conscious mind. The subject then attempts to control the readings on the machine. With practice, biofeedback subjects have learned to control many bodily functions previously believed to be totally autonomous.

The way it works can be aptly demonstrated from my own experience. As an adolescent and young adult, I had frequent bouts with painful, debilitating upper back and neck pain, which I had attributed to “pulled” muscles. During one of these episodes, I went to a physician at a university health clinic, who had worked with biofeedback. After finding no visible injury in either my back or my neck, he explained that my condition was due not to muscle *strain* but to muscle *tension*. He said I needed to learn to relax the muscles in my neck and upper back consciously, muscles that were in fact all “voluntary” and that I could consciously control. Instead of prescribing muscle relaxants, he suggested that I use the pain as biofeedback regarding the amount of tension I was putting on the affected muscles and to make a conscious attempt to relax them. I would know I was doing it right whenever I felt the pain diminish. I began practicing immediately, and the pain was gone completely within two days. That was in 1976, and I have not had another severe episode of neck and upper back pain since. As soon as I feel its onset, I immediately focus on relaxing the muscles that hurt, and the pain goes away. In more recent years, I have used it to head off episodes of *lower* back pain, which is potentially far more debilitating.

My use of biofeedback here is hardly extraordinary. The primary survival function of the experience of pain lies in the fact that it is a form of biofeedback. Moreover, I was using it to control muscles that even conventional physicians knew were voluntary. However, biofeedback research has shown that subjects can control bodily functions previously regarded as *involuntary*.

Barbara Brown, one of the early pioneers in biofeedback research in the 1970s, aptly summarizes the significance of biofeedback for our purposes:

The remarkable impact of bio-feedback on both scientists and the public is a phenomenon in itself. It has a startling revolutionary flavor, for even ten years ago we were chastised and taken to scientific task for exposing the thought that the mind did indeed control the body. The condemnation of such thinking dominated our intellectual and scientific speculations, despite a growing acceptance of the concept and success of psychosomatic medicine, and despite the experiential evidence of improved physical health with improved mental health.¹⁵⁶

Brown's work will be the focus of our overview of biofeedback.

One of the discoveries from biofeedback research is that we can learn to control our heart rates. Brown describes an early experiment:

One of the first studies (1966) which contains many more implications for human behavior than has yet been recognized was that of Brener and Hothersall. Their subjects were wired for heart rate recording; the room was comfortable and the investigators pleasant. In front of the subjects was a panel of two lights, a green one which the investigator said was a signal for a time period when high-frequency tones could be heard, and a red light when low tones could be heard. The subjects were asked to try to cause more high tones when the green light was on and to try to make more low tones when the red light was on. They were asked to do this "by mental processes only," but they weren't told that the high tones actually were their own fast heartbeats while the low tones represented their own slower heartbeats. In theory, then, all the subjects knew was that in some unknown way they had the power to produce more high or low tones and that they were to accomplish this mysterious effect exactly when signaled to do so.

Human beings are almost always quick to obey verbal commands, but to everyone's surprise even their hearts complied with the requests of the experimenters. When signaled to make more high tones, they did so by increasing their heart rates; to make low tones more often, they slowed their hearts.¹⁵⁷

Brown makes the following note regarding the rapidity of the heart's response:

Another facet of Brener and Hothersall's study that has not received adequate attention is the amazing rapidity with which the heart responded to the two different signals, green and red. Each colored light signal lasted less than a minute, yet for the most part the heart promptly responded to each new requests to slow or to speed up....

While it is true that the difference between slowing and speeding in Brener and Hothersall's experiments scarcely exceeded twenty beats per minute, accumulated over time this could mean some fourteen thousand

¹⁵⁶ Barbara Brown, *New Mind/New Body* (New York, Evanston, San Francisco, and London: Harper and Row, 1974), 15.

¹⁵⁷ Brown, 237.

beats in just half a day, and this difference could be important to the organism.¹⁵⁸

People can also learn to *maintain* their heart rates:

The objective [of the experiment] was to learn whether people could keep their hearts beating regularly without ever becoming aware that they were doing it. When a light signal was turned on, it meant that a shock to the leg might be upcoming. At the same time, however, the subjects were presented with a task to do that kept their attention so that they were too busy to notice the signal warning about the shock.... To heighten the attention the subjects were told that if they failed to detect changes promptly, they would get the leg shock. At the beginning of the experiment the subject was exposed to what would happen if "something" about him failed to perform: he was given the shock. Naturally the heart rate increased, and it also increased when the warning light came on. The heart rate was now elevated, and the experiment was so designed that the subject was punished by the shock if he now failed to maintain the accelerated heart rate. And that is exactly what the hearts did: they maintained the accelerated heart rate as long as the warning light signal was on and they avoided the electric shock. As soon as the warning light was turned off, indicating no more shock, heart rates dropped back to normal.¹⁵⁹

In this experiment, the conscious mind was bypassed, on account of the preoccupation with controls. The unconscious mind, taking in feedback from the senses, was acting to control the heart. This experiment follows a straightforward, stimulus-response mechanism; there is really no thought, conscious or unconscious, involved.

The more profound implications of biofeedback were discovered when people learned to speed up the heart without the rewards or punishments of operant conditioning, i.e., when it was discovered that people could learn to control their heart rates when given nothing more than information about what their hearts were doing:

The real jolt to the experimental conditioning learning theorists came with the 1971 study of Bergman and Johnson, who made the startling discovery that people could change their heart rates when given cognitive information only and without any shocks or feedback information, bells or lights of the hallowed conditioning techniques. They simply instructed their subjects: "When you hear the tone, try to increase your heart rate," or, "When you hear the tone, try to slow your heart rate."... Subjects who were asked to increase heart rate did very well, speeding the heart by some 3 beats per minute within the 6 seconds of the tone. Those asked to slow their hearts didn't, but neither did they increase the rate. As in other experiments the results point to a greater ease in speeding up the heart than in slowing it down. Although the investigators interviewed their subjects intensively, they

¹⁵⁸ Brown, 239.

¹⁵⁹ Brown, 239–40.

could find no consistent technique used either to accelerate the heart nor to keep it from accelerating when asked to slow it down.

...A quick calculation shows, however, that the change in heart rate never exceeded 4 percent.... [Nevertheless] Closer inspection of the study shows that nearly every time the subjects heard the tone, they increased heart rate. It's the consistency that counts. During other 6-second intervals without the tone, their heart rates varied scarcely at all, so by the rules of statistics it can be inferred that the change during the tone appeared specific to the time when a change in heart rate had been requested.¹⁶⁰

As Brown herself admits, the results of this study were at least in part inconclusive. The subjects of the experiment could not learn to slow their heart beat, and they were able to speed it up only to some degree. Taken by itself, it offers little comfort to coronary-prone, Type-A personalities, who would like to continue Type-A behavior safely by learning to control their heart rates.

Blood pressure is another metabolic process that has been brought under control with biofeedback. Blood pressure is taken with two measurements. Systolic blood pressure is the blood pressure when the heart beats and pushes the blood through the circulatory system. Diastolic blood pressure is the pressure when the heart is at rest, i.e., between the beats. The blood pressure of a healthy individual might be 110/70, with 110 being the systolic reading. Similarly, the blood pressure of a hypertensive might be 140/120. Of these two readings, the one that is likely to be a health risk is the diastolic. (Exercise and a strong heart can induce high systolic blood pressure.) High diastolic blood pressure indicates that some underlying malady is keeping the pressure from dropping, as it should, between heartbeats. Brown cites two experiments, one dealing with systolic blood pressure and the other diastolic. In the first experiment, the subjects (all males) were rewarded by being shown pictures of female nudes. In a subsequent experiment with diastolic blood pressure, the rewards were more varied. Brown describes the study:

In the diastolic bio-feedback experiment, the experiment proper was very similar to the one described above [an experiment with systolic blood pressure], with one major exception. Instead of using pictures of female nudes as the reward all of the time, these fantasy rewards were used only one-third of the time, the other rewards being sometimes pictures of landscapes or sometimes pictures of how much money the subject would receive for correct performance of changing his blood pressure.... Some subjects received the flashing-light/beeping-tone feedback of successful performance when the blood pressure was a point or so higher while other subjects were similarly rewarded when the blood pressure dropped a point or two. All subjects were additionally rewarded (reinforced) after every twenty successes by the pictures....

¹⁶⁰ Brown, 246-6.

The average decrease for those rewarded for decreasing pressure was about two points. Statistical analyses revealed (!) that these were not significant changes.

The real drama occurred after the study. Some of the subjects were instructed that the experiment was now over, but would they please continue to try to make correct responses although there would now be no feedback and no pictures. At this point the blood pressure of subjects rewarded for going up really bounced upward (at least in comparison to what they did during the experiment), rising on the average about eight points, while those rewarded for going down dropped about three points. Largely on the basis of this unexpected event the investigators concluded that human subjects can learn to raise or lower their diastolic blood pressure.¹⁶¹

The results of this experiment *are* significant for Type-A personalities!

Brain waves too have been brought under control with biofeedback. Brown describes one of her own early experiments, in which the subjects learned to control their own brain waves, not only when the biofeedback devices were attached, but also later, when they were disconnected. In the end, the subjects had learned how it felt to produce alpha brain waves themselves — and then, using only the subtle feelings discovered during biofeedback, to induce them intentionally:

Pairs of electrodes were applied to the scalp to record a conventional EEG.... [T]his system turned the light on when alpha activity was present and turned it off when alpha disappeared. There was, however, one more feature: the intensity of the light reflected the size of the alpha....

For the experiment itself the subjects were simply asked... to try to find some feeling state within themselves that would keep the blue light on as much of the time as possible....

The results were quite startling. By the end of the first practice session, the average subject had more than doubled the amount of alpha in his EEG, and he tripled the amount during the third practice session.... In the third practice session the abundance reached the extraordinary high of 60 percent of all EEG activity. This is as much or more than the average person shows when he has his eyes closed and is very relaxed....

[A]t the end of each practice session and in subsequent practice sessions, a number of subjects produced large amounts of alpha during the feedback periods, then tended to show the desynchronized or "alert" EEG patterns during the rest periods. This suggested that when they were attending to the feedback signal, they continued to increase their alpha, and when attention to the task was no longer required, alpha disappeared. This was opposite to the usual sequence of changes observed for alpha: that alpha generally disappears during attention and reappears when attention is relaxed....

One of the most exciting consequences of the alpha bio-feedback experiment took place as the study was ending. It occurred to me that if the

¹⁶¹ Brown, 293–4.

experimental subjects had truly learned to control their own alpha, then they should be able to perform the feat without the help of bio-feedback.

A month or so after their alpha experiences, we recorded the EEGs of a number of the subjects from the original study. This time there were no feedback signals... Over an hour's recording time, the accuracy of the subjects for knowing when alpha was present ranged between 75 and 100 percent. Even two months later, accuracy remained above 70 percent.¹⁶²

To my knowledge, the therapeutic value of brain wave control per se may be somewhat limited, but the fact that it can be brought under conscious control suggests some amazing possibilities. If brain waves can be brought under conscious control, what else can? What if we could learn, via biofeedback how it “feels” to produce white blood cells, or bring about other immune system activities consciously? Though these questions remain unanswered, the findings from biofeedback research render such speculations much more realistic.

One of the most remarkable discoveries from biofeedback research is that in some cases we can learn to control the metabolism of a single cell — consciously. Early biofeedback researchers knew that the neuro-muscular system was comprised of entities called “motor units,” which consist of several muscle fibers controlled by a single nerve cell. Brown explains how these researchers used biofeedback from these motor units to train subjects how to control the metabolism of the nerve cell:

Each motor unit has its own electrical signature, easily seen when the changes in electrical energy are allowed to flow across an oscilloscope screen or move a recording pen across paper....

The first researchers made a puppet show of the motor-unit muscle cells.... Their electrical dancing is caught by the electrode, acting like a television camera, and fed by cables into the television receiver, the oscilloscope version used in laboratories. Each small cell group dances across the screen in distinctive shapes.... The subjects watching their own interior, minute, unconscious body activity would begin to say, “Oh, there's Charlie, and there's Sam, and here come the twins.” Then a very curious event occurred. Soon the subjects began to announce, “Did you know that I can make Charlie come by whenever I want,” or, “Watch me make Sam disappear.”¹⁶³

Given the physiology of motor units, controlling an individual unit entails controlling the metabolism of a single cell, and this is in fact what the subjects were doing when they made “Charlie come by” or “Sam disappear.”

Another area of biofeedback research was the electrical conductivity of the skin, or “skin talk,” to use Brown’s terminology. According to Brown, skin talk holds a unique place in biofeedback research:

¹⁶² Brown, 331–2.

¹⁶³ Brown, 157–62.

Skin bio-feedback takes quite a different form than that of other body systems such as heart, muscles, or brain waves. The biofeedback monitors of those organs or systems give information that appears to relate to changes directly within the systems themselves. Bio-feedback of heart rate information, for example, tends to emphasize primarily how the heartbeat is performing; brain wave biofeedback tends to emphasize how brain electrical activity is performing. Because of their vital role, the fact that these body activities are expressing emotion and mind function as well as their life-supporting function tends to be a secondary consideration. But in the case of the skin, with its less well appreciated vital function, it is not the skin that skin talk is talking about primarily; the skin is talking about the *mind*.

With the skin, then, the priorities are reversed: the skin monitor is feeding back information primarily about the mind, and only secondarily, if at all, information about the skin itself. And what we can learn in skin biofeedback is not control of the skin, but control of emotions and mental activity. This might seem to make heart muscle or any other kind of bio-feedback obscure indicators of emotion as compared to the skin's ability to communicate the inner being.¹⁶⁴

Ontological materialists might take issue with Brown here, arguing that although the skin is not talking about itself, neither is it talking about the mind per se. It could be talking about the brain. Nevertheless, be it mind or brain, the skin is talking about what we would normally call thought processes, albeit in some cases unconscious ones. Brown elaborates on the scope of skin talk:

Not only can the skin talk profile personality and cultural backgrounds, it also reflects mood, that emotional tone of the individual around which his more immediate emotional reactions swing. Like the voice from the larynx, the voice of the skin rises and falls, becomes loud and soft, hesitates and delays, explodes with vigor. Every emotional nuance is reflected in transposing relationships of its electrical components, weaving them into ever more complex patterns to be puzzled over by psychophysicists.¹⁶⁵

The skin's response to emotions is no surprise. What is remarkable is its response to abstract concepts. Brown describes an experiment in which the skin was trained to obey verbal commands. In the first part of the experiment, the subjects were given an electric shock along with the words "receive a shock." In Pavlovian fashion, the skin soon began to react to the words themselves in the same way as it had when paired with an actual shock. This was expected. However, the experimenters then told the subjects that in upcoming experiments, the words "green light," which make no reference to shocks in themselves, would be accompanied by a shock. The subjects' "skin-mind" learned to respond to the words "green light" as if the shock were received *before any actual shock was ever administered*.

¹⁶⁴ Brown, 50–51.

¹⁶⁵ Brown, 61.

In effect the skin-mind had learned to make an *a priori* judgment. According to Brown:

The skin-mind learned so well that when the real experiment using lights and shock was subsequently carried out, no further learning occurred. It was somewhat anticlimactic that when the experiment was reversed and the subjects were told that the words "green light" no longer meant that a shock would follow in the make-believe experiment, the skin responses gradually diminished until they failed to occur at all. The responses to verbal suggestion even evoked the process of physiologic adaptation....

I find it one of the more curious episodes of behavioral research that no one then asked the question: how can man remember a specific skin answer (that he was not consciously aware of, nor even knew occurred) to the word "shock" long enough or well enough that he can evoke that same answer when he is asked to make that skin answer to the words "green light"? Or that he performed this task better than when he actually saw the light and felt the shock?... The light of those experiments thirty-five years ago shining on man's ability to control the activity of his body has lain sleeping, imprisoned in behavioral control science. Today bio-feedback researchers have demonstrated unequivocally that the mind, the will, can and does control nearly all body activities.¹⁶⁶

Brown's point here is very important. Our metabolism is not controlled by a simple, mechanistic process of stimulus and response, but it can be, and often is, mediated by conscious thought. In the case of the later experiments Brown mentions here, there was never any actual classical or operant conditioning in which the subjects were trained to expect a shock when they heard the words "green light." It was only via their thinking, their understanding of the experimenters' words, that they associated the symbol with the action.

One of the discoveries of biofeedback with respect to skin talk was evidence for the existence of subconscious thought. By "thought" here, I mean the power of reason and the ability to make intellectual and moral judgments. A cognitive psychotherapist I once knew said that the most useless thing any therapist can do is to attribute a client's problems to something in the subconscious mind. You might as well say, The devil made me do it. He then suggested that unconscious "thoughts" are not thoughts at all, because thought by nature and definition is necessarily conscious. The evidence from biofeedback experiments, however, suggests otherwise. Brown cites an experiment in which the skin revealed subconscious reason and judgment:

Naughty words or other emotion-arousing words were flashed on a screen so briefly that the subjects could not perceive them intelligently. Mixed in with the arousing words were some neutral words. Although it was

¹⁶⁶ Brown, 68-69.

impossible for the subjects to see the words and so consciously recognize them, something in their brains did recognize every word, and this recognition was voiced by the skin. For every naughty word there was an orienting response by the skin, but no responses to the neutral or bland words. A number of brain electrical responses have also been found to occur at the same time, indicating that long before conscious recognition the body and its subconscious substructure both recognize and make judgments about what goes on in the environment.¹⁶⁷

Not only does skin talk reveal the process of subconscious thoughts, but it also reveals its intelligence, which in some cases is greater than that of the conscious mind:

This was shown by an experiment in which subjects were asked to rate the intensity of a noxious stimulus both verbally and by their skin responses. The subjects verbally rated the most noxious as the least noxious, but the skin's electrical response was largest and longest when the stimuli actually were the most noxious. This curious result was interpreted as indicating the effect of expectancy on subjective feeling; that is, subjectively the more noxious stimuli weren't as bad as expected, so the brain compared the expected bad with the real not-so-bad-as-expected. The skin, however, was with reality all the way.

Further evidence that the subconscious is not only more in touch with reality than consciousness but also has the facility to express its recognition of reality via the skin can be seen in an experiment where subjects were given shocks and told that these would vary in intensity when actually the shocks were all of the same intensity. The subjects reported that the intensity of shock became less and less, that is, they adapted subjectively to the shock but their skin responded exactly the same to each and every shock.¹⁶⁸

Of special interest to process philosophers and theologians, biofeedback studies have shown that the skin reacts to color. Brown cites the following experiment:

The skin also is a good color detector and seems to reflect the way in which brain neurons process color information. Experiments demonstrating nonconscious body reactions to colors support the common belief that colors induce emotional states which are specific to different hues. We all know people who prefer the yellow-green part of the spectrum and others who like blues and still others who dote on reds and pinks. In general there are many more people who like the blue-green part of the visual spectrum. One author has postulated this is because it is the "safe" part of the spectrum, being in the middle, whereas colors at the opposite ends of the spectrum — infrared and ultraviolet — have dangerous connotations. First he compared skin responses to slides projected on a screen of the colors red and green, and found that skin responses were much larger to red. He

¹⁶⁷ Brown, 75.

¹⁶⁸ Brown, 77.

then compared green to the color at the other end of the spectrum, violet, and again found that skin responses to violet were larger than those to green. When the experimental subjects were asked how they felt about the colors, they reported that the reds and violets were much more arousing, exciting, and lively.¹⁶⁹

This suggests that colors carry emotional connotations, making more plausible Whitehead's contention that our perception of colors as seen actually arises out of colors as feelings.

Biofeedback research has therefore made two distinct contributions to our discussion. The first is that metabolic processes hitherto believed to be purely autonomous can in fact be brought under control by means of thought — provided they are brought before consciousness. This suggests that biofeedback could at least theoretically be used to bring metabolic processes such as immune responses under conscious control. However, I was unable to find any studies in which anyone actually succeeded in doing it. The second is empirical evidence for the existence of unconscious thought. Biofeedback experiments have shown us fairly conclusively that the ordinarily conscious processes of reason and judgment can be exercised at a subconscious level.

V. Summary and Conclusion

To summarize the evidence in this chapter: Thinking has been shown to affect the body in many extraordinary ways. People have accomplished things with, and under, hypnosis that would be impossible in a waking state. Holy people and spiritual adepts in various traditions have also displayed extraordinary physical capabilities and physiological processes. Finally, biofeedback studies have shown us that many processes, previously believed to be totally automatic, can be brought under conscious control. Given this background, psychosomatic healing in particular should not seem so strange and implausible. The claim that a strong-willed, positive attitude can generate sufficient immune system activities to destroy cancer cells, for example, may not be so wild after all.

¹⁶⁹ Brown, 83–84.

Part III
Philosophical Arguments

Chapter 8

Conclusions from the Evidence

Although the evidence can tell us that thinking significantly affects health, it cannot tell us how to interpret it philosophically. Accordingly, in drawing conclusions from the evidence, we must take leave of the empirical method and turn to philosophical argument. There are three major questions on the subject of what to do with the evidence. Because all of them are philosophical in nature, I have included them in Part III of this essay. One of them is whether the evidence is worth examining at all. If mental healing is, as materialist skeptics claim, a mere misinterpretation of the evidence, then the evidence is simply irrelevant. A second question is whether mental healing practices — such as imagery, hypnosis, meditation, prayer, placebos, positive thinking, and good doctor-patient relationships — do in fact work and have a proper place in scientifically-based health care. This is a critical issue for both health care providers and philosophers, in that good theories should also work in practice. Third, there is the question of what is really happening, when and if psychosomatic healing occurs. Is the healing “mental” in the Cartesian sense, i.e., a cause-effect relationship of a mental substance acting on a physical one? Or, is it merely a physical causal relationship between the central nervous system and the immune and other systems, in which case a mental substance, in the Cartesian, sense plays no effective role at all? Is it something else?

In this chapter, I make two arguments. First, I argue that the evidence definitely is worth examining, and that the major arguments against doing so are unsound. Second, I argue that the evidence does suggest that mental healing techniques have a place in scientifically based health care. The remaining philosophical issues are addressed in Chapters 9 – 11.

I. Merits of Examining the Evidence

Many reputable philosophers and health care practitioners dismiss the evidence of mental healing without review. The difficulty of persuading skeptics to examine the data has been one of the major obstacles to developing psychosomatic medicine. Therefore, it is necessary to show that the evidence itself merits examination before drawing conclusions from it.

The general argument against examining the evidence is that mental healing is “unscientific,” that, although it may be an appropriate topic for supermarket tabloids, it is not one for reputable medical and scientific journals. The ultimate irony of this position is that the refusal to review the evidence is neither a skeptical nor a scientific position. A skeptic is one who suspends judgment. Refusing to examine the evidence, based on a priori

opinions of its irrelevance, is certainly not that. Moreover, the act of refusing to look at the evidence is in itself an abdication of the scientific method. The predicament is similar to that of William James in defending the value of psychical research nearly a century ago. However, we do have one tactical advantage unavailable to James. He could not effectively argue that people were dying for lack of interest in psychical research. With respect to psychosomatic healing, one could argue that they are.

The claim that psychosomatic healing is “unscientific” seems to come from a combination of three sources:

1. Emotionally-based prejudice and unclear or hasty thinking
2. A narrow view of what science is or should be
3. An a priori commitment to ontological materialism, a worldview in which mental causation of any kind is impossible

I will examine these three objections in order.

Emotionally-based Prejudice and Unclear or Hasty Thinking

Historically, emotional prejudice has significantly obstructed the development of scientific medicine. For example, when Jenner first introduced the idea of smallpox vaccination in the eighteenth century, many objected to it because the idea of scratching someone with puss from a sick animal was simply repugnant. With respect to mental healing, the prejudice is a general aversion to anything that even sounds religious or spiritual. This kind of objection is more an emotional reaction than anything else.

Prejudice is not the only source of poorly formulated objections to examining the data. Mental healing is much easier to deny than to understand, especially if one’s worldview demands an explanation formulated in purely physical terms. Not everybody has the time, acumen, or inclination to grasp the philosophical and scientific issues involved with mental healing, some of which have baffled the keenest of contemporary professional scientists and philosophers. It would be unrealistic to expect health care professionals to become first-rate philosophers and continue to perform operations and take office visits — to say nothing of keeping abreast with the technological advancements in their own field. Instead, they derive their definition of “scientific” from what they believe to be a consensus of their peers and mentors.

In responding to these less-than-well-formulated objections, one must first understand the constraints upon those who make them. Professional philosophers and reputable theologians could not escape criticism by their colleagues, were they to make such objections. They are more likely to come from people in health care and its associated sciences, where there is no time to engage in lengthy philosophical debates. Because the objections

themselves were formulated in haste, we can assume that our replies would be read just as hastily. Hence, we must be brief. Secondly, it would be helpful if the replies had emotional, as well as rational, appeal.

I would answer the objections of this kind with the following argument. We all agree that those who need health care should get it, provided that it is affordable and deliverable. What has brought Christian Scientists under fire is their refusal to accept or permit the delivery of medical care, even when it appears warranted, on account of their metaphysical beliefs. It is not their religiosity or even their philosophical idealism that is most objectionable, but their willingness to let people suffer and die when effective remedies are available. Because justice delayed is justice denied, health care should likewise not be delayed. To obstruct, delay, or misdirect the development of any treatment that shows promise is, in effect, to withhold it. If psychosomatic therapy has any real potential, then that potential merits exploration and development as quickly as possible. Moreover, its development should not be left to the quacks and charlatans. It needs the discipline and integrity of the scientific method. Therefore, to reject, on a priori grounds, all evidence suggesting that psychosomatic therapy might work, results in withholding treatment from those who need it. Yet, Christian Scientists are condemned for the same offense.

A Narrow View of What Properly Constitutes Science

Although mental healing definitely pertains to health, it is not normally part of a medical doctor's formal training. A doctor is far more likely to hear about it, especially in its psychokinetic form, in church than in medical school. Many of them see mental healing as a purely religious or psychological issue, as opposed to a medical or scientific one.

While I believe that this is an error, it is an understandable one. In his introduction to the anthology *Quantum Questions*, Ken Wilber explains why this sort of misclassification might happen. Wilber argues that modern "science" actually has two dimensions: the scientific *method* and the traditional scientific *domain*. The scientific method includes practices such as experimentation, observation, and verification. The scientific domain has traditionally been limited to the principles of mathematics and what we can observe via the five senses, with or without the aid of instruments.¹⁷⁰ The domain and method have been linked for so long that their conjunction has become confused with their identity. Mental healing is viewed as unscientific because mentality itself can neither be observed by the senses nor measured mathematically, even with the aid of the most sophisticated

¹⁷⁰ Ken Wilber, *Quantum Questions: Mystical Writings of the World's Greatest Physicists*, Ken Wilber, ed. (Boulder, Colo.: Shambhala Publications, 1969), 12–14.

instruments. People therefore misclassify it as outside the domain of science.¹⁷¹

This problem surfaces in medicine in several ways. Doctors frequently distinguish the “science” from the “art” of medicine. The former is scientific knowledge and technical expertise. The latter, often called “bedside manner,” is the ability to relate to patients in healing ways. When my pathologist father spoke of this distinction, he almost always regarded the “art” as less important. Never one to mince words, he made it very clear that the patient is much better off with an abrasive, insensitive, but technically competent physician, than with an “idiot with a nice bedside manner.” When I asked him why a doctor could not have both the art and the science, he replied, “Ideally, they should, but such doctors are rare.” However, this is exactly the kind of doctor that Siegel, Dossey, and Cousins would like to see come out of medical school. They believe what has traditionally been called the “art” of medicine should be included in the “science.”

Siegel gives us more insight, in speculating why the medical journals tend to ignore studies on self-induced cures of cancer:

One problem with cancer statistics is that most self-induced cures don't get into the medical literature. A survey of the reports on colorectal cancer found only seven such cases described between 1900 and 1966, although there have certainly been many more than that. A person who gets well when he isn't supposed to doesn't go back to his doctor. If he does, many doctors automatically assume his case was an error in diagnosis. In addition, most physicians consider such cases too “mystical” to submit to a journal, or think they don't apply to the rest of their patients, the “hopeless” ones.¹⁷²

A leading immunologist once told me over lunch that he deliberately omitted any discussion of psychoneuroimmunology from his immunology textbook. When I asked him why, he replied that it is not something medical doctors can use. Although we know that the nervous, endocrine, and immune systems all interact, the physiological processes are too complex and elusive to treat with either internal medicine or surgery, which are, after all, what medical schools must teach. Psychologists, ministers, priests, rabbis and other mental and spiritual counselors may be able to

¹⁷¹ The misclassification error here may be one made more by materialist philosophers than doctors or scientists. My physicist friend Anthony Smart accused me of maligning scientists in suggesting that they would make such an error. He contended that, among scientists, or at least among physicists, science is the scientific method — and no more. Professor Fred Sontag of Pomona College, during my oral defense of this dissertation, echoed this sentiment in saying that most of the scientists he knew — and most doctors, for that matter — were quite open to the notion of psychosomatic healing.

¹⁷² Siegel, 21.

use psychoneuroimmunology, but it has little to do with practicing medicine. Hence, the domain of medicine, according to this immunologist, is the biochemistry of the body. Thinking habits and belief systems, which lie outside that domain, belong to psychologists and the clergy. This immunologist, evidently, did not see the “art” of medicine as having any legitimate place in an immunology text at all.

It is this narrow view of medicine as drugs and surgery that Cousins, Dossey, and Siegel are protesting. Cousins suggests that doctors originally become intimidated by, or prejudiced against, the so-called “soft” sciences while in medical school, and this fear persists into their professional life. Based on his own experience as a medical school professor, he gives the following explanation of why medical doctors would be reluctant to expand their domain:

Some of the students... seemed dubious about the role of psychological factors in causing disease or in contributing to a strategy of treatment.... They lived in a new world of technology designed to provide exact answers. The technology spewed out neat little numbers that all fitted together. The study of anatomy or physiology or biochemistry provided precise descriptions. Everything had a name and everything was in place.

References to the need for a patient-physician partnership, or to the communication skills of the doctor, or to medical ethics, or to the philosophy of medicine or even to the history of medicine, were regarded by some of the students as “soft,” and therefore not really primary in medical education. By contrast, subjects such as physics, biochemistry, pharmacology, anatomy, etc., won the favored adjective “hard.”

The reasons were not obscure. “Soft” subjects lacked precise answers. The grade-conscious student, therefore, could never be sure that the answers on examination papers would correspond to the professor's judgment. With the “hard” subjects, however, the correct number or fact was certain to lead to a predictable grade. The students therefore tended to steer away from the “soft” and gravitate to the “hard.”¹⁷³

Medical school survivors are understandably reluctant to expand the scope of their practice into areas in which they feel uncertain and incompetent. Few people, least of all those whose incompetence and uncertainty can lead to loss of life, embrace this kind of experience enthusiastically. I remember when my father took up the science of gemology as a hobby. One of the things he loved most about it was that there were always precise and definitive answers. Anatomy, he said, was his favorite subject in medical school, largely for the same reason. Pathology offers no such precision. Although he learned to tolerate the ambiguities and uncertainties of his professional life, he admitted that he would have preferred that they not be

¹⁷³ Cousins, *Head First*, 26–7.

there — especially when making the life-or-death decisions that were a routine part of his practice.

Other factors have also engendered opposition to psychosomatic medicine. For example, cynics say that the problem is that there is no money in it, i.e., the medical and pharmaceutical establishments oppose psychosomatic medicine precisely *because it is inexpensive* and would reduce their incomes and profits. I am not so naive as to believe that the health care industry is somehow exempt from the crass, sociopathic thinking that occurs in other businesses. Money is central in all business, including health care. However, as the son of two doctors, I do not believe it is the only issue under consideration. The vast majority of the doctors I know, as well as those I know who work in pharmaceutical companies, are deeply interested in their patients' health. Although quality of care is sometimes sacrificed for profit, I think it is unfair to accuse the health care industry of a deliberate, systematic campaign to make people sick in order to create markets for cures. Moreover, both the health insurance and managed care companies, potent economic and political forces within that industry, stand to gain much from inexpensive medicine. As the industry turns more to managed health care, prevention rather than cure will become increasingly profitable for these major players. It will be interesting to see how much the changing economic interests will change the attitude towards psychosomatic medicine. Be that as it may, the cynical, economic explanation by itself seems insufficient. I find Wilber's, Siegel's, and Cousins's explanations more adequate.

Adequate or not as explanations of why medical people have refused to review the evidence, the above explanations do not constitute valid objections against reviewing it. It is the intellectual integrity of the scientific method, not the limited nature of the scientific domain, that has led to the success of modern medicine. This method, which dictates that we experiment and verify before drawing conclusions, preserves intellectual integrity and keeps dogmatic excesses in check. There is no reason to limit intellectual integrity to mathematics and that which can be observed with the senses. The scientific method can be applied beyond its traditional domain. This is not to say that it will be easy. Psychosomatic medicine will have to deal with all the complexities of human thoughts and emotions, as well as the differences between individuals. The investigation is not likely to lead to solutions in the form simple or precise mathematical formulas. Moreover, contemporary philosophy has yet to provide a viable philosophical paradigm for psychosomatic healing. Nevertheless, the investigation may lead to the discovery (or, should I say rediscovery?) of some general maxims that could greatly improve the quality and lower the cost of health care. The first step in applying the scientific method to this

new domain would be to review the existing evidence systematically and even critically.

An a Priori Commitment to Ontological Materialism

Materialists claim, as we have shown, that mental causation is impossible as a matter of principle. There can be, accordingly, no bona fide evidence for psychosomatic healing. When cited to prove the existence of mental healing, the supposed evidence is used to misinterpret the observed events.

This argument deserves some attention. Someone could easily conduct a study “proving” the earth was flat by showing that billiard balls do not roll on a level surface without being pushed. However, because the round earth theory has been demonstrated empirically, I would choose to ignore such “evidence” that “proves” the earth is flat. Why would anyone want to examine evidence for a discredited theory?

The theory that the materialist claims to have been scientifically refuted is that of mental causation. Only material forces can move material things. To use Gilbert Ryle’s pejorative terminology, they reject the Cartesian dualist idea that a “ghost” can move a “machine.” Materialists do not believe in ghosts at all — not even ones that animate living organisms. Thus, the idea that ghosts can perform major repairs on machines seems especially preposterous.

One basis for this argument is that mental causation is scientifically impossible because it violates the law of conservation of energy, or of matter/energy. Mental causation supposedly violates this law, because it involves the influence of a substance that has no physical energy on physical things.

The argument, however, is fallacious for two reasons. As Griffin says, we do not know for certain that the amount of energy in the universe has remained constant since the big bang. Even if we are reasonably certain that it has, we are not *more* certain than we are about the reality of consciousness and mental causation.¹⁷⁴ The other reason is that what the materialist claims is violating the law of conservation of energy is not mental causation per se, but dualistic interactionism, i.e., the influence of a purely mental substance on a purely physical one. Something that is both mental and physical can exert physical influence, on account of its physical energy, but according to mental rules.

An example of such an entity is computer software. In one sense, the word processor I am now using is a physical entity. I purchased it as a compact disc, and it now resides in my computer’s physical memory. Its ability to control the computer stems from its physical characteristics.

¹⁷⁴ Griffin, *Unsnarling the World-Knot*, 51.

However, the way in which it controls the computer, i.e., what it tells the computer to do, originates in the programmer's and the operator's thoughts. It can therefore make the computer, a purely physical entity, behave according to a mind's rules — all without violating the law of conservation of energy in the least. As the power supply provides sufficient physical energy for the computer to run programs, so does the blood supply provide sufficient energy for the brain to sustain thoughts. The difference between the brain and the computer is that we know how the computer loads and runs programs. We do not know how the brain supports thoughts. Even so, there is no reason to believe that there is any violation of the law of conservation of energy involved, unless we arbitrarily presuppose that thoughts cannot also be physical things or activities. Mental causation may ultimately not involve ghosts moving machines at all. Cartesian dualism, which seems to be the focal point of the materialists' protest, is only one of several known theories of the mind-body relationship. There are others, such as personal idealism and panexperientialism, which have been with us at least since Berkeley and Leibniz.

However, let us suppose that materialism and dualism really are the only viable ontological worldviews. The materialists would still have no grounds for ignoring the evidence for mental healing on the grounds that mental causation itself is impossible. If the impossibility of mental causation is what renders mental healing impossible, then *all* forms of mental causation — including that which is ostensibly involved in ordinary things such as waving a hand or speaking — are impossible as well. At this point, the materialist's position is in danger of degenerating into absurdity, because these acts, being actual, are possible by definition. Of course, materialists usually do not deny that we can wave our hands or talk. What they do instead is either give wholly implausible, reductionist explanations of these activities or simply admit that these activities may be impossible to explain in materialist terms.

To be consistent, they should grant mental healing the same modal status as other forms of apparent mental causation, i.e., call it impossible to *explain*, not impossible to *occur*. The mental causation involved when thoughts stimulate the production of natural killer t-cells is probably the same kind of mental causation that occurs when my thoughts cause my fingers to type on this keyboard. In both cases, we have certain thoughts that lead to certain physiological responses. The only differences are in the particular thoughts and responses involved, and the fact that most of us have better conscious control over our voluntary muscles than our production of t-cells. If we could ever learn to control our t-cell production as well as we control our hands, we would have a powerful new cure for cancer, lupus, and a host of other diseases. However, the problem of mental causation is the same for both hand-waving and producing t-cells. (We

presume that physiological processes handle the details in both cases.) Were we discussing psychokinetic healing, the mental causation might be different, because it involves action at a distance as well as mental causation. In this essay, however, we are dealing with psychosomatic healing only.

In order to be consistent, however, the materialist should classify psychosomatic healing, along with a host of other human activities, as inexplicable, not impossible. With this reformulation, the materialist position is more consistent internally, in that it treats all forms of mental causation alike. This reformulation, however, removes the basis for continuing to ignore the evidence. The fact that something is inexplicable does not justify ignoring it. On the contrary, the inexplicability of events only emphasizes the need to investigate them further.

Some materialists might object that mental healing does *not* belong in the same category as intentional bodily motion. The ability of a human being to move about is a matter of common knowledge. There is not nearly as much evidence for psychosomatic healing. This argument, however, is spurious. The amount of evidence for one phenomenon relative to the evidence for another is irrelevant. The fact that there is much more evidence for the existence of planets and stars than there is for black holes does not justify ignoring what evidence there is for black holes. The same holds for psychosomatic healing. One can argue that the evidence for either mental healing or black holes is insufficient to establish its existence, but only after examining the evidence itself first.

In summary, there is no justification for refusing to examine the evidence. In refusing to look at it, it is the self-styled scientific skeptics who are being unscientific. In obstructing the development of what could become a powerful set of therapies, the skeptics are committing the same offense for which we reproach Christian Scientists, i.e., denying treatment for those who need and could otherwise receive it. Furthermore, to insist that the scientific method be limited to its traditional domain is to be obstructionist. Science advances by moving to new domains. Finally, even the committed materialists, who embrace an ideology in which it is difficult if not impossible to explain mental causation, should still be willing to examine the data. Mental healing may not involve the kind of dualistic interaction they deem impossible. Moreover, even under the materialist paradigm, psychosomatic healing is not that much harder to explain than other, much more common manifestations of mental causation. It would therefore be more appropriate to classify mental healing as inexplicable, as opposed to impossible, and investigate it like any other mysterious phenomenon.

II. The Place of Psychosomatic Therapies in Scientifically Based Health Care

The evidence surveyed shows that psychosomatic therapies can and do work. Placebos, hypnosis, and imagery practice all have statistically significant, positive effects on health. Conversely, discouraging and depressive thoughts have been shown to make us sick. Heart disease and cancer, arguably the two most serious diseases in America today, can both be attributed at least in part to mental causes. Job dissatisfaction can lead to heart disease; the inability to express one's self emotionally can lead to cancer; and, stress, grief, depression, and loneliness can all lead to either, as well as to poor health in general. Furthermore, other studies have shown that the dire circumstances in themselves do not make us sick. The determining factor is *our interpretation* of these events. Anger, grief, loneliness, and sadness are natural human emotions, but they differ from despair and depression, in that the latter usually entail a belief that nothing can be done about the adverse conditions, at least for the foreseeable future. The cognitive factor is critical.

The evidence also suggests a tremendous, untapped potential for mental treatment of physical ailments. The works of spiritual adepts and holy people of many religions — as well as the mentally ill — have all shown the extraordinary extent to which thinking can affect physiology. Also, biofeedback studies have shown that we can systematically train the mind to control physiological processes previously believed to be automatic. However, biofeedback has also shown that much of the thinking that affects the body is subconscious. By making us aware of subconscious processes, biofeedback enables us to bring them under conscious control. A major element of psychosomatic therapy is helping patients become aware of subconscious thoughts and beliefs.

In summary, the evidence does suggest that thoughts can significantly affect health, either adversely or beneficially, although we may not yet fully understand how. It also indicates that psychosomatic therapy shows considerable promise. Mental therapies can often alleviate, and sometimes cure, illnesses for which there is no known conventional medical treatment. The potential health benefits of preventative mental therapies may be greater still. The arguments by Cousins, Dossey, Siegel and others, that our health care system should pay more attention to the mental element in both diseases and cures, are sound. In an era in which high-tech medicine is becoming increasingly unaffordable for more and more people, the neglect of this simple and usually inexpensive form of therapy is especially tragic.

III. The Evidence and the Philosophical Issues

Although the evidence is quite conclusive with respect to the potential for psychosomatic healing in health care, its philosophical implications are not

so conclusive. Although the evidence tells us that psychosomatic healing occurs, it does not tell us how. Psychoneuroimmunology is beginning to tell us how the brain affects the immune system, but it does not tell us how the mind affects the brain. Prima facie, it would seem that the evidence favors some worldviews over others. Materialism, which denies mental causation altogether, is the ontology that is least compatible with the evidence. Explaining phenomena such as the placebo effect, feats performed under hypnosis, and the live burial of the Yogi Haridas is extremely difficult in materialist terms. However, the evidence itself does not prove conclusively that these phenomena cannot be attributed to the brain, because it does not address the mind-brain relationship. Dualism is somewhat more compatible, but not much. Mental healing involves mental causation, a form of mind-body interaction, and mind-body interaction is what dualism finds hardest to explain. Mental healing would seem to be more compatible with idealism and panexperientialism, but most contemporary philosophers assume that these ontologies have already been discredited.

The relationship between mind and matter is ultimately not an empirical question. Had it been one, some clever scientist would probably have devised a study, or series of studies, that would have solved the riddle. The issue is almost purely philosophical. Accordingly, the philosophical issues, if they are to be resolved at all, must be addressed by philosophical argument. In Chapter 9, I review the current debate on the mind-body problem of modern philosophy and attempt to explain how it has come to what seems to be an intractable stalemate. Once the nature of the stalemate is properly understood, we can begin to explore some of the alternatives to dualism and materialism, alternatives that might explain psychosomatic healing.

Chapter 9

Of Ghosts and Machines: Understanding the Mystery of Mind over Matter

This chapter is an examination of mind-body problem of modern philosophy and its relationship to the phenomenon of psychosomatic healing. In addition to these introductory remarks, it consists of five sections:

1. Philosophical Implications of the Evidence for Mental Healing
2. The Discovery of the Problem in the Philosophy of Descartes
3. An Overview of the Current Mind-body Debate
4. An Overview of the Idealist Alternative
5. Mental Healing as a Problem for Modern Philosophy

The first section is a review of the implications of the evidence with respect to the mind-body problem, free will, and supernaturalism presented in the previous chapters. Although the evidence tells us nothing new about the mind-body relationship, it nonetheless clearly favors either idealism or panexperientialism over dualism and materialism. The issues of free will and supernaturalism are closely tied to that of mental causation, which, in turn, hinges on the mind-body problem.

The second section shows how the mind-body problem became especially apparent in Descartes's philosophy. Descartes viewed mind and matter as two completely different kinds of substances, which, although they interact, have no coherent explanation of their interaction. However, this problem has overshadowed another problem with Cartesianism that is less obvious but more serious — its inability to explain any kind of efficient causality as real influence.

The third section is a review of the current mind-body debate itself. This debate, which has consisted largely of the dualists' and materialists' refutations of each other, has become an intractable stalemate that has done little more than weaken both positions.

The fourth is an overview of the idealist alternative, which, although it has received little recent attention in academic philosophy, is the prevailing ontology among believers in mental healing. Problems with this alternative, especially when we apply the regulative principle of hard-core common sense, render this paradigm undesirable as well.

The last section is my explanation of why mental healing has been so problematic for modern philosophy, and, to some extent, why contemporary philosophers have been reluctant to tackle it. Inherent in the

concept of mental healing itself are two problems that have been especially intractable for modern philosophy: causation as real influence and the mind-body relationship. I will argue that these problems go back beyond Descartes to Aristotle and his view of the world as composed of substances with attributes. Once we understand how substance thinking has contributed to the enigmas of causation and the mind-body relationship, both the origins of the enigmas and the road to understanding them may become apparent.

I. Philosophical Implications of the Evidence for Mental Healing

The evidence itself raises three major philosophical questions with respect to psychosomatic healing:

1. The problem of explaining mental causation;
2. The question of freedom to choose our own thoughts;
3. The question of supernatural involvement, i.e., direct activity by God, unmediated by secondary (natural) causes.

The question of mental causation actually embraces two philosophical issues: the mind-body relationship and causation itself as real influence. Any adequate theory of mental causation must address both. The latter two questions, those of free will and supernatural involvement, hinge on the first. It is difficult to conceive of free will without mental causation, because free choice is in itself a form of mental causation. In free choice, a mental act, i.e., a decision or choice, acts as the first cause of what one will do. Without mental causation, there would be physical determinism or no causation at all.

The question of the supernatural depends on what is considered “natural.” One could reasonably argue that nothing can ever be supernatural. The laws of science are supposed to be descriptive, not prescriptive. Anomalies merely indicate that the current formulations of the laws need to be changed or discarded, not that the actual laws of the universe have been violated.

Of course, not everyone shares this characterization of science, e.g., the materialist skeptics who argue that scientific laws do not permit mental healing. However, let us assume that scientific laws are prescriptive, as well as descriptive. We do not ordinarily attribute events that have a natural explanation to supernatural causes. When a person spontaneously recovers from a cold or flu, modern people do not proclaim it to be a miracle, because normal immune responses are known to cure these diseases. However, when a person spontaneously recovers from metastatic cancer, the story is somewhat different. Ordinary immune responses do not normally induce a spontaneous regression of cancer.

The reason that we have attributed such healing to supernatural causes is the apparent lack of a “natural” explanation. The nature of the causation involved is what seems so mysterious. We now know, for example, that natural killer t-cells can destroy cancer cells. We do not know, however, how thinking can at times stimulate the production of enough of these t-cells to eradicate a cancer. If mental causation is itself a natural process, then there is no reason to attribute psychosomatic healing to supernatural causes. God, if involved at all, could be acting through natural processes. On the other hand, if mental causation lies outside the natural system, then any Divine activity involved with it would be supernatural. I will argue later in this essay that God may act through our own thinking.

Although the evidence is quite conclusive with respect to the value of psychosomatic therapies in scientifically based medicine, it provides few, if any, new insights into the ultimate nature of mental causation. Although psychoneuroimmunology is discovering connections between the immune and nervous systems, it has told us nothing about how the mind affects the brain. The same holds for all the other empirical evidence presented, including the placebo effect, the Black Monday syndrome, the cancer personality type, the phenomena of hypnosis, and even the stigmata of the Catholic saints. None explain mental causation. All they tell us is that belief somehow becomes biology.

The problem of mental causation is not new to Western philosophy. It has contributed to the development of four distinct major theories of the mind-body relationship: dualism, panexperientialism, idealism, and materialism. Of these worldviews, materialism and dualism have recently dominated the debate in academic philosophy, whereas idealism has dominated the literature on mental healing. Panexperientialism seems to be neglected in both discussions. We turn next to the mind-body debate in modern philosophy, tracing its origins to Descartes and dualism, then moving on to the contemporary debate.

II. The Discovery of the Problem in the Philosophy of Descartes

Although the mind-body problem of modern philosophy did not originate with Descartes, he seems to have set the stage for the discussion. One of the problems with great minds is that they can do great damage. René Descartes is clearly one of the greatest thinkers in modern philosophy. However, he made a few wrong turns, from which modern philosophy is still trying to recover.

Descartes derived his two substances, thinking mind and extended matter, with two separate arguments. He proved the existence of his own mind by arguing that the very act of thinking proves the mind’s existence, and that he himself existed as a being that thinks. Had he followed this line

of reasoning further, the history of Western philosophy might have been very different. He could have, for example, further concluded that thinking presupposes an object of thought, as much as it does a thinker, and derived the reality of matter from that. Had he derived his notion of matter along these lines, he might have concluded that both mind and matter are essential aspects of human experience, and that neither can exist without the other. Thus, he might never have concluded that mind and matter were substances that could exist independently of each other.

However, that is not the course he took. Having derived his own existence as a mental substance in the *cogito* argument, he took leave of the *cogito* and moved directly to the ontological proof of God, deriving the existence of matter, his second substance, from the fact that God exists and cannot be a deceiver, and that we clearly and distinctly perceive material things. Therefore, extended, material things must also exist. Having derived their existence independently, and being able (or at least so he thought) to conceive of their existence as separate, Descartes concluded that each of the two substances could exist without the other. What remained a mystery was their mode of interaction.

However, this remaining problem was serious enough to be recognized even by Descartes's contemporaries, Malbranche and Gassendi to name two. If Descartes could not explain their interaction, then one could legitimately question whether he had a "clear and distinct" concept of either. The relationship of the two substances to each other may be an essential, as opposed to accidental, characteristic of both. The fact that both Spinoza and Leibniz, the most prominent among Descartes's immediate successors, developed panexperientialist systems is more than coincidental. Both Spinoza's monistic and Leibniz's pluralistic panexperientialism attempt to deal with the fact that, although mind and matter are indeed distinguishable, they seem to be inextricably linked.

The problem of explaining interaction, however, is not the most serious weakness in Cartesian dualism. More serious — because it is less obvious — is the underlying doctrine of the independence of mind from matter, and vice versa. If we start with experience as Descartes understood it, then we are led directly to the philosophy of the British empiricists. Although Locke's views were reasonably consistent with Descartes's, Berkeley challenged — and I think successfully — the Cartesian concept of matter as an extended substance that was itself devoid of experience and could exist independently of anyone's perception of it. Soon afterwards, Hume argued that Berkeley's arguments against matter could also be applied to mind or spirit, and thus, that experience tells us very little about the nature of reality.

Since Hume, philosophers have taken one of three courses. Idealism, which dominated much nineteenth-century philosophy and has also

dominated the popular literature on mental healing, claims that matter is reducible to a figment of the mind. Materialism and epiphenomenalism, which have prevailed in both academia and medicine in the twentieth century, have attempted to deny the existence of mind or to reduce it to a mere property of matter. However, both materialism and idealism share with dualism a common belief: that either *mind*, as an unextended but experiencing substance, or *matter*, as an extended but vacuous actuality, or *both* can be adequately conceived without each other. I will attempt to show how this false assumption has reduced the mind-body debate to the exercise in futility that it has become.

III. An Overview of the Current Mind-body Debate

Although neither Leibniz, Spinoza, nor Hegel would have predicted it, Cartesian dualism is alive and well in the twentieth century. In fact, the current mind-body debate seems to be proceeding almost as if the series of great thinkers between Descartes and Kant, or at least between Descartes and Hume, had never existed. In the current debate, dualism and materialism, the least attractive paradigms with respect to psychosomatic healing, are assumed to be the only viable options. Metaphysically, it has come down to the modernization of Descartes and Hobbes. Alternative views, such as idealism and panexperientialism, are generally not considered worthy of serious discussion.

One would think that a review of this debate might introduce some arguments that would strengthen these two positions, but that is not the case. Each side attempts to make its case primarily by refuting the other and win the debate by elimination. *The problem is that both sides have succeeded in this regard.* The materialists have refuted dualism, and the dualists have refuted materialism. Hence, the debate has become a plague on both houses.

In *Unsnarling the World-Knot: Consciousness, Freedom, and the Mind-Body Problem*, David Ray Griffin summarizes the arguments that materialists and dualists have used to refute each other. In doing so, he notes that some arguments made by materialists against dualism can be turned back against materialism. The reason that materialism and dualism share these problems, argues Griffin, is that materialism itself is a form of “crypto-dualism,” which will be explained later.

In this section, we will very briefly review the standard arguments against dualism and materialism. It should become clear why neither materialism nor dualism fulfills the requirements of rationality and adequacy defined in Chapter 2, especially when we apply the regulative principle of hard-core common sense. We will begin by reviewing the arguments against materialism alone, then those against dualism alone, and finally those that apply to both.

Problems with Materialism

Materialism is the only worldview that seems to conflict with the evidence for mental healing directly, because, at least under most formulations, materialism denies that the phenomena observed can occur. If the evidence really is factual, then this denial is irrational. What saves materialism from refutation here is that there is nothing in the evidence per se to prove that the brain, interacting with the endocrine, immune, and other parts of the nervous systems, could not produce all the phenomena observed. Materialists can still argue that the Black Monday syndrome, the placebo effect, the cancer personality type, and even the survival of the yogi Haridas after weeks of live burial are all products of the brain. Although it would be extremely difficult to show how the brain could accomplish such feats, we have no proof that it cannot. Accordingly, materialists could reclassify mental healing from “impossible” to “inexplicable,” thereby improving both the internal and external consistency of their position.

However, it is reasonable to ask if this reformulation of materialism, which merely promotes it from inconsistency to marginal adequacy, is worth the effort. To demonstrate adequacy, one would have to explain how the brain actually accomplishes these things. The difficulty of explaining all mental functions in terms of the brain has been one of the major problems with materialism from the outset.

The humble placebo effect would pose one of the most difficult problems, because it is too obvious to deny. Medical research, in using blind and double-blind studies, almost universally acknowledges it. With a single-blind study, the materialist might attribute the placebo effect to the subjects' brains. However, the need for *double-blind* studies — with its implication that the *experimenters'* beliefs can alter a drug's affect on the subjects' physiology — suggests that something akin to telepathy or psychokinesis is happening, as well as mental causation. The materialist would have to attribute the apparent mental causation to the brain, and the apparent telepathy or psychokinesis to subliminal, but sensory, communication. Other phenomena described in the previous chapter pose similar problems. When one considers how difficult it would be to explain these phenomena in materialist terms, it is easy to understand the temptation to dismiss the evidence for mental healing itself as fraud or anomaly.

The problems with materialism are presented under two headings: “Problems of Rationality” and “Problems of Adequacy.”

Problems of Rationality

One problem with materialism, which affirms that the mind is somehow identical to the brain, is that it is difficult to understand what mind-brain identity could actually mean. Most materialists have attempted to equate

mind states and activities with the corresponding brain states and activities. However, something is invariably lost in the translation. If it is difficult to understand how a ghost can move a machine, and even more difficult to understand how a ghost can repair one, it is harder still to understand how the ghost and a machine could be *identical*.

Most materialists advocate a “supervenience” theory, in which mind-states relate to brain states in the same way as visible characteristics, such as the shininess of metal or the liquidity of water, relate to the underlying molecular structure and activity. However, the difference between molecular and sensible properties is much less than that of brain and mind. Both the visible properties and the molecular properties are physical properties. In Griffin’s terminology, how could an experience ever reduce to the activities of non-experiencing things? The language and categories involved are completely different. As one of my undergraduate professors put it, “How, after all, could a brain state be true?”¹⁷⁵ Thus, reductive materialism is marginally intelligible at best.

To escape this and other problems of reductive materialism, some materialists have embraced eliminative materialism, which denies the reality of the mind altogether. However, the problems with this alternative are even worse. To deny the reality of consciousness outright is to believe that one cannot have beliefs. Griffin quotes materialist John Searle in summarizing this point:

As Searle says, “If your theory results in the view that consciousness does not exist, you have simply produced a *reductio ad absurdum* of the theory.” We should, accordingly, eliminate eliminative materialism from the positions to be taken seriously.¹⁷⁶

Of course, eliminative materialists do not deny that we experience consciousness. What they say is that the language we use to describe subjective, first-person states tells us nothing that cannot be said in terms of objective, third-person states and processes.

One of the materialists’ reasons for saying that we can dispense with the concept of mentality is that sentience and intelligence occupy only a small portion of a very vast physical universe. However, the place they occupy — where we live — is a very important one. The truth that Descartes held to be most self-evident was the existence of his own mind.

Another problem with materialism is that it ultimately leads to the denial of our knowledge of the external world. This is especially difficult for

¹⁷⁵ Quote was by Robert Jaeger made in an upper division class on philosophy of mind at Yale College in the early 1970s.

¹⁷⁶ Griffin, *Parapsychology, Philosophy, and Spirituality: A Postmodern Exploration* (Albany: State University of New York Press, 1997), 102.

materialism, because the atoms and molecules that comprise the external world are the only entities that the materialist believes are real. The problem stems not from materialism per se, but with its corollary doctrine of sensationism, which says we can know things outside ourselves only via the five senses. If all our knowledge of the external world must come through the senses, we cannot know the external world as it is in itself at all, but only as it appears to us. The simple process of seeing an object across the room is a complex chain of physical and physiological events. Light rays ricochet from the object to the retinas of the eyes, and signals traverse the optic nerves towards the brain. At the end of the physical process, we have neurons firing in the brain. At each step, what actually occurs becomes less and less like the original object, or at least, further and further removed from it. Then, a miracle happens — “a miracle,” as Griffin quipped, “performed by an illusion.”¹⁷⁷ The mind somehow extracts a reasonably accurate mental image of the external object from the firing neurons! The event is almost supernatural, because, for the materialist, the mind is but an epiphenomenon, a supervenient quality, or an outright illusion. Yet, it is able to fabricate an accurate picture of an external object from a bunch of firing neurons. This is an impressive feat, especially for something that does not actually exist, or, at the very most, exists without any power of causation.

Now if our illusory mind has the power to create mental images of physical objects from nerve impulses, why would it need the external objects in the first place? Who is to say that the mind is not dreaming or hallucinating the whole scene? Thus, our “knowledge” of the external world is reduced to speculation, and we have solipsism. (In fact, as I argue later, it becomes a solipsism of the present moment.) Reality, as molecules in motion and the physical laws that govern them, is lost completely. Given solipsism, we can ask, along with Berkeley, of what use is the concept of matter, an entity existing outside our perception of it? The only reality with which we have contact is our own mind, and we get idealism, materialism’s exact opposite.

Problems of Adequacy

In addition to the problems in coherence and intelligibility, materialism also has problems of adequacy, in that it fails to explain some obvious facts and hard-core commonsense beliefs. These problems originate not so much from materialism per se, but from the related doctrines of reductionism and sensationism normally associated with it.

Materialist reductionism is the theory that the whole can be fully explained by the activities and characteristics of its parts. The behavior of

¹⁷⁷ Griffin, *Unsnarling the World-Knot*, 143.

subatomic particles determines that of the atom; the behavior of atoms determines that of the molecule; the molecules determine the cell; and so on, until everything about the organism is ultimately explicable in terms of the mechanics of its smallest parts.

This reductionist theory of human nature fails to explain some obvious phenomena. One is the unity of an individual's experience, i.e., how all of a life's experiences are contained within the single experience of an individual. There is no counterpart of that unity in the brain, which consists of billions of neurons. Yet, each of us experiences our mind and life history as one. Each of us, when we think of ourselves as individual persons, will (usually) refer to ourselves as an "I," not a "We." The brain is a collective; it has no physical counterpart to the unity of consciousness.

Closely related is the problem of explaining the unity of bodily behavior. Griffin describes the problem as follows:

The question here is, for example, how I can drive an automobile while talking to my wife (about the mind-body problem, of course), while smiling, while turning the dial on the radio, while remembering a childhood event, and so on. If there is "no single Boss," but merely a vast aggregation of microagents, how is this coordination achieved?¹⁷⁸

The brain has no single structure that unifies command and control. To unify and coordinate all these activities, the brain itself would need to have something like a brain of its own to serve as a control center. It has no such center. Brain functions are distributed throughout the organ.

When combined with sensationism, materialism has problems explaining other hard-core commonsense beliefs. One is causality. This was the thrust of Hume's argument. If, as both Hume and the materialists maintain, we can garner information about the outside world only via the five senses, then we have no empirical basis for knowing how causes bring about their respective effects. The notion of a cause's power to bring about its effects is neither a sense datum nor a series of sense data, and sense data are all that experience gives us. We can know only the constant conjunction or correlation of the cause with its effect.

Mathematical relations cannot be perceived via the five senses, nor can the senses perceive values, such as truth, beauty, and moral virtue. One could argue that the senses can give us beauty, but how could they give us truth or moral virtue?

One of the more obvious sources of non-sensory information is memory. The five senses give us only immediately present data. Hence sensationism cannot tell us how we have the idea of "the past." This is why sensationism

¹⁷⁸ Griffin, *Parapsychology, Philosophy, and Spirituality*, 114.

gives us not only solipsism, per the discussion presented earlier, but solipsism of the present moment.

Finally, materialism cannot explain the psi or “psychic” phenomena of clairvoyance, telepathy, and psychokinesis. Clairvoyance and telepathy are often called “extra-sensory perception” or “ESP,” because they involve the ability to know things that cannot be perceived via the five senses, which is impossible under sensationism. Clairvoyance is the ability to perceive events at a distance, and telepathy is the ability to read minds, or to perceive what other people are thinking or feeling without known means of communication. Psychokinesis is the ability to move or reshape physical objects without applying physical force.¹⁷⁹

Problems with Dualism

Faring somewhat better is Cartesian dualism, which does not, at least, overtly deny the possibility of mental healing. Although it is difficult to grasp its ghost-in-the-machine concept of mind-body interaction, dualism at least provides a framework that affirms mental causation. The evidence, therefore, does not render dualism contrary to fact, but its self-consistency is in serious question. Superficially, the main problem with dualism is its inadequacy. If the mind has no physical energy of its own, nor the ability to create it, one can rightfully ask how it can interact with the brain. Likewise, one can also ask how the brain, as a purely physical entity, can be receptive to the mind or act on it. How can a substance that deals in ideas, purposes, values, and intentions interact with an entity that can only pull or push? Dualism cannot explain how mind and matter can affect one another at all.

This has led critics of dualism to question whether the dualist concepts of mind and matter are themselves intelligible. What may appear to be a problem of adequacy may in fact be one of intelligibility. One could argue that the ability to direct the body is an essential aspect of the mind. If this is the case, any theory that defines mind and body in such a way that their interaction is inconceivable, is *in itself* inconceivable.

Problems Common to Both Materialism and Dualism

Griffin argues that dualism and materialism share many problems, largely because materialism is really “cryptodualism,” or dualism in disguise. Materialism is nothing more than a dualism that attempts to deny the actuality of mind or spirit or to reduce it to a property of matter. While materialism discards the Cartesian notion of a mental substance, it retains Descartes’s notion of matter as vacuous (i.e., non-experiencing) actuality. Because materialists must acknowledge, albeit grudgingly, that some

¹⁷⁹ For a fairly comprehensive of the evidence for psi phenomena, see *The Signet Handbook of Parapsychology*, Martin Ebon, ed. (New York: Penguin Books, 1978).

actualities have experience, they must inevitably return to the view that there are two kinds of actualities: those with experience and those without it. While many philosophers of mind have criticized Descartes for his view of the mind, Griffin contends that the Cartesian view of matter is even more problematic.¹⁸⁰ Accordingly, in that it retains this view, materialism inherits any inadequacies and inconsistencies inherent in dualism. Most of the criticisms described in this section were originally materialists' objections against dualism. However, Griffin shows how they also apply to materialism, having originated from dualist concept of matter.

One major problem is in drawing the line between sentient and non-sentient things. Descartes drew it very high on the evolutionary chain, attributing sentience only to humans. Even his dog was a machine without a ghost. One can argue that he drew the line in the wrong place, but the problem of where to draw it remains. How sophisticated must a biomachine be in order to have, in Sartre's terminology, a "for-itself"? Are bacteria sentient? Are viruses? Could even atoms and molecules have experience? The problem applies to materialism, as well as dualism, if one rephrases the question as: How sophisticated must a machine be in order to *feel the illusion* of its own for-itself? The illusion of sentience is just as inexplicable as the real thing.

Closely related is the problem of the "Great Exception."¹⁸¹ Wherever that line is drawn, those entities that lie on one side of it are different in kind from those on the other. The materialists ask: Why should certain things be so different from the vast majority of other things in the world — in fact, so different that they are not really subject to the same natural laws, such as conservation of energy? Again, the question can be turned back on the materialists: How could some things, which are governed by the same physical laws as everything else, be so privileged as to have this very unique, supervenient quality we call experience?

Another question is how time could have arisen in the evolutionary process, when the concept of evolution itself presupposes time, and time, in turn, presupposes experience. Griffin presents the question in this way:

¹⁸⁰ Most of the material presented comes from *Unsnarling the World-Knot*, but some will come from *Parapsychology, Philosophy, and Spirituality*. As further background material, I have also drawn on two other essays: "Panexperientialist Physicalism and the Mind-body Problem," *Journal of Consciousness Studies* 4, no. 3 (1997): 248–68, and "Of Minds and Molecules: Postmodern Medicine in a Psychosomatic Universe," in *The Reenchantment of Science*, David Ray Griffin, ed. (Albany: State University of New York Press, 1988). Griffin, in turn, draws heavily upon contemporary philosophers of mind, such as Jaegwon Kim, Geoffrey Madell, Colin McGinn, Thomas Nagel, Karl Popper, William Seager, and John Searle.

¹⁸¹ Griffin, *Unsnarling the World-Knot*, 61–2.

Yet another problem for dualists and materialists, because they both assume that experience arose at some late date in cosmic evolution, is to explain *how the evolutionary process could have had the time — literally — to have gotten to the point at which time is said to have emerged.* That is, as most of those who have thought much about it, such as the arch-materialist Adolf Grünbaum, have realized, time, in the real sense, presupposes experience: Without experience there would be no “now,” and without a “now” there would be no distinction between past and future..... Assuming this necessary connection between time and experience, those who believe that experience arose historically must also hold that time arose at some point in the evolutionary process.... The problem with this position, of course, is that it is circular, because evolution itself presupposes the existence of time.¹⁸²

If time did not emerge until sentience, then everything up to that point must have occurred simultaneously. Evolution could not possibly have emerged at a moment *in* time, because time must have already been there for evolution to take place.

Perhaps the greatest problem common to both dualism and materialism is the problem of emergence. The evolutionary view of natural history implies that matter existed before mind. This gives rise to several additional problems. One is the break in continuity. How could evolution develop machines that could generate ghosts? In the beginning, the world was nothing but lifeless matter. Then, by some unknown quirk of fate, a particular lump of clay was able to catalyze a for-itself. In the words of materialist J. J. C. Smart:

How could a non-physical property or entity suddenly arise in the course of animal evolution?... [W]hat sort of chemical process could lead to the springing into existence of something non-physical? No enzyme can catalyze the production of a spook!¹⁸³

Although originally aimed at dualism, Griffin again argues that this critique also applies to materialism. Catalyzing the mere *appearance* of a spook is equally inexplicable. Be it a substance or an emergent attribute, we still do not know how, or when, it got there.

Griffin argues that the concept of the “emergence” of mentality out of non-experiencing entities involves a category mistake. Properties of things, be they Locke’s “primary” qualities such as mass, extension, and motion, or the “secondary” qualities of color, odor, and sound, are all properties of *things observed*, as opposed to the *act of observing*. To categorize the

¹⁸² Griffin, *Unsnarling the World-Knot*, 62–3.

¹⁸³ Smart, J.J.C., “Materialism,” in *The Mind-Brain Identity Theory*, C.V. Borst, ed. (London: Macmillan, 1979), 159–70. Quotation taken from Griffin, *Unsnarling the World-Knot*, 63.

qualities of things observed with the capacity to observe is, in his view, a “category mistake of the most egregious kind.”

It involves... the alleged emergence of an “inside” from things that have only outsides. It involves not the emergence of one more objective property for subjectivity to view, but the alleged emergence of subjectivity itself. Liquidity, solidity, and transparency are properties of things *as experienced through our sensory organs*, hence properties for others. Experience is not what we are for others but what we are *for ourselves*. Experience cannot be listed as one more “property” in a property polyism. It is in a category by itself.¹⁸⁴

To use Sartre’s terminology, to be mental is to be for-itself, or the observer, and to be material is to be in-itself, or a thing observed by another. Griffin elaborates elsewhere:

When we think of a molecule as a nonexperiencing thing, we are thinking of it as experienced *by us*. Actually, we usually experience a large aggregation of molecules, as in a rock, and then try to imagine what an individual molecule would be like. In any case, we do not experience what it is to be a molecule. We only know it, insofar we know it at all, from without.

But when we think of mind as an experiencing thing, we are thinking of it from within. We know what a mind is by identity, by being one.¹⁸⁵

Griffin is saying, in effect, that mentality is what something is *for itself*, and that physicality is what something is *for another*. If mentality is a supervenient property, as the materialists would claim, it is a very different kind of property, one that Griffin argues belongs in a category all by itself. The analogy to other properties that are purely physical does not apply here.

IV. The Idealist Alternative

Viewed from a scholarly perspective, the writings on mental healing in Christian Science, New Thought, and pop psychology are easy targets. Their tendencies to overstate their case and to pay little heed to issues such as precise formulation and internal consistency render them easy to attack, or simply dismiss, by scholarly critics. I am prone to treat them somewhat more charitably. I myself subscribed to New Thought philosophy for over a decade and seriously attempted to apply it in my own life. In fact, New Thought philosophy gave me my original inspiration to write this essay. In retrospect, some of my attraction to New Thought idealism may have been wishful thinking. However, I also believed what the dualists and materialists were saying about each other in the contemporary mind-body debate.

¹⁸⁴ Griffin, *Unsnarling the World-Knot*, 65.

¹⁸⁵ Griffin, “Of Minds and Molecules,” 151.

Ironically, it was the arguments given by materialists and dualists that made idealism seem attractive by comparison. However, in embracing idealism, I was admittedly guilty of the same offense for which I just berated the materialists and dualists: supporting one view largely because the known alternatives seem so obviously wrong.

Ultimately, it was experience, not philosophical argument, that persuaded me to abandon the idealist model. The idealist worldview simply did not describe the world in which I lived, nor did it really describe the phenomenon of mental healing as I personally had observed it. While dualism and materialism are unintelligible, the idealist alternative is simply unbelievable. As I did further research into the subject and continued to apply the practical aspects of the idealist model in my life, I discovered that the idealist model has some serious conceptual problems that explained my difficulties in applying and believing in it, problems that would remain even if the model were to be more carefully and consistently reformulated.

Nevertheless, the legacy of idealism to the philosophical discussion of mental healing is not without value. It has given us a set of healing techniques, such as imagery, affirmation, and affirmative prayer, with which we can both test and apply hypotheses about mental healing. It has also provided a set of propositions about mental healing that are good starting points for both empirical testing and philosophical debate. Whether we agree with the idealist metaphysic or not, much of what we do know about mental healing was discovered by idealists, and credit must be given where it is due. My treatment of the idealist model has three sections:

1. An overview of the major tenets of the idealist position.
2. A philosophical critique of the idealist model
3. A summary of its real contributions to this discussion

Overview of the Idealist Model

In summarizing the idealist position here, I focus on the New Thought philosophy of Ernest Holmes, as well as the better-known writings of Mary Baker Eddy, founder of Christian Science. With respect to mental healing, idealism has one major advantage over both dualism and materialism: *In contrast to materialism, it clearly affirms mental causation and therefore the possibility of mental healing. In contrast with dualism, it does not need to explain dualistic interaction to affirm it intelligibly.* Another source of its appeal is its natural congruence with healings described in the New Testament. In fact, both New Thought and Christian Science base their claims more on the authority of the New Testament than any other single source. A third source of idealism's appeal is its simplicity. If, per Descartes, we accept our own existence as experiencing subjects as self-evident, we have within our experience all of reality. There is no need to

describe, or even posit, the existence of an external, material reality whose nature is ultimately unknown or even unknowable. The external world is exactly as it appears, and we can deal with it as we would under naïve realism — except that idealists would say that we can largely control our experiences via our thinking.

The metaphysics of both New Thought and Christian Science can be summarized with six concepts that are relevant to this discussion: idealism, monopsychism, monism, the omnipotence and omnibenevolence of God, and the denial of genuine evil. I summarize the remaining five doctrines below, using Holmes's *The Science of Mind* and Eddy's *Science and Health* as references.

1. *Idealism*. In both New Thought and Christian Science, it is always the thoughts and beliefs of the observer that determine the nature and existence of the events observed. The material world is not unlike the shadows on the cave wall in Plato's *Republic*.¹⁸⁶ This belief is based less on philosophical argument or natural theology than on revelation in scripture. God, the creative power in the universe, is Mind or Spirit. Therefore, Mind or Spirit is what creates.
2. *Monopsychism*. This is the term I use to describe the doctrine of the "One Mind," according to which the distinctions between individual minds are ultimately illusory. In both New Thought and Christian Science, there is really only one mind in existence — God.¹⁸⁷
3. *Monism*. This follows from the first two teachings. If there is only one mind, and that mind is all powerful, then it follows that God is everything. Holmes explicitly states, "God is all there is,"¹⁸⁸ and Eddy taught a similar doctrine.¹⁸⁹ However, Eddy, who believed the material world to unreal, explicitly rejected pantheism.¹⁹⁰
4. *The Omnipotence and Omnibenevolence of God*. The omnipotence of God follows from the idealist and monopsychist doctrines. The omnibenevolence of God is a principle given in revelation.¹⁹¹
5. *The Denial of Genuine Evil*. Both New Thought and Christian Science regard genuine evil, including all illness, as either an illusion or an experience that is unnecessary. Eddy explicitly held the former

¹⁸⁶ Holmes, 412; Eddy, 187.

¹⁸⁷ Holmes, 87,393; Eddy, 469–70.

¹⁸⁸ Holmes, 405;

¹⁸⁹ Eddy, 587.

¹⁹⁰ Eddy, 27.

¹⁹¹ Holmes, 478; Eddy, 140

view.¹⁹² Holmes held the latter, attributing all apparent evil to ignorance and improper use of Mind's creative power.¹⁹³

Critique of the Idealist Model

Neither Holmes nor Eddy were professional scholars. Both Holmes's *The Science of Mind* and Eddy's *Science and Health* are better described as exercises in homiletics than in philosophy, in that they were written more to comfort, inspire, and heal the afflicted, than to stand up to scholarly critique.¹⁹⁴ However, if anyone is to blame for the lack of scholarship in the writings on mental healing, it is not those who actually wrote on the subject, but those who could have done a better job, but nonetheless chose to not to. It would be easy to point out the flaws in the arguments of these homespun philosophers, but it would also be both mean-spirited and pointless. Were I to dismiss the idealist model altogether, on the grounds that Eddy's and Holmes's arguments were weak, a scholarly idealist (They *do* exist!) could rightfully accuse me of using them as straw men and insist that the idealist model would stand if reformulated. Instead, I focus on the problems inherent in the idealist model itself, which would inevitably surface no matter how well-formulated that model might be.

Although idealism explains mental healing better than dualism or materialism, there are some good reasons for rejecting it. Ultimately, it fails for much the same reasons as materialism, in that it too is a form of cryptodualism that attempts either to deny the existence of one Cartesian substance, or reduce it to a manifestation of the other. Most idealist philosophies, although they publicly proclaim monism, are fraught with dualist overtones. For example, Berkeley offered two, radically different modes of existence: *percipere* (to perceive) and *percipi* (to be perceived). Although his was not a dualism of mind and matter, it was nonetheless a dualism of perceivers and perceptions. Mary Baker Eddy, although she denied the reality of matter, nonetheless took considerable pains to contrast it with Spirit. Like her materialist counterparts, she explicitly denied mind-matter interaction, saying that matter and Spirit cannot "mingle."¹⁹⁵ Ernest Holmes was less dualistic, but his views were panexperientialist as much as they were idealist.¹⁹⁶

¹⁹² Holmes, Eddy, 207.

¹⁹³ Holmes, 109–10.

¹⁹⁴ The idealist model discussed here is that of Christian Science and New Thought. Other forms of idealism, such as those of the nineteenth-century Hegelians, and those of the Hindu-Buddhist schools may not be subject to this kind of critique. This is addressed in Chapter 11, when we review some possible objections of idealists.

¹⁹⁵ Eddy, viii, 72, 73, 75, 97, 110, 173, 186, 223, 278, 281, 468, and 479.

¹⁹⁶ Holmes, 103, 113–4.

As one might expect, idealism has some problems in common with materialism, i.e.; it contradicts both fact and hard-core common sense. As the materialist attempts to reduce mind to a mere property of matter (reductive materialism) or else deny its reality entirely (eliminative materialism), the idealist attempts to reduce matter to a mere creation of mind (New Thought or Berkeley) or deny its reality entirely (Christian Science). Materialists would substitute properties of matter for subjectivity; idealists would substitute the mental activities of observers for the properties and activities of things observed. Under materialism, genuine mental causation is impossible; under idealism, genuine body-to-mind and body-to-body causation is impossible. Under materialism the mind of the observer is impotent, under idealism, omnipotent. Neither describes its power as we experience it.

Eliminative Idealism is Self-refuting

As Searle said of theories that deny the existence of consciousness, any theory that denies the existence of the material world has also produced its own *reductio*. Anyone who writes, speaks, or thinks is presupposing the existence of a material world in the very act of doing so. If the person is speaking, she is using her vocal chords. If she is writing, she is using her hands, as well as a writing instrument. If thinking, she is presumably using her brain. Thus, the denial of the existence of the material world is absurd on its face.

No Accounting for Mental Creation

Surprisingly, idealism also fails to account for mental causation. Its theory of creation is (somewhat ironically) not unlike that of realist Thomas Aquinas. Spirit creates by contemplation. However, like the mystery of mind-matter interaction in dualism and the problem of emergence in both dualism and materialism, the idealist notion of creation-by-contemplation is also problematic. The explanation that the mind can create things in much the same way as it creates thoughts both begs the question and raises new problems. It begs the question, because it fails to explain how a mind can create a dream, fantasy, ratiocination, belief, or any other thought, let alone a world. The additional problems that it creates are those of explaining how we can distinguish *mere* thoughts from actual things, when both are created by the same power acting in the same way.

No Accounting for Efficient, Physical Causation

In idealist systems, the only form of real influence is psychokinesis. Idealists often apply the model of Plato's cave, in which matter, like Plato's shadows, is merely the effect of unseen mental activity. Consider the following account of causation by Ernest Holmes:

The objective form to which we give our attention is created from the very attention which we give to it. The objective is but the reflection of the subjective state of thought. Life is a blackboard upon which we consciously or unconsciously write those messages which govern us. We hold the chalk and the eraser in our hand but are ignorant of this fact. What we now experience we need not continue to experience but the hand which holds the eraser must do its neutralizing work.... Life is a motion picture of subjective causes. What is the screen and are the figures real? Yes and no. Real as figures but not self-created, not self-perpetuating. Happy is the one who holds the projecting machine firmly in his conscious thought and who knows how to make conscious use of it.¹⁹⁷

The way in which we use our “chalk” and “eraser” is largely a function of our beliefs. So Mary Baker Eddy writes:

The cause of all so-called disease is mental, a mortal fear, a mistaken belief or conviction of the necessity and power of ill-health; also a fear that Mind is helpless to defend the life of man and incompetent to control it. Without this ignorant human belief, any circumstance is of itself powerless to produce suffering. It is latent belief in disease, as well as the fear of disease, which associates sickness with certain circumstances and causes the two to appear conjoined, even as poetry and music are reproduced in union by human memory.¹⁹⁸

Unfortunately, these models do not explain how psychokinesis works any better than they explain how the contemplative process can create. Idealism, therefore, leaves us with Hume’s account of efficient causation as the result of our thinking habits, i.e., fixed beliefs about the world. The laws of physics only apply because thinking makes them so. All power lies within the observer.

Although the evidence does indeed suggest that thoughts are powerful, it does not suggest that they are *all powerful*. Under the idealist account of causation, we should all be omnipotent. I should be able to enter a twelve-step program, kick the habit of gravity, and learn to walk on water or levitate. The proposition that our thoughts have this kind of power is not substantiated by fact.

One of the implications of this doctrine is that all physical cures are really placebos. Consistent with this doctrine, Christian Scientists eschew the use of medication. Says Eddy:

It is plain that God does not employ drugs or hygiene, nor provide them for human use; else Jesus would have recommended and employed them in his healing. The sick are more deplorably lost than the sinning, if the sick cannot rely on God for help and the sinning can. The divine Mind never

¹⁹⁷ Holmes, 412.

¹⁹⁸ Eddy, 377–8.

called matter *medicine*, and matter required a material and human belief before it could be considered as medicine.¹⁹⁹

Holmes took a more moderate position and never prohibited medical treatment. In fact, he regarded the incompatibility of spiritual and physical treatment as a “superstition”²⁰⁰ and gave the following instruction to spiritual practitioners:

The mental and spiritual practitioner should deal with his field alone. He is not opposed to the medical practitioner, he does not say, “I cannot treat this man if he takes a pill.” Unless the practitioner can *prove* that the man does not need to take a pill, the patient had better take it if it will benefit him.

The reason for this is that he, unlike Eddy, believed that matter and physical laws were both real, although they were real as creations of Mind. Illness and health were therefore both physical and mental. However, over time, the mental was the more powerful factor.

Man's life, in reality, is spiritual and mental, and until his thought is healed, no form of cure will be permanent. We understand that health is a mental as well as a physical state.²⁰¹

Hence, drugs and surgery can buy time for the patient to correct his thinking, even if they cannot cure or prevent disease in the end. The disease will likely recur in some form if the thinking does not change.

Although Holmes was more flexible with respect to his idealism than Eddy, both held the mind to be the only real power. However, if this were the case, affirmation, visualization, and prayer should work as well as, if not better than, conventional medicine for *all* ailments, not just those where conventional medicine is less effective. In the summer of 1996, I contracted pneumonia, with a fever of almost 104°. The doctor gave me one of the stronger forms of penicillin, and I was back to work in a week. The disease never recurred. At the time, one of my co-workers, who came from India, said to me, “You should thank God that you live in a time and culture in which this kind of medicine is available. For most of human history, and in some countries even today, you could have died from this.” Under the idealist model, prayer should work as well as antibiotics in curing pneumonia, but the facts say otherwise.

Idealists in Christian Science, New Thought and some “New Age” circles will argue that the facts are what they are on account of our collective beliefs. If the human race, collectively, had sufficient mental discipline and

¹⁹⁹ Eddy, 143.

²⁰⁰ Holmes, 320.

²⁰¹ Holmes, 190.

training, we really *could* alter the laws of physics and chemistry. They attribute Jesus's alleged walking on water, feeding the multitudes, and changing water into wine to this kind of ability to rise above the collective unconscious of the human race. We can all learn to walk on water and levitate. What is out of control is not the world, but our own thinking.

Having practiced Buddhist meditation for several years, I must agree that few of us have much control over our thoughts. Moreover, trained meditators have accomplished extraordinary physical feats (remember the burial of the Yogi Haridas). In the 1960s, the world was shocked by pictures of Buddhist monks in Vietnam, who, in protest against persecution by the Diem regime, calmly poured gasoline over themselves and set themselves afire. Such behavior may be considered reprehensible for many reasons, but the lack of self-control is not among them. Hindus and Buddhists have been developing their meditation techniques for millennia. Were the laws of physics alterable by the mere power of mental control, the masters in these disciplines would almost certainly have developed and taught these techniques by now. This is not to say that thought is not powerful. In fact, my main objective in this essay is to show how powerful it really is. However, it is not *all* powerful. Some, if not most, of the real influence in causation lies in the events themselves, not just in the minds of the observers.

William James's Arguments Against Idealism

Finally there are the arguments against all forms of monistic idealism presented by William James in *A Pluralistic Universe* and elsewhere. The first part of James's argument is that idealism is an exercise in over-intellectualization. The idealism of the nineteenth century, which was the object of James's critique, heavily emphasized the role of the intellect in determining what was real. For these idealists, James argued, reality was to be found in the abstract concepts that rendered experience intelligible — not the full, rich, and sometimes intensely aesthetic nature of experience as it is perceived. This emphasis on intellectualization inevitably leads to a somewhat barren, empty view of reality. It was a reality in which the substance of life was in the menu, not the meal.

From Green to Haldane, the absolute proposed to us to straighten out the confusions of the thicket of experience in which our life is passed remains a pure abstraction which hardly any one tries to make a whit concreter.²⁰²

²⁰² William James, *A Pluralistic Universe*, in *William James: Writings 1902–1910* (New York: Library Classics of the United States, 1987), 691.

For James there was much more that was real in the concrete, finite things experienced in every day life than there could possibly be in the idealists' concept of God.

To apply the notion of "abstraction" to the Infinite Mind of Holmes or Eddy would be a gross misinterpretation, especially of Holmes, who was as much a panexperientialist as he was an idealist. For him the finite things in life existed with all their richness *precisely because they were* manifestations of the One Mind. Our attitude towards them should be one of gratitude, wonder, and awe. Only the abstract concepts of the carnal mind, the tools of logic, are empty and devoid of liveliness. The last thing that Holmes, or even Eddy, would have us believe is that God is an abstraction.

However, James contends, contrary to idealist arguments, an all-inclusive, Infinite Mind is not required in order for the universe to be intelligible. The idealist argument James would refute is based on the Humean brand of empiricism, which says that all that experience gives us is a random stream of sense data. To render this stream of sense data intelligible, a mind is needed to determine relationships between the data and impose some sort of order on it. James summarizes the idealist position in his discussion of T.H. Green's arguments:

[R]elations are purely conceptual objects, and the sensational life as such cannot relate itself together. Sensation in itself... is fleeting, momentary, unnamable (because, while we name it, it has become another), and for the same reason unknowable, the very negation of knowability. Were there no permanent objects of conception for our sensations to be 'related to,' there would be no significant names, but only noises, and a consistent sensationalism must be speechless.²⁰³

However, James offered a different rendition of empiricism than that of Hume. In his "radical" empiricism, experience yields much more information than Hume would have us believe.

Every examiner of the sensible life *in concreto* must see that relations of every sort, of time, space, difference, likeness, change, rate, cause, or what not, are just as integral members of the sensational flux as terms are, and that conjunctive relations are just as true members of the flux as disjunctive relations are. This is what in some recent writings of mine I have called the 'radically empiricist' doctrine (in distinction from the doctrine of mental atoms which the name empiricism so often suggests). Intellectualist critics of sensation insist that sensations are *disjoined* only. Radical empiricism insists that conjunctions between them are just as immediately given as disjunctions are, and that relations, whether disjunctive or conjunctive, are in their original sensible givenness just as fleeting and momentary... and

²⁰³ James, *A Pluralistic Universe*, 756-7.

just as 'particular,' as terms are. Later, both terms and relations get universalized by being conceptualized and named. But all the thickness, concreteness, and individuality of experience exists in the immediate and relatively unnamed stages of it, to the richness of which, and the standing inadequacy of our conceptions to match it, Professor Bergson so emphatically calls our attention.²⁰⁴

In other words, the mere fact that the mind *describes* does not immediately and necessarily entail that it *prescribes*. Both the universe and its intelligibility are *given* to us, although our minds are hardly "adequate" to cope with the task of understanding it.

From that, James argues that an Infinite Mind is likewise unnecessary to hold the universe together. Instead of being connected like cherries in a bowl, events in the universe can be connected like links in a chain. James describes this as the "each-form," as opposed to the "all-form," of reality.

If the each-form be the eternal form of reality, no less than it is the form of temporal appearance, we still have a coherent world, and not an incarnate incoherence, as is charged by many absolutists. Our 'multiverse' still makes a 'universe'; for every part, tho it may not be in actual or immediate connexion, is nevertheless in some possible or mediated connexion with every other part however remote, through the fact that each part hangs together with its very next neighbors in inextricable interfusion. The type of union, it is true, is different from the monistic type of *all einheit*. It is not a universal co-implication of all things *durcheinander*. It is what I call the strung-along type, the type of continuity, contiguity, or concatenation.²⁰⁵

It is perhaps ironic that James, the implacable foe of monistic idealism, was the only major figure in the history of philosophy to take New Thought seriously.

The Practical Problem of Application

Although Norman Cousins coined the phrase "Belief becomes biology," it was the nineteenth-century New Thought and Christian Science thinkers who first put forth the concept (at least in the West). The major problem with this idea, both practical and theoretical, is that the belief in health must precede the biology of health. With respect to preventive medicine, it is not a problem. We simply reinforce our belief in our own health, and we tend to stay healthy. However, when we are sick and want to get well, a paradox confronts us. We must come to believe we are well at a time when we are in fact still sick.

New Thought and Christian Science address this problem with the doctrines of monopsychism and mistaken identity. The mortal body-mind

²⁰⁴ James, *A Pluralistic Universe*, 757–8.

²⁰⁵ James, *A Pluralistic Universe*, 778.

that gets sick is not our real identity. Our real identity is the Divine Mind, which is always whole, perfect, and complete. Prayer for health, therefore, consists of reshaping our beliefs about who we are from that of the sick, mortal body-mind to that of the Divine Spirit. Once we have realized this idea, the mortal body-mind gets well.

The problem with this approach is both theoretical and practical. Theoretically, it is an area in which the lack of clarity and consistency in the writings on mental healing begins to take its toll. By definition, to say that we are identical to the Divine Mind is to say that we are not numerically distinct from It. However, this is patently absurd. Even in New Thought and Christian Science, the Divine Mind is always regarded as one, and the finite minds are obviously many. The lack of a precise, coherent explanation of how the Divine Mind participates in the human, or vice versa, is a major problem with the idealist theories of mental healing.

The theoretical problem takes on a practical dimension when one is lying in bed with a fever of 104°, or in a hospital bed recovering from cancer surgery. Unless one is having a near-death experience, the experience of illness is anything but beatific. Yet, the idealists tell us that we must somehow convince ourselves, even in these dark moments, that we are not only healthy but one with Almighty God. I cannot speak for others, but for myself, this cognitive shift has not been possible. For these reasons, the idealist model also fails the test of rationality and adequacy.

Idealism's Real Contribution to the Discussion

Whether we accept their metaphysical views or not, most of what we do understand about mental healing came from idealists. Until now, they have stood alone in taking the subject seriously, and not all of their effort has been wasted. The idealists have put forth several propositions about mental healing, which, in spite of their vague and often inconsistent formulations, are either empirically verifiable, or, with some reformulation, philosophically tenable. The empirically testable propositions are twofold:

- Belief becomes biology.
- Belief exerts its power is in the present.

The first of these propositions is not only verifiable, but, to a large extent, *already verified*. The cancer personality type, the placebo effect, the Black Monday syndrome, and the studies of executives during the AT&T breakup all provide such verification. Further research could refine and clarify this proposition, as well as improve our methods of applying it.

The second proposition has been much less studied and tested, but it still lends itself to empirical testing. One way to test it would be to compare the effectiveness of traditional prayers of petition with the “affirmative

prayer treatment” advocated in New Thought and Christian Science. Holmes makes the following distinction between the two:

One of the questions most frequently asked about the Science of Mind is, “Are *prayers* and *treatments* identical?” The answer to this question is both Yes and No.

If when one prays his prayer is a recognition of Spirit's Omniscience, Omnipotence, and Omnipresence, and a realization of man's unity with Spirit, then his prayer is a spiritual treatment.

If, on the other hand, one is holding to the viewpoint that God is some far off Being, Whom he would approach with doubt in his thought; wondering if by some good luck he may be able to placate God or persuade Him of the wisdom of one's request — then, there is but little similarity between prayer and treatment. Nothing could bring greater discouragement than to labor under the delusion that God is a Being of moods, who might answer some prayers and not others.²⁰⁶

For Holmes and other idealists, the essential element in a successful prayer is developing the realization that one already has the desired good.²⁰⁷ To test this hypothesis, one could compare the efficacy prayers by a group of traditional believers, praying by petition with the intention of invoking God's intervention, with those of believers in Christian Science or New Thought, who use affirmative prayer with the intention of shifting their own beliefs. If the difference in the healing rates between the two groups is statistically significant, then the proposition has been statistically demonstrated. Other tests comparing the effect of affirmations made in the present versus the future tense might also be helpful.

The major philosophical contribution of the idealists is their naturalist (or, in their terminology, “scientific”) theology of mental healing. That such a theology is possible is one of the central theses of this essay. The idealists have suggested that mental healing involves Divine activity, but not supernatural Divine activity. Although I must ultimately reject their particular theology, some of its tenets could be retained — with some reformulation of the metaphysics. The most important of these is that the creative process in the universe takes place within us. Although it may be impossible to understand how one could be identical with God, it is much more plausible to believe we are somehow instantiations of a larger, creative process — even in a hospital bed. Moreover, it is equally plausible that God acts in this creative process, although God and creativity may or may not be identical to each other. Finally, the proposition that creativity is directed, at least to some degree, by our thoughts and beliefs, is not only plausible but

²⁰⁶ Holmes, 149.

²⁰⁷ Holmes, 164.

also substantiated by a large and growing body of empirical evidence. Thus, we can summarize the legacy of the idealists with three propositions:

- The creative power of the universe is active in the genesis of the individual's experience in the present.
- God is actively involved and causally efficacious in that process.
- The thoughts and beliefs of the individual can significantly affect that process, even to the point of directing it to prevent or heal an illness.

As it happens, Whitehead's process philosophical theology provides an excellent, philosophical framework for these propositions. This is the thrust of Chapter 10. However, before we move on to Whitehead's model, we must first complete and summarize our explanation of why modern philosophy has been so reluctant to tackle the issue of mental healing, and why it has failed so miserably in addressing two key philosophical issues it involves: the mind-body relationship and causation as real influence.

V. Mental Healing as a Problem for Modern Philosophy

I believe it was Einstein who said that one cannot solve a problem at the level of thinking that is creating the problem. The mind-body debate in contemporary philosophy is just this kind of an exercise in futility. In this section, I argue that the problem of mind-body interaction is fundamentally one of causation, complicated further by the enigmatic nature of the mind-body relationship, when mind and body are understood in the Cartesian sense. Neither Cartesian notion, mind nor matter, provides a framework for adequately understanding causation. For that, we need to go beyond the notions of mind *qua* mind and matter *qua* matter altogether and focus instead on notions like *creation* or *creativity*.

To some extent, modern philosophy has been unduly preoccupied with the differences between mind and matter that renders their interaction inconceivable. This is not to say that this problem is philosophically insignificant. On the contrary, it is serious enough to render dualism unintelligible, and, for some philosophers, to make materialism or idealism more attractive by comparison. However, although it is the most obvious problem, it is not the most fundamental. The real problem is that mind-body interaction is ultimately an instantiation of causation, which, per Hume, is highly enigmatic even when the interacting substances are as similar as two billiard balls. Neither mind, when conceived as sentient and intelligent substance, nor matter, when conceived as something with extension, mass, and velocity, is especially useful in understanding causation as real influence. The reason for this is that attributes such as mass, velocity, extension, sentience, and intelligence describe only the way mind and matter *already are*. They say nothing about how either minds or

molecules *come to be* what they are. Therefore, the only notion of causation that can be derived from them is that of constant conjunction — not causation as real influence. To explain causation as real influence, we would need to understand it in terms of a broader, more general theory of creation or creativity itself.

The necessary connection between causation and creativity becomes more obvious when we ask what we mean by “A causes B.” When we make this claim, we are saying that cause A is in some manner involved in the genesis or creation of effect B. This does *not* mean that, by “genesis or creation,” we mean creation *ex nihilo* in the Thomist sense. It merely means we know the nature of A’s is involvement in bringing about B. Only when we understand the process by which B comes to pass can we definitively say that A is a necessary or sufficient condition for B to occur. For example, consider the discovery of the peculiar form of pneumonia called “Legionnaires’ Disease.” When it first appeared, its origins baffled us. We knew that its victims were all attending the same convention, but we had no idea how the condition itself developed or spread. It was only later, when the disease reappeared several times under similar circumstances, that we discovered its cause, which, it turned out, had nothing to do with being in the American Legion. The cause of the disease was identified as a pathogenic bacterium that grows in the accumulated condensation in air conditioners, which, in turn can blow pathogenic bacterial spores throughout a building.

Generalizing from particular, we can say that a viable, general theory of causation for all events can be understood only in terms of larger, even more comprehensive theory of how events in general come to pass, i.e., a general theory of the *creation* of events. The development of just such a theory was the primary objective in the philosophy of Alfred North Whitehead. In attempting to formulate a theory that explains efficient causation as we experience it, i.e., as real influence, he found it necessary to develop a more general theory of creativity. In formulating that theory, he was forced, in turn, to address the mind-body problem along the way. However, this development was more than incidental. Whitehead had the foresight to see mind-body interaction as integral to the discussion of causation and creativity itself.

In the next chapter, I present an overview of Whitehead’s “process” metaphysical theory. However, in doing so, I aim to show that Whitehead is doing much more than merely offering us a panexperientialist alternative to dualism, idealism, and materialism. He has, in fact, changed the entire context of the discussion.

Chapter 10

Whitehead's Process Model

Whitehead's primary contributions to our discussion his theories of mental and physical causation as real influence and of the mind-body relationship. However, his theory of causation is also unique in taking relativity and quantum mechanics, the twentieth-century revolutions in physics, into account. As such, it is not only the most comprehensive and detailed theory of causation, it is also the most current.

The main problem with Whitehead's philosophy is also its strength. He is asking us to understand our world in a radically different way. His philosophy is both difficult to understand and easy to misunderstand. The challenge for anyone attempting to summarize his philosophy is to simply it without distorting it. To reduce this discussion to a manageable scope, I focus on four issues that directly pertain to the topic at hand:

1. Two Fallacies: Simple Location and Misplaced Concreteness
2. Whitehead's Reconstruction of Mind and Matter
3. Theory of Causation and Mind-body Interaction
4. How Psychosomatic Healing Would Occur in Whitehead's System

In discussing the fallacies of simple location and misplaced concreteness, I summarize what Whitehead believed to be two of Western philosophy's critical errors that have impeded our efforts to understand some very ordinary phenomena, such as causation and the mind-body relationship. In the fallacy of misplaced concreteness, he argues that the most fundamental units of human experience are not the minds and bodies that have hitherto been called "substances." Instead, they are momentary events, or "actual occasions of experience," that have both mental and physical aspects. This doctrine is central to his theory of mind-body philosophy. In the fallacy of simple location, he argues that events do not exist in only one place in space-time. This concept is essential to his theory of causation as real influence, because it allows for one event, the cause, to exist in some sense in a later event, the effect.

Whitehead never argued that mind and matter do not exist. He painstakingly reconstructs and reinterprets them in terms of actual occasions, and explains how our world can consist of actual occasions, as well minds and bodies, once we see that each describes a different aspect of our experience — the former, the concrete, and the latter, the abstract.

Whitehead's general theory of causation was certainly one of the primary objectives in his philosophy. Like James, he did not believe that the mind could impose causal laws upon the universe. He accepted James's

arguments that causal relationships are given to us, i.e., in some sense felt by us, in our experience. However, he realized that overcoming Hume's objections required some fundamental changes in the way we understand the world. We must cease trying to understand causation and mind-body interaction in terms of minds, bodies, substances, and attributes and begin thinking in terms of processes, events, and creativity. The basic building blocks of Aristotle's philosophy, as well as common sense, must be disassembled, examined, and re-assembled again in order to see how they really work. Like the idealists, Whitehead was willing to go beyond common sense, but unlike them, he also held himself accountable for explaining it.

In his theory of the mind-body relationship, Whitehead explains how the commonsense notions of mind and body can be understood in terms of actual occasions. He also gives us a new way of understanding what it means to be "mental" and "physical," and the role these two notions play in causation. He also explains how God interacts with the world.

The last topic, how psychosomatic healing occurs in Whitehead's system, is my own contribution to the discussion. There I outline how psychosomatic healing would occur under Whitehead's model, as well as how it explains the idealist legacy, i.e., the notion of a God and creative process operating within us and the role of beliefs in dictating biology. In fact, it explains it more completely and consistently than the idealists did themselves.

I. Two Fallacies: Simple Location and Misplaced Concreteness

Unlike some of the idealists, who felt free to dismiss certain hard-core commonsense beliefs as illusory, Whitehead believed that it was incumbent on philosophy to explain hard-core commonsense beliefs. However, his approach to common sense was one of disassembling it in order to save it, which makes his metaphysics seem paradoxical and easy to misread. On the one hand, common sense demands that we find a way to preserve the notions of mind-body interaction and efficient causation as real influence. On the other, Whitehead discovered that certain other beliefs, beliefs that are so widely held that they too might seem to be hard-core common sense, were interfering with our understanding of causation and the mind-body relationship. Therefore, it may seem, at first, that Whitehead's project was one of throwing out some hard-core commonsense beliefs in order to save others. However, a belief loses its hard-core commonsense status as soon as somebody shows how we can function in life without presupposing it in practice. At that point, it ceases to be "hard-core" and becomes "soft-core" common sense. Therefore, the success of Whitehead's philosophy depends largely on how well he reassembled the commonsense beliefs he took apart. The two main commonsense beliefs that Whitehead challenged were what he called "simple location" and "misplaced concreteness." These fallacies,

which he describes in greatest detail in *Science and the Modern World*, have misled Western philosophy in very significant ways.²⁰⁸

Fallacy of Simple Location

“Simple location” for Whitehead is the belief that the information about any event in space-time does not include information about other events happening elsewhere and at other times. Whitehead gives the following explanation of “simple” location.

[A]s soon as you have settled, however you do settle, what you mean by a definite place in space-time, you can adequately state the relation of particular material body to space-time by saying that it is just there, in that place; and, so far as simple location is concerned, there is nothing more to be said on the subject.²⁰⁹

This doctrine, according to Whitehead, eventually leads to the conclusion that no knowledge can come from experience. For Whitehead the problem gnawed at the very foundation of empirical science, in that if it were true, it would be impossible to explain the success of inductive logic or even memory.

It is at once evident that the concept of simple location is going to make great difficulties for induction. For, if in the location of configurations of matter throughout a stretch of time there is no inherent reference to any other times, past or future, it immediately follows that nature within any period does not refer to nature at any other period. Accordingly, induction is not based on anything which can be observed as inherent in nature. Thus we cannot look to nature for the justification of our belief in any law such as the law of gravitation. In other words, the order of nature cannot be justified by the mere observation of nature. For there is nothing in the present fact which inherently refers either to the past or to the future. It looks, therefore, as though memory, as well as induction, would fail to find any justification within nature itself.²¹⁰

William James had already identified the source of the problem as the doctrine of sensationism, i.e., that we know events most directly via the five senses. From James's proposition that we have non-sensory experiences that are both direct and real, it follows that experience contains much more than just sense data. Experience gives us relationships, such as that of cause and effect, as much as it does the color blue. When we concede that the present moment provides information about other events located elsewhere in space-time, simple location becomes, as Whitehead argued, a “fallacy.” According to Whitehead, it was this fallacy that misled Hume into

²⁰⁸ Whitehead, *Science and the Modern World* (New York: The Free Press, 1967), 49.

²⁰⁹ Whitehead, *Science and the Modern World*, 49.

²¹⁰ Whitehead, *Science and the Modern World*, 51.

thinking that experience gave us nothing more than an unintelligible stream of sense data, and from that proposition, that experience gives us no notion of efficient causality.

The idea that efficient causation is *not* given to us in experience not only makes empirical science impossible, but it also runs against common sense. It is from experience that we learn that touching a hot stove causes pain and blisters. Whitehead argued that experience actually *does* give us these notions, but we cannot find them in a universe understood in terms of simple location.

The Fallacy of Misplaced Concreteness

The fallacy of simple location comes from another, more fundamental fallacious belief, and that is fallacy of what he called misplaced concreteness. On the surface, it may appear that Whitehead, in arguing that simple location is fallacious, is contradicting hard-core common sense. After all, my car is in fact now in my garage. It is not both in my garage and on the freeway, nor is it in both the garage and my living room. It is where it is and nowhere else. If it is *not* simply located in my garage, I may have trouble finding it when I want to go to the store later this afternoon.

Simply put, Whitehead answers this problem by saying that, in some sense, what I understand to be my car is a very incomplete and abstract concept of what my car really is. What I understand to be my car is in fact in what I understand to be my garage. However, neither my car nor my garage, as I understand them, comprises the full reality of these things. For example, when I look at my car, it is in my experience as well as in the garage. Thus, my car is simply located in my garage only when conceived at a certain level of abstraction. Says Whitehead:

[B]y a process of constructive abstraction we can arrive at abstractions which are the simply-located bits of material, and at other abstractions which are the minds included in the scientific scheme. Accordingly, the real error is an example of what I have termed: The Fallacy of Misplaced Concreteness.²¹¹

The fallacy of misplaced concreteness is the belief that the physical objects (bodies) and mental substances (minds or souls) are the basic components of human experience. However, if what I know as my car is not really my experience of the car, then what is it? One thing it is not, contrary to Hume, is a mere stream of sense data. Instead, Whitehead would say it consists of a series of moments of my experience that he called "actual occasions." Whitehead's occasions differ from Hume's sense data in several significant ways. One of them is that an occasion includes within itself its

²¹¹ Whitehead, *Science and the Modern World*, 58.

relations with other occasions. Another is that an occasion itself is an experiencing entity, albeit a short-lived one. In its most concrete form, reality consists of these occasions, not the minds and bodies we have traditionally assumed to be the basic building blocks of our experience.

This is not to say that what we call minds and bodies do not exist. On the contrary, their existence is a hard-core common sense belief. However, the belief that these entities are the most concrete form of actual entity is not. The most concrete actual entities, he says, are occasions of experience, and they are not simply located. An experience I had yesterday, for example, is not simply in the past but also in my present experience as a memory. Likewise, my present experience will continue to exist in my future experiences. Whitehead argues that the actual entities comprising the molecules of my car are of the same nature.

In addition to giving rise to the fallacy of simple location, the notion of misplaced concreteness has misled philosophers into overusing and over-relying upon the concepts of substance and attribute in trying to understand the world. Whitehead describes how this misleading belief arose:

[S]ubstance and quality, as well as simple location, are the most natural ideas for the human mind. It is the way in which we think of things, and without these ways of thinking we could not get our ideas straight for daily use.... The only question is, How concretely are we thinking when we consider nature under these conceptions?... When we examine the primary elements of these simplified editions, we shall find that they are in truth only to be justified as being elaborate logical constructions of a high degree of abstraction. Of course, as a point of individual psychology, we get at the ideas by the rough and ready method of suppressing what appear to be irrelevant details. But when we attempt to justify this suppression of irrelevance, we find that, though there are entities left corresponding to the entities we talk about, yet these entities are of a high degree of abstraction.

Thus I hold that substance and quality afford another instance of the fallacy of misplaced concreteness. Let us consider how the notions of substance and quality arise. We observe an object as an entity with certain characteristics. Furthermore, each individual entity is apprehended through its characteristics. For example, we observe a body; there is something about it which we note. Perhaps, it is hard, and blue, and round, and noisy. We observe something which possesses these qualities: apart from these qualities we do not observe anything at all. Accordingly, the entity is the substratum, or substance, of which we predicate qualities.²¹²

Once again, Whitehead is not saying that the categories of substance and quality do not describe anything real, nor is he saying that they are useless. Instead, he is arguing that they pertain not to our experience in its most concrete form, but to abstractions from it. Because they omit so much of

²¹² Whitehead, *Science and the Modern World*, 52.

what we actually do experience, the notions of substance and quality are quite useless in our efforts to understand some obvious facts of experience, such as causation and mind-body interaction. Both causation as real influence and mind-body interaction are given to us in experience. However, they cannot be understood when we limit our thinking about experience to the abstract level of substance and quality.

With respect to this discussion, it was the attachment to substance-attribute thinking that left Descartes puzzled over the riddle of dualistic interaction. The mind, when conceived as nothing more than a thinking thing, cannot interact with the body, when the latter is conceived as nothing more than an extended thing with mass and velocity. However, neither the notions of a thinking thing, nor that of an extended thing, fully describe the experiences from which we come to know minds, bodies, and their interaction. To understand mind-body interaction, we need to think of minds and bodies in terms other than those of substances with purely private qualities, i.e., qualities inherent in the substances themselves. My present experience, for example, is what it is because it includes sights, sounds, and sensations from my body. My mind, when understood as a temporally ordered society of occasions of experience, is therefore construed by relations, not private qualities.

Once we realize that our commonsense notions of substance and attribute are based on abstraction and leave out much of what we experience, then we can begin looking into other aspects of nature that have hitherto been ignored. Only then can we begin to understand how experience gives us notions like causation as real influence and mind-body interaction.

II. Whitehead's Reconstruction of Mind and Matter

Whitehead never claimed that substance and attribute thinking was false. On the contrary, he acknowledged that these categories were highly useful, if not indispensable, in our daily lives. If they are not the basic building blocks of our experience, and are instead mere abstractions, we need to know how we abstract these notions from the concrete. To understand things like minds and bodies as abstractions from actual occasions, we need to look at how the notions of mind and matter are abstracted from actual occasions.

The basic unit of reality for Whitehead is the "actual entity," which he uses almost synonymously with the term "actual occasion." (The only the exception is God, who is an actual entity but not an actual occasion.) Whitehead defines an actual entity as follows:

Each actual entity is conceived as an act of experience arising out of data. It is a process of 'feeling' the many data, so as to absorb them into the unity of

one individual 'satisfaction.' Here 'feeling' is the term used for the basic generic operation of passing from the objectivity of the data to the subjectivity of the actual entity in question....

An actual entity is a process, and is not describable in terms of the morphology of a 'stuff'.... In Cartesian language, the essence of an actual entity consists solely in the fact that it is a prehending thing (i.e., a substance whose whole essence or nature is to prehend)."²¹³

The process involved in each actual entity or occasion is the unification of multifarious facets of an experience into a final complex feeling, which Whitehead called "satisfaction." It is an act reminiscent of inscription found on U.S. coins: *E pluribus unum*.

Whitehead calls this process of unification "prehension," which is like "apprehension" or "comprehension," except that it need not be intellectual.

[A] prehension involves three factors. There is the occasion of experience within which the prehension is a detail of activity; there is the datum whose relevance provokes the origination of this prehension; this datum is the prehended object; there is the subjective form, which is the affective tone determining the effectiveness of that prehension in that occasion of experience.²¹⁴

All prehension must take place within an occasion of experience. Within that occasion, there is the datum that is presented to that occasion, but there is also its meaning, value, or significance to the occasion in which it is prehended. A single occasion includes many prehensions.

An occasion exists in two modes. It exists first as a subject, during which it prehends prior occasions (physical prehensions) and possibilities (conceptual prehensions) and then unifies these prehensions into a "satisfaction." Then the occasion ceases to be an experiencing subject in its own right, and becomes a superject, an object or datum for subsequent occasions. In this way, it transcends simple location, and continues to exist as an experience in other occasions that may be spatially and temporally quite distant.

The first and second phases of prehension are the physical and mental "poles" respectively of an occasion in the making. The following table gives a brief summary of the characteristics of each of these two poles.

²¹³ Whitehead, *Process and Reality*, Corrected Edition, David Ray Griffin and Donald W. Sherburne, ed. (New York: The Free Press, 1978), 40–1.

²¹⁴ Whitehead, *Adventures of Ideas* (New York: The Free Press, 1933), 176.

Characteristic	Mental Pole	Physical Pole
<i>Determination</i>	Partially self-determining	Fully determined
<i>Prehension of</i>	Eternal objects	Previous occasions
<i>Causal mode</i>	Final	Efficient
<i>Innovation</i>	Introduces novelty	Introduces no novelty

The physical pole does not involve self-determination on the part of the occasion. It involves taking what is given from the past — no more, no less. In the act of prehending non-actualized universals, the mental pole can, to varying degrees, introduce novelty into what the occasion will finally become. It is therefore the self-determining aspect of the occasion. As Griffin puts it:

To attribute mentality to all actual entities is to attribute at least an iota of spontaneity to them, a germ of what becomes conscious self-determination in us.²¹⁵

The physical pole comprises the sum total of all *past* occasions prehended by the *present* occasion. The mental pole begins by prehending abstract notions of what is possible, which Whitehead calls “eternal objects.” In more complex occasions, it may also experience a sense of relationship between what is possible and what has been given from the past in the form of a feeling. Whitehead calls the subjective form of this kind of occasion a propositional feeling.

The physical pole is where efficient causes from the past exert their influence on what the present occasion will become. In the physical pole, past occasions inject a tendency for the present occasion to repeat the past, in that the past occasions constitute, more or less fully, what the present occasion is to become. As Griffin says:

The physical phase is the phase of compulsion, as it is the effect of the efficient causes from the past, which impose their in-formed energy upon the present occasion, which will in turn impose itself with compulsive force upon subsequent events.²¹⁶

The mental pole exerts final, as well as some formal, causation. It determines what the occasion will become in terms of universals and values. It decides how the occasion “feels,” and what universal categories apply or do not apply to it.

²¹⁵ Griffin, *Unsnarling the World-Knot*, Unpublished Manuscript, Appendix A, 196. Passages omitted in published work.

²¹⁶ Griffin, *Unsnarling the World-Knot*, Unpublished Manuscript, Appendix A, 196.

The physical pole is the particular. It is the prehension of fully instantiated actual occasions that have already occurred individually. The mental pole begins with the prehension of universals, the “eternal objects,” then integrates them with the physical pole. By relating occasions in the physical pole to its set of universals, the mental pole can inject novelty into the occasion. Its capacity to inject novelty varies directly with its complexity, i.e., the size and complexity of the set of available eternal objects, as well as the number and complexity of occasions it prehends from the physical pole. The more complex the occasion, the more novelty it can introduce, and the greater its degree of self-determination.

Even the lowliest occasions — those that comprise molecules, subatomic particles, and even events in “empty space” — have a “mental” pole. However, this does not mean Whitehead thinks these entities are capable of anything like rational or abstract thought. Instead, these occasions exercise very minimal self-determination. They do prehend possibilities along with concrete occasions given in the past, but the novel possibilities they can prehend are very limited and vary little from one occasion to its successors.²¹⁷

In Whitehead's ontology, these prehending occasions, which are in some sense both mental and physical, are the only actualities there are. They are the only things that can be said to “exist” in the fullest sense, in that they are the only things that can exert either efficient or final causation (self-determination). Whitehead calls the theory that only actual occasions can do anything the “Ontological Principle.” As he says, “The ontological principle can be summarized as: no actual entity, then no reason.”²¹⁸ All causality with respect to actual events takes place between actual entities, in the case of efficient causation, or within actual entities, in the case of final causation. All creativity, in other words, is exerted by actual entities.

The dipolar nature of an individual occasion is one of the two major meanings for the terms “mental” and “physical” in Whitehead's philosophy. However, this sense of the meaning of these terms does not correspond to the mental and physical substances of Descartes. However, the two senses of the mental-physical dichotomy are indeed related. The basic units that comprise what Descartes called mental and physical substances are the same for both, i.e., dipolar actual occasions of experience that are both mental and physical in the first sense. *The difference between a mental substance (enduring individual) and a body (aggregate) in Whitehead's*

²¹⁷ This is why Griffin prefers the term “panexperientialism” to describe Whitehead's philosophy over William James's term “panpsychism.” The latter suggests that the world is composed of fully developed psyches, which endure over time and are capable of conscious experience. See Griffin, *Unsnarling the World-Knot*, 77–78.

²¹⁸ Whitehead, *Process and Reality*, 19.

philosophy is not due to the fact that they are composed of different kinds of things, but to the fact that they are different configurations of the same kinds of things. In other words, what Descartes called mental and physical substances are different because they are organized differently.²¹⁹

Whitehead therefore rebuilds the notions of minds and bodies in terms of the ways in which actual occasions are arranged. Both minds and bodies consist of occasions linked together in a “nexus” (plural “nexus,” pronounced “necksoos”). Whitehead defines the term “nexus” as follows:

[A] nexus is a set of actual entities in the unity of the relatedness constituted by their prehensions of each other, or — what is the same thing conversely expressed — constituted by their objectifications in each other.²²⁰

Some nexus, which Whitehead calls “societies,” have a social order that allows us to understand them as “substances” in the Cartesian or Aristotelian sense, i.e., to think of them as an individual entity. There are two types of societies relevant to this discussion: enduring individuals and aggregates, which comprise, in commonsense terms, mental and physical entities respectively. An enduring individual is a purely temporal society of occasions, all of which share a common pattern, in which each successive occasion prehends its predecessor, and, in turn, is prehended by its successor. As Whitehead puts it:

The simplest example of a society in which the successive nexus of its progressive realization have a common extensive pattern is when each such nexus is purely temporal and continuous. The society, in each stage of realization, then consists of a set of contiguous occasions in serial order. A man, defined as an enduring percipient, is such a society. This definition of a man is exactly what Descartes means by a thinking substance.²²¹

The distinguishing feature of the societies traditionally called “mental substances” is their purely temporal contiguity. They are all ordered as unidimensional, temporal series. They are “mental,” in the sense of having an enduring, individual experience, not because they are composed of entities of a different kind, but because their social order is purely linear and temporal. In such societies, efficient causation occurs from member to

²¹⁹ I use the term “mental substance” here instead of “mind” deliberately. What Descartes considered a “mind” would for Whitehead consist of a temporally ordered society of highly complex occasions. For Descartes, these sophisticated mental substances were the only form of mental substance in existence. (Even his dog lived without one.) However, for Whitehead there are temporally ordered societies of much simpler occasions as well, which would be present not only in dogs, but also, to varying degrees of complexity, in molecules and atoms as well.

²²⁰ Whitehead, *Process and Reality*, 24.

²²¹ Whitehead, *Adventures of Ideas*, 205.

member, but each individual member exercises some degree of self-determination individually and can make choices that affect future occasions in the series. Thus, Whitehead says:

Societies of the general type, that their realized nexus are purely temporal and continuous, will be termed 'personal'. Any society of this type may be termed a 'person'. Thus, as defined above, a man is a person.²²²

It follows that not all persons are persons in the sense of being human. By this definition, any linear series of occasions in this configuration, even if in an atom or a molecule, is a "person."

What we understand as physical objects or bodies are called "aggregates," or, more precisely, "aggregational societies." Griffin describes what distinguishes these societies from those that comprise enduring individuals.

One type of spatiotemporal society can be called aggregational. The point of this term is that the society as a whole, such as a rock, does not have any overall experiential unity that allows it to feel and act as an individual. The term "aggregational" should not be taken to mean that the thing in question is a mere aggregate, like a pile of sand, that has no real cohesive unity. A rock or a billiard ball is an aggregational society, not just an aggregate. Nevertheless, it is like a pile of sand in having no experiential unity and thereby no power to respond to its environment as a unity with even the slightest degree of freedom.²²³

Unlike enduring individuals, aggregational societies include occasions that are contemporaries. They move together because their constituent occasions all operate according to the same dynamic forces, not because a dominant occasion in the society directs all the others. Says Griffin:

[A] rock appears to be a single actuality, but modern science has taught us that it is comprised of billions of distinct individuals....The gravitational force causing the rock to fall operates on its individual atoms, not upon the rock as such.... But now we know that the apparent unity of action is an illusion generated by the behavior of billions of constituents.²²⁴

The society as a whole has no self-determination. What governs the behavior of these societies are the principles described by quantum mechanics and the law of averages, which, when combined, give us the laws of physics and chemistry. This is why physical objects, which do in fact consist of experiencing entities, have been misunderstood to be "vacuous

²²² Whitehead, *Adventures of Ideas*, 205.

²²³ Griffin, *Unsnarling the World-Knot*, 186.

²²⁴ Griffin, *Unsnarling the World-Knot*, 173.

actualities," a vacuous actuality being "a *res vera* devoid of subjective immediacy."²²⁵

Where Western philosophy went wrong was in looking to substance and attribute as the basic concepts of reality. This practice led to the Cartesian notion that there were two kinds of entities, those with material attributes and those with mental ones, and the paradox of their apparent interaction. Whitehead contended that there is no interaction at the level of abstraction in which minds and bodies are thus understood. The interaction involves not two substances with completely different natures acting upon one another, but the action of prior occasions in one nexus on subsequent ones in others. This is how what we call mind-body interaction takes place. Occasions that comprise the enduring individual (i.e., the mind) act upon, or are prehended by, other occasions in the aggregational society, i.e., the body, or various parts thereof. All efficient causation, including that of mind-body interaction, is of this form. Modern philosophy has failed to understand either causation or the mind-body relationship, because both occur at the concrete level of individual actual occasions, not to the abstract level of substances and attributes.

III. Theory of Causation and Mind-body Interaction

It was Hume who showed that we cannot explain efficient causality at the abstract level of understanding. What the earlier rationalists had believed were things "in themselves," the colorless, odorless extended substances, were conceived as nothing but configurations of sense data, and sense data yield no notion of causality. This left Hume and many later philosophers wondering where the idea of causality originated in the first place. Hume attributed it to mental habits, Kant, to the nature of the understanding itself.

Whitehead's ontology dispenses with the notion of the colorless, odorless extended substances altogether. Extension, mass, and velocity, as conceived independently of any actual experience, are not external realities at all, but eternal objects that have no actuality in themselves. They only become real when manifested along with more primitive feelings such as color and odor in actual experiences. Therefore, for Whitehead there are "things in themselves," but they are not vacuous actualities. They are all analogous to the occasions of our own experience.

For Whitehead, there are two modes of experience: causal efficacy and presentational immediacy. The latter is the mode in which we experience the objects of sensory perception, and it includes experiences that occur at a fairly high level of abstraction. The former is the direct experience of a past occasion by a present one. It is at this level that record of the past is

²²⁵ Whitehead, *Process and Reality*, 29.

transmitted into the present; here is where efficient causes actually induce their effects.

However, perception in the mode of causal efficacy is not the mode in which we experience things with "clarity and distinctness," to use Descartes's terms. It is in the mode of presentational immediacy in which precise, geometrical, notions such as shape, size, and motion are instantiated. Because most philosophers, like Descartes, prefer to think clearly and distinctly, they have focused on the mode of presentational immediacy in understanding the world. Although this is often very productive, the opportunity to understand things like causation and mind-body interaction is lost. It is as if we have chosen to eat the menu instead of the meal, because it is, after all, easier to read, and we really *do* want to know what we are eating! Then we wonder where the flavor went!

In Whitehead's system, we actually "feel" causal relationships between prior events and subsequent ones, as well as in the efficacy of our own bodily events on our experience. (This is in contrast to Hume and Kant, who held that causal relationships are not given to us in experience, but are fabricated by the mind, either out of habit [Hume] or out of the basic nature of the understanding [Kant].) Whitehead describes how an experience in the mode of causal efficacy works with respect to a man blinking at the flash of a light.

In the dark, the electric light is suddenly turned on and the man's eyes blink. There is a simple physiological explanation of this trifling incident.

But this physiological explanation is couched wholly in terms of causal efficacy: it is the conjectural record of the travel of a spasm of excitement along nerves to some nodal centre, and of the return spasm of contraction back to the eyelids. The correct technical phraseology would not alter the fact that the explanation does not involve any appeal to presentational immediacy either for actual occasions resident in the nerves, or for the man. At the most there is a tacit supposition as to what a physiologist, who in fact was not there, might have seen if he had been there, and if he could have vivisected the man without affecting these occurrences, and if he could have observed with a microscope which also in fact was absent.²²⁶

However, for Whitehead, this vague transport of feelings from one occasion to another is how efficient causality occurs. "It must be remembered that clearness in consciousness is no evidence for primitiveness in the genetic process: the opposite doctrine is more nearly true."²²⁷ The great mistake of modern philosophy, as exemplified in Hume and Kant, was to attempt to find causality in those aspects of experience that are clear and distinct, i.e., the mode of presentational immediacy.

²²⁶ Whitehead, *Process and Reality*, 174.

²²⁷ Whitehead, *Process and Reality*, 173.

Let us now dismiss physiology and turn to the private experience of the blinking man. The sequence of percepts, in the mode of presentational immediacy, is flash of light, feeling of eye-closure, instant of darkness.... According to the philosophy of organism, the man also experiences another percept in the mode of causal efficacy. He feels that the experiences of the eye in the matter of the flash are causal of the blink. The man himself will have no doubt of it. In fact, it is the feeling of causality which enables the man to distinguish the priority of the flash; and the inversion of the argument, whereby the temporal sequence 'flash to blink' is made the premise for the 'causality' belief, has its origin in pure theory. The man will explain his experience by saying, 'The flash made me blink'; and if his statement be doubted, he will reply, 'I know it, because I felt it.'

The philosophy of organism accepts the man's statement, that the flash made him blink....Hume by a sleight of hand confuses a 'habit of feeling blinks after flashes' with a *feeling of the habit of feeling blinks after flashes*.²²⁸

Like James before him, Whitehead viewed the relationship of cause and effect as something *felt*. It is therefore not something that is imposed on a stream of sense data by the mind, but something "given" to the experiencing subject. However, the experiencing subject is not, in this case, a mental substance, and what is "given" is not a colorless, odorless extended thing with mass and velocity. The distinction between self and other, in the primary perceptual mode, is more temporal than spatial. The experiencing subject is a single, momentary occasion. The "other" that is given to it is own past, as well as its own body.

Efficient causality occurs on account of the transitive nature of occasions, i.e., their tendency to transmit their past into the present, and, through the present, to the future. In the case of primitive occasions, there is little or no possibility for the introduction of novelty. Primitive occasions have a very limited set of subjective aims and eternal objects from which they could conceive of novelty to bring into themselves. However, with more complex occasions, such as those that comprise a human experience, the available eternal objects and subjective aims are much greater. The actuality given from the past is compared and contrasted with known eternal objects. Out of this contrast, the present occasion actually gives *meaning* (to use the term employed by Larry Dossey) to that which it receives from the past. The more complex the occasion, the more new possibilities it can bring into its own experience, and the greater is its capacity for self-determination.

In introducing novelty into an occasion, the mental pole provides the possibility for change, as well as some degree of freedom, in every occasion. Thus freedom, change, and efficient causality, all precepts of hard-core

²²⁸ Whitehead, *Process and Reality*, 175.

common sense, can coexist. There is efficient causality, in that past events actually enter and become the content of present ones. To that extent, the past determines the present. However, each occasion also has a link to eternity, the eternal objects that exist outside of space-time in the primordial nature of God. It is this connection to eternity that enables each occasion, especially the more complex ones, to give new meaning to the past and alter causal sequences.

In Whitehead's system, the notion of "mind-body interaction" can be misleading, because no real interaction occurs at the level of abstraction in which we understand things as "minds" and "bodies." There is mind-body interaction, but it cannot be understood in terms of a mental substance acting on a material one, or vice versa. What occurs is the action of prior occasions, which can be part of a dominant, temporally ordered society, on subsequent contiguous occasions. Likewise, contiguous occasions that are not part of the dominant society can act on those that are. The former would be mental (mind-to-body) and the latter, body-to-mind, causation.

Mental causation, as it occurs in either psychosomatic healing or in simply raising my arm, can actually mean several different things. There are two senses in which it occurs within a single occasion itself. The first of these is an occasion's direct prehension of eternal objects as possibilities, i.e., the mental pole of the occasion itself. In the ingression of an eternal object into the occasion, the eternal object causes, to some extent, the occasion to be what it finally becomes. This is how mental causation effects change or novelty, including a change from sickness to health, or vice versa. The second of these is what Whitehead calls a "hybrid physical" feeling.²²⁹ A hybrid physical feeling is called "physical" because it stems from a prehension of past occasions. Its mode of causal efficacy is therefore efficient, not final. However, it differs from a pure physical feeling in that it involves prehending aspects of those occasions that originated in the mental poles of past occasions. Thus, it could be called a second-hand, or passed-through form of mental causation. It does not effect novelty, but, like purely physical feelings, it merely tends to perpetuate the repetition of past events.

A different kind of mental causation altogether occurs between occasions that comprise an enduring individual and those in adjacent nexus. Charles Hartshorne coined the phrase "compound individual" to describe entities like the human body-mind, which consists of both an enduring individual and an aggregate — acting as a unit.²³⁰ In compound individuals, the enduring individual dominates the aggregate, as Leibniz's soul monad was the "dominant monad" in the body. The major difference is that, unlike

²²⁹ Whitehead, *Process and Reality*, 246.

²³⁰ Griffin, *Unsnarling the World-Knot*, 163–217.

Whitehead's enduring individuals, Leibniz's monads were not composite societies of occasions, but indivisible entities in themselves.

In a compound individual, certain occasions in an aggregational society have an unusual affinity with the occasions in an enduring individual. In a human being, the occasions that comprise the brain are presumed to be of that type. In prehending the occasions of the enduring individual, brain-tissue molecules are causally affected by it, and the result is mental causation as Descartes understood it (or failed to understand it). Likewise, this affinity between the occasions of the enduring individual and those of gray matter enable the former to receive input from the latter.

In truth, we do not know the exact nature of this affinity between mind and brain occasions. However, we presume that some similarity in their natures enables them to be sympathetic, or even empathetic, with each other, i.e., they must be capable of having experiences that are at least in some sense similar. This is admittedly a leap of faith, because the only way to verify this presumption is to experience being both a brain cell and a complete human — and then compare the two experiences. However, the leap of faith is much smaller than that of believing that two substances with no attributes in common can interact (dualism), or that the mind is completely reducible to the brain (materialism), or that the entire material universe is but a figment of some mind (idealism).

Whitehead has therefore attempted to explain both efficient causation and the mind-body relationship by looking beyond substance-attribute thinking, and he is framing the discussion of these issues in a whole new context. Whether we ultimately accept Whitehead's interpretation or not, he is, at the very least, attempting to go beyond the level of thinking that is creating the problem.

IV. How Psychosomatic Healing Would Occur in Whitehead's System

Whitehead's model of causation is consistent with the great complexity of psychobiophysical processes, but more importantly, it explains both the power of thoughts and beliefs and the stubbornness of facts. Facts are stubborn, because they have already happened; we cannot go back and change them. They are fixed in what Whitehead called "objective immortality."²³¹ On the other hand, thoughts and beliefs can greatly influence the ingression of eternal objects into an occasion via the mental pole. In Whitehead's terminology, beliefs shape the nature of actual occasions by setting up a predisposition of "adversion" (turning towards) those eternal objects that are congruent with those beliefs, and of "aversion" (turning away from) those that are not.²³² An occasion that occurs in

²³¹ Whitehead, *Adventures of Ideas*, 193.

²³² Whitehead, *Process and Reality*, 276.

sequence dominated by negative, morbid, thoughts and beliefs will tend to feel eternal objects consistent with those beliefs. An occasion filled with optimism and enthusiasm will tend to inject more auspicious possibilities. Thoughts and beliefs can therefore drastically affect how an occasion uses whatever degree of self-determination it possesses. This is especially true of fixed or persistent beliefs, which exert this kind of influence continuously over a long time.

To show how this might work with respect to health, we can look at the placebo effect. Suppose the subject of a medical experiment is told that a fluid, which is a solution of sugar and a little alcohol in water, is a powerful medicine that causes warts to fall off. The subject then takes the syrup and envisions the reality of the warts disappearing — with considerable conviction that it is about to happen.

The causal chain begins when a high level occasion of the patient's mind-nexus first perceives (and believes) that the formula works. The initial feeling is a complex propositional one. However, it carries with it a feeling tone of optimism with respect to warts. When prehended by other occasions in various parts of his brain, this feeling tone is passed from the brain to other parts of the nervous and immune systems, initiating a psychoneuroimmunological chain reaction. The feeling goes from the neurons in the brain to the occasions that constitute the neurotransmitter molecules, as well as the neurons that carry them. It then goes to the immune system glands that take it as a signal to start producing appropriate antibodies, which eventually destroy the viruses that are causing the warts. Alternatively, the message goes to the circulatory system, which restricts the capillary blood supply to the infected tissues, causing them to die and fall off. In either case, the propositional feeling of warts disappearing is passed on to lower level occasions at whatever level they can prehend it, and the placebo works. The lower-level occasions in the chain probably do not fully prehend the initial propositional feeling. However, they do prehend enough of its nature to respond in a healthy way. Affirmations, hypnosis, and imagery could work the same way.

The theory also explains why mental causation may *not* be sufficient to effect a healing. Suppose a different patient has metastatic cancer of the spleen, one of the most deadly forms of cancer. The doctors, out of desperation, give the patient the same solution, after all traditional forms of medical therapy have failed. The psychoneuroimmunological chain reaction starts in the same way. However, this time the occasions comprising the cancer cells are deeply habituated in the pattern of uncontrolled mitosis. Subjectively, they might be experiencing an orgy of cellular delight in the process. Chemically, they are predisposed to continue reproducing — at a much faster rate than the immune system, which may already be impaired by spleen damage and other factors, can handle. In this case, the

biochemical disease process overwhelms the placebo effect, and the patient succumbs.

The strength of Whitehead's model is that it describes mental healing as it actually occurs, explaining both its successes and its failures. It also reflects the complexity of actual mind-body interaction as it occurs, in which both psychological and bodily factors can play a role at any stage. It addresses the following observation that Cousins and Cassileth made in their joint statement: "The reciprocal mind/body relationship is complex. We must be aware equally of both the potential power and the limitations of attitudes in their effects on health and disease."²³³

Whitehead's model also explains the legacy from New Thought and Christian Science, were outlined in Chapter 9 as follows:

- The creative power of the universe is active in the genesis of the individual's experience in the present moment.
- God is actively involved and causally efficacious in that process.
- The thoughts and beliefs of the individual can significantly affect that process, even to the point of directing it to prevent or heal an illness.

Under Whitehead's model, there is a single creative power in the universe at work in every occasion of experience. The main difference is that Whitehead, unlike the idealists, made a clear distinction between God and creativity. Although all creativity involves God, God is not the creative process per se. Under the idealist models, God, Mind, or Spirit is the creative process. Believers can rest assured that the Process model, although it is a natural theology of healing, is still theological. God is involved in all forms of healing, because God, as the source of all novelty, is the source of all change. However, God is not acting supernaturally here. Psychosomatic healing occurs by the same, natural process as all change.

Secondly, Whitehead's model explains the role of thoughts and beliefs in inducing sickness or health. The beliefs of the individual affect the aversion/aversion reaction of any occasion to any eternal object, thereby significantly determining the extent and nature of any novelty introduced. However, there is one aspect of the idealist model that is definitely *not* supported by Whitehead: the prohibitions against the use of conventional medicine. This makes sense only under the idealist model, in which the mind is omnipotent. The Process model does include ordinary physical (bodily) causation, and with it, the need for conventional medical treatment.

Finally, it also explains the idealist notion that the point of power is in the present moment. If thoughts and beliefs are creative in the sense just described, their causal efficaciousness is not exerted in the passing of one

²³³ Cousins, *Head First*, 215.

occasion into another, but *within* individual occasions, i.e., in the ingression of novel eternal objects into the occasion. This happens only when the occasion is acting as an experiencing subject, i.e., in the present moment. Thus, beliefs and belief systems exert their power in the present moment.

The Process model also offers a practical advantage: It is easier to believe. There are two senses in which this is so. One is that it describes both human experience and the phenomenon of mental healing much more accurately, in that it both affirms physical causation and thereby explains the limitations of mental healing techniques. This congruence with experience makes it far more palatable for anyone with a predisposition towards realism. The second is that it does not ask an afflicted individual to believe she is God in order to effect a mental healing. That can be difficult even for the healthy. We need only know that, in each moment, the creative process is unfolding within us, and that all the possibilities inherent in the primordial nature of God are available. The model therefore offers us not only grounds for optimism, but *credible* grounds for optimism, and, in that credibility, there is greater salutary power.

Chapter 11

Objections, Replies, and Conclusion

This chapter is a discussion of the foreseeable objections against Whitehead's model as a metaphysical framework for psychosomatic healing, and my replies to those objections. It ends with a conclusion that attempts to accommodate these objections.

I. Objections and Replies

To date, Whitehead's system has found little acceptance by either philosophers or the health care industry. Much of this rejection can be traced to the materialist bias in twentieth-century science and philosophy, as well as the intellectual challenge of understanding Whitehead's model. However, these attitudes have nothing to do with the merits of the Process model itself. On the other hand, there are some legitimate reasons to reject, or at least question, the Process model. I have divided this discussion according to philosophical model, i.e., the objections of materialists, dualists, idealists, and those that may be shared from multiple perspectives.

Objections of Materialists

A materialist could introduce at least two arguments that have considerable merit. One of these is that there are good reasons for restricting science to its traditional, material domain. Observation is essential to the scientific method, and the material world is what we can observe. Kant, as well as others, such as the logical positivists in this century, have argued that the domain of science should be limited to that which can be empirically verified. Can there really be any intelligible discourse about mentality per se at all, when what we are attempting to observe is observation itself? It would make sense to say that we cannot observe, without significant distortion, the act of observation itself.

I agree that we cannot put one of Whitehead's occasions under a microscope to study. However, science accepts the existence of many things that do not lend themselves to direct observation, e.g., subatomic particles and (with some controversy) black holes. Physicists posit the existence of such entities, because they help explain more observable phenomena. Whitehead's actual occasions serve a similar function with respect to mind-body interaction. Mind-body interaction is true by hard-core common sense. The question is not *whether* it happens, but *how* it happens. The materialist paradigm fails completely in this regard. Although Whitehead's model may have its problems, they are far less than those of either materialism, dualism or even idealism.

Another materialist objection is that there may be a materialist ontology of psychosomatic healing. A materialist might say, "I accept the idea that my brain affects my health. Psychoneuroimmunology, if it proves anything, proves the importance of the brain in healing. Now more than ever are we likely to find a 'natural' (i.e., materialist) explanation for what we call psychosomatic healing, especially when we consider some of the new discoveries in the 'science of chaos,' in which complex, but completely insentient, far-from-equilibrium material entities like weather systems appear to exhibit downward (i.e., whole-to-part) causation and self-determination. Might the body be just such a far-from-equilibrium system, whose functions are fully explicable in terms of these newly-discovered forms of physical causation and psychoneuroimmunology? Why accept a radically new paradigm when we have not yet fully explored existing ones."

Personally, I would welcome this response from materialists, for it would mean that at least some of them are beginning to take psychosomatic healing seriously — a major, positive step in its own right. Moreover, if they can develop a model that describes the phenomena observed as well or better than Whitehead's, I am interested in learning it — but not before then. The ball is in their court. I would encourage any materialist that thinks he can do it to go ahead.

Objections of Dualists

Many of the dualist objections will come from those committed to traditional Judeo-Christian-Islamic theology, who find a naturalist explanation of psychosomatic healing offensive on religious or theological grounds. These objections could run along any of the following lines:

- My attempt to naturalize mental healing is also an attempt to trivialize some of the miracles that are so central to certain religions, especially Christianity. I am therefore reducing the role of God in the healings in the New Testament to metaphysical and theological insignificance.
- There are other problems with the Process model, such as that of a relatively weak God with respect to the problem of evil, that render it contrary to some basic tenets of Judeo-Christian-Islamic faith.

A superficial answer to the first objection would be that the vast majority of the healings in the New Testament are *psychokinetic* healings (i.e., Jesus and the apostles healed others) and therefore lie outside the scope of this essay. However, this would be an exercise in evasiveness. If the reality of psychokinetic healing can be established to the same extent as psychosomatic healing, then I would argue that we need a metaphysical framework for it as well. However, that would be a topic for another essay.

Moreover, an application of the Process model to psychokinesis has already been introduced by at least one other Process philosopher.²³⁴

Moreover, implicit in the first objection is the view that what is theologically significant is not the fact that God heals, but that God intervenes supernaturally. In the Process model, God is still the primary healing force, in that the primordial nature of God is the source of all change and novelty, including a change from illness or injury to health. Under the Process model, God still heals, but by purely natural means. If the theological significance of the healing miracles in the New Testament is their supernatural origin, then I must concede that the objection is a valid one. However, anyone taking such a position would probably find this entire project both heterodox and unnecessary. For them, we already *have* a perfectly viable explanation for any unexplained healing: God's supernatural intervention.

With respect to other problems with the Process model, such as its approach to the problem of evil for traditional theology, I must concede that I have not attempted to answer these objections in this essay. I leave that issue to others. My purpose here is not to show that Whitehead's theory is consistent with traditional Judeo-Christian-Islamic doctrine, but that he has viable a theory that explains psychosomatic healing.

Objections of Idealists

Most of the idealist objections would come from those in Christian Science and New Thought, who would say that I am underrating the power of thought. Would it not be more healthy, they could argue, if people at least *believed* their minds were omnipotent? Whether the belief is founded in metaphysical truth or not, the belief itself is salutary. Why not let people take advantage of the power of the belief itself?

The question here is similar to that of being in denial about having a heart attack. The general calm engendered by optimistic, but false, beliefs actually serves to mitigate the condition about which the subject is in denial. There are times when the values of intellectual integrity and health appear to be conflict. My response to this objection would depend on the forum in which it is raised. If my idealist friend were himself suffering from advanced cancer, and needed all the help he could get, psychosomatic and otherwise, I would definitely not attempt to persuade him that efficient, physical causation is real. My primary concern would be his health, not his intellectual integrity, which we can address when he recovers. However, in this dissertation, intellectual integrity must take precedence over individual health. This essay is *not* intended to provide comfort and inspiration to the afflicted, but to make sense of what we do in fact observe. The evidence

²³⁴ Griffin, *Parapsychology, Philosophy, and Spirituality*, 144–6.

indicates both that belief becomes biology and that biology can sometimes overcome belief. Unlike idealism, Whitehead's model explains both. Moreover, Whitehead's model does not rule out "miraculous" healings as dramatic as the spontaneous regression of cancer. There is ample room within the context of Process philosophy for the power of faith. Within God's primordial nature are all manner of possibilities, many of which are beyond our present imagination, or even beyond human imagination altogether. In merely acknowledging the reality of physical causation, we are not necessarily accepting any kind of fatalism. Fatalism entails a certain intellectual pretentiousness in itself. Whitehead's philosophy quite explicitly rules out knowledge of the future. Because it is not yet actual, we cannot know the future. My father, after having practiced medicine for over twenty years, once told me, "I have long since ceased attempting to put limits on the length of human life. I have seen too many 'dead men' survive."

However, for myself the very fact that Whitehead's model seems to describe the world in which I live renders it psychosomatically superior to the idealist model in one very important respect. *It is believable*. The idealist model may be more optimistic in its content, but it is much harder to believe. In my own personal experience of applying psychosomatic healing techniques in my life, I have found that modest but credible affirmations work better than those that seem obviously too good to be true. Given the importance of sincere belief in psychosomatic healing — which the idealists themselves so heavily stress — I would argue that the optimism must also be credible.

Objections may also come from idealists outside Christian Science and New Thought. An Hegelian, for example, might argue that many of the problems with idealism can be attributed to the examples I used, i.e., Christian Science and New Thought. Had I used a better-formulated example of idealist model, such as those of the nineteenth-century Germans, my objections against idealism could be overcome. The problem with this objection is that it calls for a response to a theory that has yet to be formulated. Idealism, in its Hegelian form, was never used to explain mental healing, and I am not sure how an Hegelian would explain mental healing. Accordingly, I can only encourage my Hegelian idealist colleague to write and publish an essay on the subject. I would be delighted to both read it and respond to it at that time. However, as I argued in Chapter 9, *any* idealist model would still have to address the problem of explaining physical causation and the apparent limitations of the mind's power, as well as the objections to idealism raised by James.

General Problems with Process Philosophy

Whitehead's philosophy is not without its critics, and there are no doubt some who would say that his model just has too many ambiguities and

internal inconsistencies to be acceptable in its present form. I have three answers to objections of this type. The first is, again, I never intended this essay to be a general defense of Whitehead. I leave that task to the more senior Process philosophers, some of whom have been defending Whitehead for decades. Secondly, at no time have I argued that we must accept Whitehead's model exactly as he developed it. Whitehead himself acknowledged that virtually all attempts at speculative philosophy are destined to be superseded.

The true method of discovery is like the flight of an aeroplane. It starts from the ground of particular observation; it makes a flight in the thin air of imaginative generalization; and it again lands for renewed observation rendered acute by rational interpretation. The reason for the success of this method of imaginative rationalization is that, when the method of difference fails, factors which are constantly present may yet be observed under the influence of imaginative thought. Such thought supplies the differences which the direct observation lacks. It can even play with inconsistency; and can thus throw light on the consistent, and persistent, elements in experience by comparison with what in imagination is inconsistent with them.²³⁵

This essay began with the stage of observation and ended with a flight of speculative imagination. The next stage is "renewed observation rendered acute by rational interpretation." The Process model, as applied to the subject of psychosomatic healing, needs both further discussion by philosophers and testing by health care scientists. I suspect that it may well be revamped, reinterpreted, or even replaced. In presenting it as a viable model here, I am in no way declaring any attachment or allegiance to it. What I am saying is that it goes in right direction. There is little hope for bettering our understanding of mental healing, or even of mind-body interaction in general, so long as the discussion is limited to the Cartesian and materialist theoretical frameworks. If not Whitehead's model, then some another model, which is equally if not more radical, is needed. We cannot continue to attempt to solve the problem at the level of thinking that is creating the problem. We must either reframe our understanding of the discussion, or else simply concede that the enigma of mind-body interaction is insoluble. The latter option would involve laying claim to knowledge I do not possess.

II. Summary and Conclusion

In this dissertation, I initially introduced two major theses. However, in developing my arguments, I also introduced a third. The first is that psychosomatic healing is a real phenomenon, one that occurs frequently

²³⁵ Whitehead, *Process and Reality*, 5.

enough to merit the attention of our health care system. The second is that there is nothing supernatural in the process. If I succeeded in arguing for the first thesis, I probably did so in Chapters 3 – 8, where I reviewed the large and growing body of empirical evidence in its favor. However, the evidence itself does not prove conclusively that the phenomena these chapters describe are a product of mental causation. Throughout most of human history, this issue has not been a point of contention. However, in recent years, both philosophy and the health care sciences have had a strong materialist bias. The materialist paradigm says that mental causation in any form is impossible, and its activity in healing, illusory. In fact, under the materialist understanding of nature, psychosomatic healing would have to be supernatural if it occurs at all.

Nevertheless, to argue for the thesis that it is in fact natural, one must be able to show how it can be so. It is not enough to say that the belief in its supernaturalism is a recent thing, because one can say the same for relativity and quantum mechanics. Among professional philosophers, those who would contest the materialist claim have, almost by default, taken up Cartesian dualism, as if it were the only viable alternative. Although dualism allows for the possibility of mental causation, it cannot explain it, because it cannot explain mind-body interaction. The idealist model developed by Christian Science and New Thought can explain, albeit somewhat incompletely, how psychosomatic healing occurs, but it cannot explain its limitations, or why it often fails. This model must also be rejected, because an adequate theory must explain both.

This brings us to the third thesis, developed in the philosophical chapters of this essay. *To present a plausible, natural theology of mental healing, we must take the discussion outside the traditional intellectual framework of substance and attribute and begin thinking in terms of processes, events, and creativity.* This means going beyond the dualist, materialist, and idealist models that have dominated Western philosophy since Kant. Only then will we be able to make sense of the underlying issues of causation as real influence and mind-body interaction. Whitehead's model provides just this kind of natural theology of mental healing. Hence, the plausibility, if not the actuality, of my second thesis has been adequately demonstrated. Moreover, Whitehead's model was specifically designed to address the philosophical problems that have rendered mental healing so incredible: those of efficient causation as real influence and of mind-body interaction. In that sense, it begins with a commanding lead over any possible rivals. How well it stands up to philosophical critique and empirical testing are matters that the future will determine. This dissertation is intended to be but the beginning, not the end, of the involvement of philosophy in mind-body health care. If I have done nothing

more than stimulate serious discussion of this topic among professionals in either academic philosophy or health care, I have achieved my purpose.

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