

**PARANORMAL
PHENOMENA
AND
BERKELEY'S
METAPHYSICS**

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For Deborah

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This book arose out of a study of the mind-body problem, which I have been working on for a few years. I have written up that work in the accompanying volume in this series, *CONSCIOUSNESS AND BERKELEY'S METAPHYSICS*.

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I am therefore pleased to recognise the insights I have gained through conversations and experiences with Janyce Welch, Caroline and Peter Sherwood-Roberts, Peter Kingsley and Maria Karamidou, Alan Sanderson, Eileen Watkins Seymour and Clive Digby Jones, Sally Thomson, Una Sykes, and many others.

What finally pushed me over the edge of the world-view of mainstream science and into the twilight zone of psi, however, was my encounter with Marilyn Schlitz in Flagstaff. Here was someone as sane and rational as any mainstream scientist I had worked with, and who was well schooled in the disciplines of science, but who was rigorously and imaginatively investigating phenomena that blasted a gaping, ragged hole in the accepted scientific picture of the world we inhabit.

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Chapter 1

What are paranormal phenomena?

1.1 Supernatural, paranormal, or psi?

The first recorded use of the word “supernatural” was in 1526, and was derived from the medieval Latin term “supernaturalis” coined by the theologian Thomas Aquinas. It denotes, according to the Oxford English Dictionary, what is “above nature, transcending the ordinary course of nature”. A key word in that definition is “ordinary”. Supernatural phenomena are not necessarily lawless and chaotic: they may be subject to their own regularities and laws, albeit different ones from those that govern the normal world. For this reason, the word “paranormal” has come into use, emphasising that the phenomena in question are characterised by their lying outside of the normal course of events. It denotes a nomological, or law-governed, realm alien to what is recognised in everyday life.

What is wrong with definitions of this kind, however, is that they assume that the phenomena in question are freakish, that they are rare, isolated instances of no importance. This implicit assumption may bias our thinking toward the view that, while the paranormal may cause us to marvel, they will never have any bearing on the practical concerns of everyday life. From an engineer’s point of view, this is an extraordinarily limiting perspective. The phenomena that are reported to occur under the rubric of the paranormal imply an enormous potency and, moreover, point toward the need for so deep a revision of our understanding of the nature of the world that it is impossible to tell where the ramifications would end. If and when the processes and laws that underlie

and govern paranormal phenomena are understood and harnessed, they may become incorporated into our lives in ways that we cannot even guess at. They would then cease to be ‘paranormal’ and would become ‘normal’.

For these reasons, I prefer the more recent term “psi phenomena”, which denotes a family of phenomena that appear to form a natural grouping, and which may be a manifestation of a single underlying mechanism. Under the term “psi phenomena” we may include such things as telepathy (or ‘thought transference’), telepathy (or ‘emotion transference’) telecognition (or ‘clairvoyance’ or ‘remote viewing’, ‘clairaudience’, ‘clairsentience’, ‘psychometry’), telekinesis (or ‘psychokinesis’), contact with disembodied minds (encountering ‘ghosts’ or ‘spirits’ or ‘angels’, ‘mediumship’, ‘channelling’, and perhaps encountering ‘ufos’), and what I would loosely call ‘manifesting’ (including prayer, ritual magic, and synchronicity). I refer to these as a family of probably related phenomena. This is not a rigorous definition with precise boundaries. When we understand psi phenomena well enough, then we may be able to define them. In the meantime, this loose family description will do.

1.2 Need for a new scientific paradigm

Psi phenomena have been part of human life throughout recorded history and, no doubt, prehistory too. They have often been accepted as part of the normal, orthodox picture of the world. Over the past three centuries, however, a new orthodoxy has arisen — in the form of scientific practice and scientific doctrines — which systematically excludes psi phenomena from any serious consideration.

To a large degree, this exclusion can be traced to science’s roots being firmly embedded in materialism. From that perspective, psi phenomena are impossible, and so science sees no point in investigating them; conversely, anyone who does investigate them is presumed to be an incompetent scientist. In this vicious circle, anyone who genuinely wants to investigate psi phenomena — if for no other reason than that they are reported to be part of the world we inhabit — will find effective deterrents in the tremendous peer pressure and risk of damage to her reputation and career prospects.

One of the ways in which this impasse can be broken is to go back to the origins of the scientific world-view in the seventeenth century, and see that there is another route that can be taken, which leads to a world-view radically opposed to materialism. It is world-view that nevertheless does not in any way devalue or discredit the validity that existing scientific knowledge has within its own domain, the realm of physical things.

George Berkeley was an innovative philosopher living at the time when the scientific ball was first set rolling. He had the perspicacity to see that the direction it was taking would lead away from all things spiritual. But he also had the vision and intelligence to formulate an alternative philosophy, one rich enough to encompass both science's growing understanding of the physical realm, and the humanly important realm of spirit.

To a large degree, our experience of the realm of the spirit is just the everyday engagement with the mental world — colours, sounds, and other sensory imagery, on the one hand, and the exercise of the will on the other hand. This quotidian engagement with the mental is camouflaged by its close association with the course of events in the physical world: for instance, when we see a colour externally, there are physical rays of light that match our conscious experience of the colour. There is, however, one form in which the realm of spirit obtrudes into human life: in what are called 'psi' phenomena: telepathy, telecognition, telekinesis, and retrokinesis. They have no known counterpart in the physical world, so they constitute raw phenomena of the spirit.

In this book, I shall aim first to present a short account of Berkeley's metaphysics, and to relate it to much more ancient philosophies, such as the Hindu Vedānta; second, to describe the range and characteristics of psi phenomena, referring in particular to recent scientific research by the relatively few people who have been actively working in this field; and finally to develop some speculations on how Berkeley can help us to make sense of those phenomena. I shall also consider how this theory may help us to understand some of the more esoteric phenomena such as ufos.

I shall not be presenting large compilations of laboratory data, or anecdotes, of alleged psi phenomena in order to try to persuade you that they are real. My business here is not to argue the case for the existence of the phenomena. That is done very well by those

who are actively involved in parapsychological research, such as Dean Radin in his excellent book, *THE CONSCIOUS UNIVERSE*; and by journalists, such as Jim Schnabel and John Keel, who have carried out first-hand investigations of people who have experienced the paranormal; and by scientists such as Jacques Vallée who have studied the weirder forms of the paranormal. Here, my starting point is the assumption that the investigators have done their job well, and that their reports can be trusted. My aim is then to consider this question: if these phenomena are real, how can they be explained? What model of the universe do we need to have for us to be able to make sense of psi phenomena?

Obviously, this approach is open to the criticism that some of the reported phenomena may not really exist, that maybe the investigators were blinded by their own beliefs and accidentally, or otherwise, mis-reported the data. Well, that is a risk that one inevitably has to take. It is a sterile exercise to limit ourselves to just accumulating data: we need to understand it. I do not imagine that the theoretical approach that I propose in this book is the final answer. But we have to start somewhere, and Berkeley's metaphysics seem to me to be a good starting point.

There is, moreover, a reciprocal relationship between theory and experimentation. Theories, if they have any value, predict properties of the phenomena. Those predictions suggest further experiments or observations that should be made, which in turn yield new data that confirm the theory, or entail revisions to it, or completely destroy the theory. Thus theorising is not something that we do after all the data are in: it complements the acquisition and cataloguing of data.

1.3 Ontological myopia

When I was a young boy, there was another kid at school who was really keen on model aircraft with dinky little motors that drove the propeller and flew the models around in his back garden. His big ambition was to get a motor big enough to take his planes to the moon. The way he saw it was that flying to the moon is the same kind of thing as flying to the bottom of the garden, but on a larger scale. To him, the difference seemed only quantitative. He didn't see that, not only would he need a vastly bigger thrust to escape the Earth's gravitational pull, but his propeller would cease

to propel his craft in the vacuum of space: it was the wrong kind of tool to get to the moon with. We might call this ‘technological myopia’.

Academics working in neuroscience often suffer ontological myopia. They keep on coming up with ingenious but short-sighted schemes for explaining consciousness — so we get the view of consciousness as an emergent property of complex systems, or a feature of self-referential systems, or an epiphenomenon of quantum events, or a morphogenetic field, and so on. None of these ideas, however, even touches the problem of consciousness: they are the wrong kinds of intellectual tool to do the job. But, because of ontological myopia, the proponents of these theories just do not see that they have *no chance* of succeeding. Their mental horizons have been cramped by their presuppositions. They do not see that consciousness is too big and too strange to be swallowed in yet another physical theory. Instead, they get immersed in recondite debates and analyses of the details of their theories. Or they get really angry with people they call ‘mysterians’, who claim that their theories are not even addressing what Chalmers called the Hard Problem. Which is not to say that their enterprise is a waste of time: it may well shed light on other aspects of the working of the mind. But it will not illuminate the mind-body problem.

To find a tool of the right kind, we must delve down into the historical foundations of science, where we can find — in the works of George Berkeley — an alternative way of conceptualising the world, and one that enables us to get the right picture of the mind, including its weirder manifestations in psi phenomena.

Chapter 2

Berkeley's Metaphysics

2.1 Berkeley's vision and its context

George Berkeley (1685-1753) studied philosophy in Trinity College, Dublin, at a time when deep and wide-ranging storms were sweeping the intellectual climate of Europe. Just over half a century earlier, René Descartes had laid out a new map of the possible theories of the nature of our world, in his *DISCOURSE ON METHOD* (1637). He had depicted a fundamental chasm between what was called ‘matter’, solid substances extended in space, and ‘mind’, the intangible substance of our conscious experiences and thoughts. Descartes called these two substances *res extensa* or ‘extended stuff’ and *res cogitans* or ‘thinking stuff’. Five decades after Descartes’ seminal work, Sir Isaac Newton laid out the foundations of a comprehensive understanding of the world based entirely on matter, in his *PRINCIPIA MATHEMATICA* (1687), or ‘Mathematical Principles of the Natural World’. Three years later, John Locke published his monumental *ESSAY CONCERNING HUMAN UNDERSTANDING* (1690), which placed human beings firmly in the material world and presented a detailed account of how all of our knowledge came to us from the material world through our senses. Although an adherence to the Christian religion was still obligatory for anyone to take a recognised part in intellectual society, the underlying force of this current of thought was irresistibly driving people’s world-views toward materialism and atheism. More and more, the brightest and most promising conceptions of the world left no scope for God’s intervention, and sought to diminish the mind to something like a fluid circulating in the brain.

Against this background, Berkeley as a young student was ex-

cited and infuriated by the challenge that this advanced thinking presented to the ancient traditions of religion and spirituality. From the beginning, however, he had an answer: he was driven by a single, complete, and comprehensive vision, in which the world we see around us is the direct product of God's mind in ours. It was a vision in which matter was no more than a convenient fiction, just a term in Newton's equations that betokened nothing with any real or independent existence.

Like any true vision, this had an unquestionable power and clarity, which Berkeley laboured to convey to others. Something of his frustration at not being able to share this vision can be seen in the following passage, from his major work, *A TREATISE CONCERNING THE PRINCIPLES OF HUMAN KNOWLEDGE* (1710):

Some truths there are so near and obvious to the mind, that a man need only open his eyes to see them. Such I take this important one to be, to wit that all the choir of heaven and furniture of the earth, in a word all those bodies which compose the mighty frame of the world, have not any subsistence without a mind, that their being is to be perceived or known, that consequently so long as they are not actually perceived by me, or do not exist in my mind or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some eternal spirit.⁴⁰

Berkeley is not normally classified as a mystic, but a fresh reader of his works will quickly discern that the core of his philosophy is his mystical vision of the world as a direct injection of God's thoughts into our minds. In his writings, he struggles to convince his readers of the truth of this view by argumentation and reasoning, but time and again, he throws his hands in the air and seems to exclaim, "But can't you just *see* that this is how the world is?" Like other mystics, Berkeley reached his conclusions just by seeing the world suddenly in a certain way, not by laboriously picking through logical arguments. Unfortunately, like all other mystical visions, a simple statement of it may seem strange and paradoxical, and the rational arguments for it seem incommensurate with its profundity. The arguments that he does present are afterthoughts, more like meditations designed to lead his readers to have the same vision for themselves.

2.1.1 A short biography of Berkeley

George Berkeley was born in 1685, into what was then the thriving cultural centre of Kilkenny, rich in independent religious thought. Under his father's tuition, he learnt quickly, and skipped a year at Kilkenny College, and by 1699 he was in the fast lane at Trinity College, Dublin, at the age of fifteen. He was made a fellow of the college at the age of twenty-three. (Two of his private notebooks from this period (1707/8) were later discovered in Trinity College library and posthumously published. They show that by this stage, he had already formulated clearly a comprehensive account of the main points of his philosophy.) His first philosophical work, *AN ESSAY TOWARD A NEW THEORY OF VISION*, was published two years later; and his major work, *A TREATISE CONCERNING THE PRINCIPLES OF HUMAN KNOWLEDGE*, was published in the following year. The *PRINCIPLES* was his definitive account of his theory of 'immaterialism'; the earlier work, *THEORY OF VISION*, on the other hand, had deliberately avoided any reference to immaterialism, which he expected to be intensely controversial. Although privately he had been convinced of immaterialism even when he was a student, he knew that it was such a radical proposal that the delivery of it needed to be stage-managed. He wanted to establish independently his theory of how we mentally construct three-dimensional space from our sense-data, which he did in his *THEORY OF VISION*. For a while, after publishing the *PRINCIPLES*, his attention was given to political philosophy, but he returned to metaphysics after moving to London in 1713, where he published *THREE DIALOGUES BETWEEN HYLAS AND PHILONOUS*. This was a highly effective exegesis of the theory that had been expounded in the *PRINCIPLES*. Quite apart from the metaphysical theories, the literary merits of the Dialogues earned him favourable comparison with Plato,²⁸⁷ and led him to an acquaintance with Dr Jonathan Swift (1667-1745) and the most prestigious literary circles of the day.

Berkeley afterwards spent several years travelling around Europe, serving as chaplain and tutor for wealthy individuals on Grand Tours. Berkeley's tours were somewhat different, however, taking in unvisited quarters such as Apulia. In 1715, while passing through Paris, he took the opportunity of visiting his philosoph-

ical rival, Father Malebranche. Tragically, their debate at this meeting became so vigorous that it exacerbated Malebranche's ill-health and the latter died a few days later. Toward the end of his travels, Berkeley wrote *DE MOTU* in Lyons in 1721. This further expounded some important points in the *PRINCIPLES*, concerning the nature of causation. This was to be his last major work on immaterialism. After an absence of six years from Ireland, he returned to become a senior fellow at Trinity College in 1720, and took the degrees of bachelor and doctor of divinity in 1721; he resigned the fellowship in 1724, to take up the position of Dean in Derry, with a more substantial income.

During these years, he had been formulating a plan to found a college in Bermuda, for the education of both colonials and the native American Indians. Shortly after his marriage to Anne in 1728, he set off to Rhode Island, with promised financial backing for the college from the government — which they subsequently reneged on. He spent almost five years trying in vain to get the college off the ground, before returning to England in 1733, no doubt in much despondency, as he had spent his personal fortune and seven years of his life on a project that had come to nothing. During his stay in Rhode Island, however, he wrote *ALCIPHON, OR THE MINUTE PHILOSOPHER, A DIALOGUE DEFENDING THE CHRISTIAN RELIGION AGAINST VARIOUS ATTACKS*. This utilised his theory of immaterialism, but added little to it. He also corresponded creatively with Samuel Johnson, defending his philosophy.

Berkeley was now almost fifty years old, with failing health. On his return to England, Queen Caroline, who had previously been delighted by conversations with Berkeley, gave him the bishopric of Cloyne, a position that he thereafter held for twenty years until his death in 1753. His official duties and the care of his local constituency — mostly the rural poor — occupied much of his time, but he was nonetheless active in several fields of philosophy: metaphysical, mathematical, and political. In 1733, he published *The THEORY OF VISION VINDICATED, OR VISUAL LANGUAGE, SHEWING THE IMMEDIATE PRESENCE AND PROVIDENCE OF A DEITY, VINDICATED AND EXPLAINED*. In 1734, he became engaged in a heated and fruitful debate over the foundations of mathematics, starting with his publication of *THE ANALYST*. From 1735 to 1737, Berkeley published *THE QUERIST* in three parts

(subsequently revised in 1750), in the form of pointed questions concerning political issues. Finally, Berkeley published his last book, the astonishing *SIRIS: A CHAIN OF PHILOSOPHICAL REFLEXIONS AND INQUIRIES CONCERNING THE VIRTUES OF TAR-WATER AND DIVERS OTHER SUBJECTS CONNECTED TOGETHER AND ARISING FROM ONE ANOTHER*. Despite its seeming eccentricity and association with Berkeley's hypochondria, it includes deeply considered and serious discussions of Neo-Platonic philosophy. The word "tar" in the title refers to a resinous material extracted from trees, and not to coal tar.

Of these works, the last, *SIRIS*, has an undeservedly poor reputation. The very word "tar-water" conjures up in the modern mind a ridiculous image of Berkeley as a quack and mountebank selling his tar-water, snake-oil, and other panaceas in the village market. In fact, the active ingredient of 'tar-water' is an essential oil extracted from fir trees, and the first part of *SIRIS* would nowadays be regarded as a work on aromatherapy. Despite its prominence in the subtitle, tar-water takes up only about a tenth of the book. The rest of the book is a gradual development of speculations leading from aromatherapy through physiology to philosophy, and thence to metaphysics, and mysticism. Another barrier for modern readers is that the book is not structured into chapters and sections, but is a continuous series of numbered paragraphs that lead like a chain of thought from one topic to another. Berkeley was a highly accomplished literary stylist, and he used the rhetoric of writing with deliberation to achieve specific ends. For instance, in his *PRINCIPLES*, he organised his material as a systematic learned treatise; in the *DIALOGUES*, he wrote an engaging and flowing conversation; he wrote *THE QUERIST* entirely as a series of questions, inviting the reader, in effect, to write the book in her own mind — in a distinctly postmodern manner. In his professional life in the pulpit, Berkeley was accustomed to marshalling his text to suit the audience and to engender the thoughts and feelings that he sought to bring to them.

The commonly made claim that Berkeley, when he was writing *SIRIS* in his fifties, had lost the mental acuity and penetration of his youth is untrue. *SIRIS* has its form partly to reflect the interconnectedness of the subject (and in this respect can be compared to the writings of Ludwig Wittgenstein in the twentieth

century), and partly to protect his core ideas with a defensive superstructure that could deflect the critical attacks that he anticipated from the more conservative elements of the Anglican Church. In SIRIS, Berkeley relates the sacred mysteries of the Christian religion to the doctrines of so-called heathens and the supposed atheists and pantheists of ancient Greece, Egypt, and Chaldea. Furthermore, the Neo-Platonism that Berkeley's studies had drawn him to would have been associated in the popular mind more with the Roman Catholic Church, at a time when antagonism between the Anglican and Roman branches of Christianity was still running high. His earlier doctrine of immaterialism had provoked severe criticism within the Church, and the enmity of his ecclesiastical superior, Archbishop King. Bishop Berkeley might reasonably have wished to avoid further hostility and damage to his reputation that an open espousal of Neo-Platonism might have led to, and therefore shrouded it in discussions of aromatherapy and health.

Berkeley's contribution to the philosophy of mathematics is not a separate venture, but should be seen as part of the same programme as Berkeley's earlier immaterialism: in both, he sought to defend religion against the trend toward secularism that was emerging in the birth of science. On the one hand, he attacked the rise of materialism because it presented a model of the world in which nature was governed by mechanical laws leaving no room for God; on the other hand, developments in mathematics were claimed to furnish us with a clearer view of the workings of the world, without any reference to God, although in fact they rested upon mysteries as great as any found in religion. In both cases, Sir Isaac Newton had been the intellectual engine that was dragging the consensus view down the secularist road. Berkeley saw it as his duty to bulwark the decencies of religion against the rising tide of secular and mechanical conceptions of the world, as he did most vigorously in the dialogues of THE MINUTE PHILOSOPHER. (The title refers to philosophers who are preoccupied with minutiae and therefore fail to see God in the bigger picture.) In so far as he sought to establish belief in the spiritual dimension of humankind, Berkeley can be seen as promoting humanistic interests against the dehumanising drive of over-ambitious science that knows no bounds.

Although it takes us away from the subject of the present book, it is worth while noting that Berkeley's attack on mathematics did draw attention to serious defects in Newton's method, and prompted some crucial advances in the differential calculus. As Joseph Stock expressed it in his early biography (1776):

But whatever matter of reprehension mathematicians may find in this hostile attempt by our Bishop, it must be acknowledged that they have reaped no inconsiderable advantage from it, inasmuch as it gave them rise to the most complete Treatise of Fluxions that hath been yet presented to the public, in which the whole doctrine is delivered with more precision and fullness than ever was done before, or probably than ever would be done, if no attack had been made upon it.²⁸⁷

(The referenced Treatise of Fluxions is that of the British mathematician Colin Maclaurin (1698-1746).) Berkeley eventually obtained permission to resign from his arduous duties as Bishop of Cloyne and, in a state of worsening health, moved to retirement in Oxford. There, his son was a student at Christ Church College. Sadly, Berkeley Senior was able to enjoy only half a year's retirement, before he died at his new home in 1753, shortly before his seventieth birthday. A memorial plaque stands in Christ Church, although the whereabouts of his mortal remains are unknown.

2.2 The nature of objects: to be is to be perceived

As I said earlier, the central part of Berkeley's theory, when stated straightforwardly but out of context, seems paradoxical or even absurd. Its claim is that what we call solid matter, and indeed everything else that we find laid out in the physical, three-dimensional world that is apparently around us, is only fictional. It appears to be there, but it does not really have an objective existence.

The closest analogy that we have in terms of modern technology is 'virtual reality'. To enter a man-made virtual reality, you put on a helmet and goggles with a miniature screen for each eye, and ear-phones, and don pressure-sensitive gloves that detect your hand and finger movements. A digital computer generates pictures and sounds of some scene, and presents them to you

through the goggles and ear-phones. As you move, the computer constantly adjusts the pictures so as to create the illusion that you are moving inside the space that it depicts. Virtual-reality systems are rapidly improving in their realism and in the range of bodily movements that they can detect. Extrapolating a decade or so into the future, we can imagine a wired ‘body-glove’ in which every movement of the body is electronically detected and fed into the computer, which generates the illusion of full motor and tactile immersion in the world. Although this virtual world may look and feel as if it were real, it in fact exists nowhere except in the data processing of the computer on the one hand, and in your imagination on the other hand.

According to Berkeley’s vision, the everyday world we see around us is precisely such a virtual reality, with God serving as a ‘computer’ that is immensely more powerful than any we could build, generating all our experiences and sensations directly in our minds. Just as we can move around in a man-made virtual reality, so too we can and do move around in the world that God has created. Yet, in themselves, both worlds are illusory: all that is real is your experience of them and the information processor that generates them.

Here, we run up against a limit of language. For, in everyday speech we say that the objects around us — chairs and writing-desks, trees and houses — are real, and we distinguish them from dreams, day-dreams, hallucinations, and figments of our imagination. What we mean when we say that these ordinary things are real is simply that they exhibit a constancy and a regular adherence to the laws of mechanics. For example, we find that we cannot walk through walls, or that when we return home after a journey we find our home just as it was when we left. This regularity is characteristically missing from dreams and hallucinations, which are generally disconnected and chaotic. In Berkeley’s philosophy, this constancy is accounted for by saying that God keeps in His mind notes of some sort about where everything is and its appearance. When you leave your home, therefore, although you can no longer see it, God has made a mental note of how it looked when you left it, and will reproduce it exactly when you go back. Yet the room itself, considered as an independent and inert reality, simply does not exist. It is a virtual reality, not an

actual reality.

Needless to say, this limit of our language exacerbates the seemingly paradoxical nature of Berkeley's theory. Berkeley himself was well aware of this difficulty, and sought sometimes to describe everyday objects as having a 'counterfactual' or 'hypothetical' existence, and sometimes he would more properly described their continued existence in terms of the 'archetypes' or mental notes that God keeps of all objects that have been observed.

In the following passage in the PRINCIPLES, Berkeley refers to objects as having a 'counterfactual' existence, which simply means that they exist only in the sense that they *would* be perceived if anyone *were* in a position to see them. (The technical term 'counterfactual' literally means 'counter to the facts': in the case of the example that Berkeley gives below, the fact is that nobody is in the study and so nobody is actually seeing the table, and the counterfact is that if someone were in the study, the table would be seen.)

The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit does perceive it. ... For as to what is said of the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible. Their esse is percipi, nor is it possible they should have any existence, out of the minds or thinking things which perceive them.³⁹

There is a lot to say about this passage. First, however, Berkeley's Latin expression "esse est percipi" requires some explanation. The term 'esse' is the infinitive of the Latin verb 'to be'. It was used in philosophical discussions of this era to refer to what is constitutive of something's existence: the defining essence without which the thing in question could not be. The term 'percipi' is the passive infinitive of the Latin verb 'to perceive'. So, Berkeley's famous motto, usually quoted as 'esse est percipi' means, in short, 'to be is to be perceived', or, being expanded, 'the existence of the everyday objects we find around us, such as tables, is constituted by their being consciously perceived by some mind or another'.

(Incidentally, we should be grateful that Berkeley did not choose to write his whole treatise of the PRINCIPLES in Latin. That was

the norm for intellectual works in the 17th century for the simple reason that works in that language could be read by scholars of all countries throughout Europe. Latin was a universal second language that guaranteed a wide academic readership. For example, Newton's great work, PRINCIPIA MATHEMATICA, was published wholly in Latin not long before Berkeley's PRINCIPLES. Berkeley, however, wanted to avoid the obscure theoretical connotations of many Latinate terms, and chose to limit himself to the English vernacular.)

A subtly different position is suggested in the following passage from his posthumously published student notebook:

Bodies taken for powers do exist when not perceived but this is not actual. When I say a power exists no more is meant than that if in the light I open my eyes & look that way I shall see it.³⁶

So, an object's existence when it is not perceived is to be understood as just its counterfactual observability: it would be seen if we looked at it. That, however, is only part of the story. There is also a permanent power to produce that perception, whose existence is over and above the counterfactual observability. If we go back to the passage in Berkeley's PRINCIPLES, we see that there is another factor involved in the seeming continued existence of objects, such as desks, when we can no longer see them:

that ... if I was in my study I might perceive it, or that some other spirit does perceive it ... (my emphasis)

This mention of "some other spirit" refers to God and, as we shall see, it is by God's continuing to have the object in mind that its stability is guaranteed.

As we have seen, Berkeley proposes a 'counterfactual' construal of objects, such as the furniture in his study, when they are not being perceived. In order to defend this interpretation, we need to make a brief detour to consider closely how we use language. What do we *really* mean when we talk about objects in everyday life? What information are we really seeking to convey with our words? To answer this question, I will take another domestic illustration, this time from the dining room rather than the study.

As an analysis of meaning, Berkeley's counterfactual standpoint is correct, even though we may not be cognisant of this at

the time that we are using the language. When we talk about things in everyday life, we are not consciously aware of what precise meaning we are giving to words. If, at the dinner table, I cannot see the salt cellar and I say to a guest at the other end of the table, "Could you pass the salt, please", I am not consciously dissecting my use of those words and being mindful of my meaning. I just say it without much thought at all, as part of my way of life. If I were to stop and analyse the meaning that I wish to convey, then I would find it is precisely what Berkeley says. The person to whom I address the request, "Pass the salt", I expect to have a visual image of the salt cellar much like my own image of it would be, and for her to have a certain tactile sensation of its smooth glass walls when she picks it up, and I expect to experience the visual image of her hand tracking across my field of vision as she picks up the salt cellar and passes it over to me, after which I shall have the usual visual, tactile, and eventually gustatory sensations associated with using it. The salt cellar is undoubtedly real in the everyday, practical sense, but all that I effectively mean by saying that is that the pattern of experiences that I have just outlined really happens. That is all. There is no further implication that the salt cellar has a separate reality independent of our experiences. I can meaningfully talk about the salt cellar when I cannot see it, if this meaning is taken in the counterfactual sense: namely, that I would see it if it were in front of me. And that is all the meaning I need for everyday purposes. Any other considerations, such as whether the salt cellar exists when nobody can see it, just do not enter into the meaning of our words when we use them in the everyday life.

There is, however, more to objects that our being able to talk about them meaningfully in everyday life. That may be sufficient in the heat of the moment, when we are absent-mindedly passing the salt — but when we sit back in the study after dinner and reflect upon the world, we want to feel that we understand it. We want to feel that we are not just reacting to the world moment-by-moment, but rather that we have concepts about the things that exist in the world, concepts which mirror the way things genuinely are in the external world. We cannot get any such satisfactory conceptual picture of the world from Berkeley's counterfactual analysis of meaning. We need something more solid. Berkeley

answers this need by referring to the ‘archetypes’ that objects have in God’s mind.

So, for us to feel that we *understand* the world, it is not enough to have a counterfactual analysis of meaning. We want to ask: *why* do our experiences, such as those of the salt cellar, exhibit the dependable regularity that they do? In this materialistic age, of course, the natural response would be to say that our sensory experiences are given to us by matter: that there is a physical, three-dimensional world out there which impinges on our sense organs, and causes in us these sensations in all our sensory modalities, such as sight, hearing, touch, taste, smell, balance, and so on. Berkeley’s answer, on the other hand, is that it is God’s thought processes that give us this dependable regularity. According to Berkeley, God’s mind contains ‘archetypes’ of all the things we see around us, and God continually maintains and updates these archetypes and employs them as a pattern-book for generating the sensory images that He projects into our personal minds. (Needless to say, Berkeley’s use of the term ‘archetype’ has no deliberate connection with Carl Jung’s use of the same term two hundred years later. On the other hand, whether there is a hidden connection between them is a question we shall consider later.) First, Berkeley emphasises that the archetypes, unlike objects made of matter, exist only in the mind:

No idea or archetype of an idea can exist otherwise than in a mind.⁶²

Second, he emphasises that archetypes must lie in an external mind, since we do not possess control over them:

It is evident that the things I perceive are my own ideas, and that no idea can exist unless it be in a mind. Nor is it less plain that these ideas or things by me perceived, either themselves or their archetypes, exist independently of my mind, since I know myself not to be their author, it being out of my power to determine at pleasure, what particular ideas I shall be affected with upon opening my eyes or ears. They must therefore exist in some other mind, whose will it is they should be exhibited to me.⁶³

Again, the things I perceive must have an existence, they or their archetypes, out of my mind: but being ideas, neither they nor their archetypes can exist otherwise than in an

*Understanding.*⁷¹

Berkeley's expression here is somewhat unclear, and it sometimes leads people to think that the same ideas that occur in our minds must also exist in God's mind, and persist there when we are not experiencing them. Berkeley does, crucially, say "ideas ... either themselves or their archetypes". I suggest we should disregard the option that Berkeley seems to offer us, that our ideas themselves persist in God's mind. This is because our ideas are of a highly transitory nature: for instance, looking at the table before me, the ideas in my mind vary from moment to moment as my head moves in relation to the table. What persists in God's mind are structural facts about these ideas, and those facts must reside in some ideational form in God's mind.

The archetypes are thus ideas in God's mind. What form the archetypes take, however, Berkeley admitted we can have no inkling.

When considering the question of what the archetypes of material objects in the everyday sense are, Berkeley gave the following answer:

As the notion of matter is here stated, the question is no longer concerning the existence of a thing distinct from 'spirit' and 'idea', from perceiving and being perceived: but whether there are not certain ideas, of I know not what sort, in the mind of God, which are so many marks or notes that direct him how to produce sensations in our minds, in a constant and regular method: much after the same manner as a musician is directed by the notes of music to produce that harmonious train and composition of sound, which is called a 'tune'; though they who hear the music do not perceive the notes, and may be entirely ignorant of them.⁵⁵

As I said earlier, a more modern analogy would be to suppose God's mind to contain something like a computer database and to possess a functionality akin to that of a digital computer's virtual reality system. Computing engines were, however, unknown in Berkeley's day, so the analogy of a musical score was appropriate for him.

2.2.1 Matter simply does not exist

There are times when people interpret Berkeley as saying that material things do exist, but that their existence is dependent on God's mind. This is not so. Matter, as the concept is employed in the science of physics, simply and literally does not exist. Although Berkeley is often not explicit about this, it is, in fact, clear from the whole thrust of his argument. At some points at least, he does state it openly, for instance at one point in the dialogues he writes:

*Philonous: "I deny it to be possible [i.e. matter to exist]
..."*⁶⁶

The confusion about this basic claim comes, in part, from Berkeley's insistence that the form of words that we use in our everyday speech is unaffected by subjective idealism. So, if you say that Mount Everest exists, then Berkeley is not going to contradict you by saying that it is only in the mind. For Mount Everest does exist, but only in the specific sense that if we were to visit the Himalayas then we would see it. Whereas that empirical sense of the verb 'to exist' is not available for 'matter', simply because matter in itself is not amenable to observation.

This complex claim becomes clear only when we view it in the light of Wittgenstein's notion of language-games.³⁶⁴ In the language-game of everyday speech, we can correctly and meaningfully say that e.g. Mount Everest exists. This is because, within that language-game, any assertion that something exists just means certain facts about our sensory observations of the world. We call this the 'empirical' sense of existing. On the other hand, in the language-game of physics, we can say that the matter that comprises the bulk of Mount Everest exists, and that it does so in the sense that it occupies mathematically defined space, and so on. If, however, you were to conflate the two language-games and try to make the metaphysical claim that matter has a real existence independent of mind, then you would be talking nonsense. Berkeley's bald denial that matter exists is just a denial of the metaphysical claim that 'matter' (in the physicist's sense) can 'exist' (in the empirical sense).

This is precisely analogous to saying that Sherlock Holmes exists as a literary character, but he does not exist empirically.

Likewise, matter exists as a scientific construct, but does not exist empirically. Matter, like Mr Holmes, is fictional. I will expand on this crucial point later.

Given that material objects do not exist, all our ideas must come directly from the volitional act of some other mind, generally from God's mind:

Every Idea has a cause, i.e. is produced by a Will.²⁶

There is another dimension along which we may separate our thinking about objects. This differentiates between, on the one hand, our sensory impressions of the objects and, on the other hand, the imperceptible powers that produce those impressions:

Bodies etc. do exist whether we think of 'em or no, they being taken in a twofold sense. Collections of thoughts & collections of powers to cause these thoughts. The latter exist, tho' perhaps a parte rei it may be one simple perfect power.³⁵

Note that in the final sentence, Berkeley leaves open the question of whether perceptions are produced by a single, monolithic God, or whether they are produced by finite minds — which, I suppose, would be angels.

2.3 Occasionalism: Berkeley versus Malebranche

In the wake of Descartes' division of the universe into mind and matter, several European philosophers devised conceptual bridges for overcoming what, in recent years, has come to be called the 'explanatory gap'. If mind and matter are utterly different kinds of thing, how can we get any coherent account of the interacting that apparently goes on between mind and matter on a continual, day-to-day basis? When I look at the sky, how can I explain that the physical incidence of light on my retina causes the mental experience of vision? Likewise, when I raise my right hand, how can I explain that my mental intention moves a solid piece of matter?

One such philosopher was Malebranche, whom Berkeley took pains to distance himself from. Malebranche suggested that the material world really does exist just as Newton said it did, but it does not directly affect the mind. The mind, being non-material, cannot exchange energy or force with material objects. How, then, does the mind ever receive sensory impressions? Malebranche's

answer is that God directly inserts the sensory impressions into the mind just at the very moment when the relevant physical events occur. For instance, when you see something, the light enters your eyeballs and triggers electrochemical signals that pass down the optic nerves into the brain, followed by further informatic digestion in the optic cortex and other areas of the brain. At some point in that ricochet of electrical signals, God places an appropriate visual image in your mind. This is sometimes called ‘occasionalism’, for the following reason:

You will perhaps say that matter though it be not perceived by us, is nevertheless perceived by God, to whom it is the occasion of exciting ideas in our minds ...⁵⁴

Berkeley rejects this suggestion and, in fact, ridicules it for precisely the same reason that any physicalist scientist would ridicule it today. It reduces the material world to a completely irrelevant appendix. For, if our sensory impressions are generated by God anyway, then we might as well suppose that God decides what impressions to generate for his own reasons, without needing to refer to any material world. To be sure, that line of argument does not disprove Malebranche’s suggestion. (For an actual proof of Berkeley’s rival theory of idealism, we must refer to Berkeley’s argument from the unintelligibility of matter, which is discussed below.) What it does do, though, is to show the radical implausibility of Malebranche’s theory.

2.4 Berkeley and common sense

Berkeley was at pains to emphasise that his theory, although it might at first seem paradoxical, was in fact consistent with common sense and actually defended common sense against the genuine absurdities entailed by the emerging scientific revolution.

I do not argue against the existence of any one thing that we can apprehend, either by sense or by reflexion. That the things I see with mine eyes and touch with my hands do exist, really exist I make not the least question. The only thing whose existence we deny, is that which philosophers call matter or corporeal substance. And in doing this, there is no damage done to the rest of Mankind, who, I dare say, will never miss it.⁴⁹

Nor even does he deny the substantiality of the world, provided of course that this is understood only in the empirical sense:

I take not away substances ...⁸

And, in the dialogues, Berkeley has his *alter ego* make the same point:

Philonous: "I am of vulgar cast, simple enough to believe my senses, and leave things as I find them. To be plain, it is my opinion that the real things are those very things I see and feel, and perceive by my senses."⁶⁹

There is a certain subtlety to this twist, and one has to understand Berkeley's vision to see it. For, what Berkeley saw as absurd and contrary to common sense in the new scientific orthodoxy is that it relied on the abstract notion of 'matter', or substance conceived in itself as opposed to any perceptible qualities that might be possessed by this or that object. As far as common sense was concerned, Berkeley argued, any object was, in effect, just a pattern of sensory impressions, and therefore the ghostly stuff called 'matter' — which is supposed to exist independently of any sensory impressions — lies entirely outside the scope of common sense. Conversely, Berkeley's theory affirms the undoubted existence of just those patterns of sensory impression that common sense designates as objects.

The trouble is, that people have been hoodwinked so effectively by the advocates of science that they have adopted the bizarre belief they can see and feel 'matter' and, hence, they find nothing wrong in the assertion that matter really exists and, consequently, they imagine that they find absurdity in Berkeley's immaterialism. To understand that Berkeley's theory is sensible, you have to disengage yourself from the veil of delusion that materialist science has draped over us.

Nor does Berkeley's subjective idealism entail any change at all in our customary habits of talking about the things around us as real existents:

In the ordinary affairs of life, any phrases may be retained so long as they excite in us proper sentiments, or dispositions to act in such manner as is necessary for our well-being, how false so ever they may be, if taken in a strict and speculative sense.⁵²

Here Berkeley, in effect, marks out a clear demarcation between what Ludwig Wittgenstein in the 1950s called ‘language-games’. A ‘language-game’ is a social activity, integral with a way of life, in which words are employed to perform a particular practical, social, or ceremonial rôle. Everyday speech and philosophical discourse are different language-games. In the language-game of everyday speech, the rule is to talk as if it were an indubitable fact that there are solid, material objects, but in the language-game of philosophical discussion, one may well propose that material objects are fictions. The distinction that we wish here to describe as between two language-games, Berkeley described as being between the “vulgar acceptation” and the learned acceptation.⁵⁶

*We ought to think with the learned, and speak with the vulgar.*⁵²

There is, however, more to it than mere acceptation: there is also diction and usage.

Berkeley also realised that a source of confusion was the use of sensory terms to express the insensible:

*Speech [is] metaphorical more than we imagine, insensible things of their modes, circumstances etc. being expressed for the most part by words borrowed from things sensible.*³³

But where those sensually rich metaphors break down, we may run up against the limits of expressibility:

*We know many things which we want words to express. Great things discoverable upon this principle, for want of considering which diverse men have run into sundry mistakes endeavouring to set forth their knowledge by sounds, which founders them they thought the defect was in their knowledge when in truth it was in their language.*³⁴

For this reason, Berkeley kept as far as possible to plain English, as he remarked to himself in one of his notebooks:

*I abstain from all flourish & pomp of words & figures, using a great plainness & simplicity of style, having oft found it difficult to understand those that use Lofty & Platonic or Subtil & Scholastique strain.*³⁷

Berkeley’s philosophy of writing is therefore in harmony with Sir Ernest Gowers’ book, THE COMPLETE PLAIN WORDS, which was proposed as a manual for writing philosophy in my accompanying volume, CONSCIOUSNESS AND BERKELEY’S METAPHYSICS.

2.5 Berkeley and science

Just as Berkeley's metaphysic is fully consistent with common sense, provided that both the metaphysic and common sense are correctly understood, so it is also fully consistent with science — provided that science is understood only as providing theoretical and predictive explanations of empirical data, as opposed to speculating on such metaphysical ideas as materialism. In the following passage, Berkeley correctly espouses this empiricist function for science:

If therefore we consider the difference there is betwixt natural philosophers [i.e. physicists in modern terms] and other men, with regard to their knowledge of the phenomena, we shall find it consists, not in an exacter knowledge of the efficient cause that produces them, for that can be no other than the will of a spirit, but only in a greater largeness of comprehension, whereby analogies, harmonies, and agreements are discovered in the works of Nature, and the particular effects explained, that is reduced to general rules

...⁵⁷

Berkeley was conversant with the physiological study of the brain and, as the following passage shows, he was aware of that branch of seventeenth-century science that has since flourished into neuropsychology. Nevertheless, he was also very clear that whatever facts neuropsychologists may discover about our brains and our minds will have no impact at all on his theory of subjective idealism.

Hylas: ... there seems on the other hand something so satisfactory, so natural and intelligible in the modern way of explaining things, that I profess I know not how to reject it.

Philo.: I know not what you mean. Hylas: I mean the way of accounting for our sensations or ideas.

Philo.: It is suppose that the soul makes her residence in some part of the brain, from which the nerves take their rise, and are thence extended to all parts of the body: and that outward objects by the different impressions they make on the organs of sense, communicate certain vibrative motions to the brain or seat of the soul, which according to the

various impressions or traces thereby made in the brain, is variously affected with ideas.⁶¹

Berkeley deals with this challenge in the manner that one would expect. Since the brain is itself really a construct that has been built up from our conscious experiences, it therefore cannot conceivably serve as a substratum for those very experiences. Whatever we may discover in our study of the brain, it can never yield any experimental evidence to contradict Berkeley's immaterialism. The fact that our external perceptions are correlated with physical stimuli that are incident upon our sense organs, or the fact that at least some conscious experiences are correlated with electrical activity in the brain will in no way embarrass the Berkeleian theory. Berkeley therefore saw no threat in the study of the brain.

2.6 Berkeley was not a solipsist

Probably the most common misunderstanding of Berkeley's theory is to think that it is the same thing as solipsism, or that it entails solipsism. Solipsism is the theory that only you exist. This is categorically not Berkeley's theory, nor is there any evidence that Berkeley ever gave it any credence, nor is it implied by Berkeley's theory. Yet the mis-identification persists. For example, at the International Conference, TOWARD A SCIENCE OF CONSCIOUSNESS in Tucson, 1998, one of the organisers — a leading figure in the field — referred to 'solipsism' as if it were a synonym of 'idealism'.

In the following passage, Berkeley states unequivocally that the existence of anything depends on its being perceived by some mind, not necessarily one's own:

Wherever bodies are said to have no existence without the mind, I would not be understood to mean this or that particular mind, but all minds whatsoever. It does not therefore follow from the foregoing principles that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception of them.⁵¹

He makes the same point in the dialogues, where Hylas makes the naïve mistake of thinking that Philonous is claiming solipsism:

Hylas: *Supposing you were annihilated, cannot you conceive it possible, that things perceptible by sense may still exist?.*

Philo.: I can, but then it must be in another mind. Why I deny sensible things an existence out of the mind, I do not mean my mind in particular, but all minds. ... Now it is plain that they [sensible things] have an existence exterior to my mind, since I find them by experience to be independent of it. There is therefore some other mind wherein they exist, during the intervals between the times of my perceiving them: as likewise they did before my birth and would also after my supposed annihilation. And as the same is true of other finite created spirits, it necessarily follows, there is an omnipresent eternal mind which knows and comprehends all things, and exhibits them to our view in such a manner, and according to such rules as he himself has ordained, and are by us termed the Laws of Nature.⁷⁰

2.7 Mathematical objects

Berkeley had a very modern, one might even say Wittgensteinian, view of the nature of mathematical objects such as numbers and perfect geometrical figures. As an empiricist, he held that they just did not exist. All that was real in this respect was our mathematical practice: we have the symbol-based apparatus of mathematics, which is of immeasurable importance in solving practical, technical problems, but it would be a naïve folly to assume that the terms that occur in mathematical propositions genuinely refer to anything.

He is therefore diametrically opposed to the modern Platonists who imagined the progress of mathematics as consisting in discovering mathematical things that are objectively out there, as if waiting to be found:

Hence we may see how entirely the sequence of numbers is subordinate to practice, and how jejune and trifling it becomes, when considered as a matter of mere speculation.⁵⁹

Thus mathematical objects are, in one respect, akin to physical objects, in so far as they essentially working fictions. They have no independent existence of their own, but serve as hooks on which we can collectively hang the systematic patterns of our perceptual experiences.

2.8 The nature of the spirit

Berkeley's motto is often quoted as "Esse est percipi", but that applies only to objects, not to spirits. The more general principle, which applies to both, is this:

*Existence is percipi or percipere.*⁵

which means that the essence of existence is either to be perceived or to perceive. At least at a conceptual level, there would appear to be two kinds of things: ideas, and the spirits that experience those ideas. In fact, when we drill more deeply down into both concepts, we reach the same core idea, just as the Hindu mystics discovered that the ātman (the personal soul) and the Brahman (the universal soul) are ultimately one and the same.

2.8.1 Existence of the spirit

One intuitively has a sense that one's self exists as a real, active entity that is conceptually distinct from any particular idea within the mind. Berkeley recognised this:

*But besides that endless variety of ideas or objects of knowledge, there is likewise something which knows or perceives them and exercises divers operations, as willing, imagining, remembering about them. This perceiving, active being is what I call mind, spirit, soul, or myself. By these words I do not denote any one of my ideas, but a thing entirely distinct from them, wherein they exist, or, which is the same thing, whereby they are perceived; for the existence of an idea consists in being perceived.*³⁸

The spirit is, however, deeply mysterious because it lies outside the field of conceptual thought. It is radically different from anything else we encounter in our introspection or sensory impressions:

*The Will is purus actus or rather pure spirit, not imaginable, not sensible, not intelligible, in no wise the object of the Understanding, no wise perceptible. ... Substance of a spirit is that it acts, causes, wills, operates, or if you please (to avoid a quibble that may be made on the word "it") to act, cause, will, operate — its substance is not knowable, not being an idea.*²⁵

2.8.2 The perceiving and willing of the spirit

As soon as we begin a close examination of the question of who we are, we are confronted by the riddle of whether the perceiving 'I' refers to the same thing as the 'I' that performs acts of free will. Since the willing 'I', that is, the volitional agency, is invisible, we must consider the possibility that it is not really there, and that all our actions stem from the workings of some blind mechanism, to which the perceiving 'I' is a passive spectator. Or, even, that some supra-personal agency is using us as puppets. Berkeley's answer was very clear that the perceiving and willing 'I' are the same entity:

*A spirit is one simple, undivided, active being: as it perceives ideas, it is called the 'Understanding' and as it produces or otherwise operates about them, it is called the 'Will'. ... Whether he hath ideas of two principal powers, marked by the names 'Will' and 'Understanding' distinct from each other as well as from a third idea of substance or being in general, with a relative notion of its supporting or being the subject of the aforesaid powers, which is signified by the name 'soul' or 'spirit'. This is what some hold; but so far as I can see, the words *will*, *soul*, *spirit* do not stand for different ideas, or in truth, for any ideas at all, but for something which is very different from ideas, and which being an agent cannot be like unto, or represented by, any idea whatsoever.⁴⁸*

Berkeley reiterates that the spirit is the ground of all ideas:

From what has been said, it follows there is not any other substance than spirit, or that which perceives.⁴¹

2.8.3 The Will is the essence of the spirit

At certain points in one of his notebooks, Berkeley comes tantalisingly close to a doctrine that was independently advanced, and made famous, a century later by Arthur Schopenhauer, that the essential thread of what we call the personal identity is manifested in the will, that is, in the aims and tendencies of the invisible, free agency:

Qu: Whether Identity of Person consists not in the Will.³¹

Continuing along this line of thought, he differentiated the Will from the experiential content of the mind:

The soul is the Will properly speaking & as it is distinct from Ideas.⁷

At times in his notebooks, he looks as if he also toyed with the notion that David Hume later advocated, that there is no self over and above the stream of conscious experiences. The following remarks were made in successive entries:

The very existence of Ideas, constitutes the soul.⁹

Consciousness, perception, existence of Ideas seem to be all one.¹⁰

Mind is a congeries of Perceptions. Take away perceptions & you take away the mind.¹¹

I believe, however, that Berkeley had a rather more sophisticated intuition of the relationship between the Understanding, the Will, and the Ideas, and one that he struggled to articulate. Here again, I think that Berkeley was running up against the limited ability of ordinary language to express his mystical vision. Immediately following the above remarks in his notebook, we find this:

Say you the mind is not the Perceptions, but that thing which perceives. I answer you are abused by the words ‘that’ & ‘thing’ — these are vague, empty words without a meaning.¹²

We might be tempted to imagine that Berkeley was thinking of what ‘process ontologists’ such as Alfred North Whitehead advocated in the twentieth century. In this, Whitehead supposed that we cannot properly differentiate consciousness from the contents of consciousness, because what we take to be different experiences and therefore objects in relation to an experiencing subject, are rather the varying states of a continuing process. Berkeley, however, had something more profound in mind. For, he emphasised over and over that the spirit was not amenable to conceptualisation. We are rebounding off not just the limits of language, but the limits of conceptual thought. Again, Berkeley records in his notebook his frustration in trying articulate the ineffable:

Blame me not if I use my words sometimes with some latitude. ‘tis what cannot be helpt. ‘Tis the fault of language that you cannot always apprehend the clear & determinate meaning of my words.¹³

Subsequent entries in this notebook reveal Berkeley's genius struggling to reconcile incommensurable conceptions. The fruits of this intellectual labour never made it into his PRINCIPLES or the DIALOGUES, because he never succeeded in nailing this part of vision down in words. In the following two remarks, he identifies one line of tension: between, on the one hand, our unavoidable need to conceptualise mental reality into 'perceiving' and 'being perceived'; and the mystical vision of a unitive existence that integrates 'perceiving' and 'willing':

Things are two-fold active or inactive. The Existence of Active Things is to act, of inactive to be perceived. ... Distinct from or without perception there is no volition: therefore neither is there existence without perception.¹⁴

The habitual separation that we make in our thoughts, of the subject from the object, will tempt us to reify experiences. It will lead us to think of them as inert things subsisting by themselves. Yet Berkeley's philosophy requires us to see them, at the same time, both as the logical product of our act of perception and as the logical product of God's volition. The only resolution of this tension is to realise that what we think of as an experience is really identical with God's volition. There are no intermediate things, the experiences, distinct from us (the experiencers) or God (the creator of the experience). Rather, God's will is immanent in the experience: God's volition is constitutive of the experience itself. Yet, neither God's will nor our own can be encountered as such, they can be encountered only as experiences:

The substance of body we know, the substance of spirit we do not know, it not being knowable, it being purus actus.¹⁵

Likewise, he asked rhetorically whether the Understanding could know in advance what volition the Will would enact:

Qu: whether the Will can be the object of prescience of any knowledge.³⁰

He does not record an answer to this rhetorical question, but it would be of a piece with the rest of his philosophy for him to deny the possibility of foreknowledge of free will.

Berkeley came close to identifying experience with volition, in the following somewhat puzzling remarks — which seems, however, to refer to human will rather than divine will:

Qu: may not there be an Understanding without a Will?

... Understanding is in some sort an action.²⁴

It seems to me that Will & Understanding, volitions & ideas cannot be severed, that either cannot be possible without the other.²⁹

The full realisation of this was not articulated in western philosophy until Schopenhauer wrote THE WORLD AS WILL AND REPRESENTATION, a hundred years later. Berkeley, meanwhile, still could not break free of the instinctive mental habit of reifying ideas: he did not hit upon Schopenhauer's articulation of the phenomenal world as a 'presentation' of the Will.

2.8.4 Human spirit is God's spirit

Berkeley did, however, adumbrate Schopenhauer's theory of the single, universal Will, in so far as Berkeley saw the human spirit and God's spirit as one and the same:

The spirit the active thing, that which is soul and God, is the will alone. The ideas are effects, impotent things.

... The concrete of the will and understanding I must call Mind not person, lest offence be given, there being but one volition acknowledged to be God.¹⁶

We see no variety or difference betwixt the volitions, only between their effects. Tis one Will, one Act, distinguished by the effects. This Will, this Act, is the spirit, operative principle, soul, etc.²¹

And here, in the epicentre of this universal mystical vision, Berkeley sees as clearly as Schopenhauer, that even to assert the unity of human and divine spirit is to drag conceptual thought out of its proper orbit and cast it into a space where it can gain no purchase:

You ask, Do these volitions make one will? What you ask is merely about a word. Unity being no more.¹⁷

Even a conceptual distinction as rudimentary as between 'one' and 'many' fails to apply in this central core of suprapersonal apprehension. Berkeley did not, however, despair. He believed that further investigation would bring him the elucidation and articulation that he sought:

But, say you, I find it very difficult to look beneath the words & uncover my ideas. Say I, use will make it easy.

In the sequel of my book the cause of this difficulty shall be

more clearly made out.¹⁸

His manuscript for the sequel (that is, Part II of the PRINCIPLES) was, Berkeley claimed, tragically lost and he never felt able to re-write it. (There is a speculation that he may have secreted the manuscript on return to Ireland, fearing that its conclusions would be too controversial.)

2.8.5 God's spirit has a mind

The identification of experience with volition cuts both ways: as God's volition is presented to us as experience, so God experiences our volitions. In this respect, Berkeley's theology stands out against the popular modern watering down of pantheism, in which the word 'God' is employed to re-label the natural laws that govern the universe. In that God engages in both experiencing and willing, He is very much a mind as we are:

The properties of all things are in God, i.e. there is in the Deity Understanding as well as Will. He is no blind agent & in truth a blind agent is a contradiction.²²

Conversely, if the human spirit is identified with the godhead, then it must be seen to have a supra-personal aspect:

It seems that the soul takn for the Will is immortal, incorruptible.²³

2.9 Why are natural phenomena mechanistic?

Given that God has unlimited power to contrive in us whatsoever sensory impressions he chooses, it seems otiose for natural phenomena to possess the careful and intricate mechanisms that they do. Why, for instance, do plants possess a vascular system that transports water from the roots to the leaves, when God could in an instant miraculously create the sights and scents of endless varieties of plants. Berkeley's answer was essentially that God wanted a system that possessed a certain elegant economy.

... the reason why ideas are formed into machines, that is, artificial and regular combinations, is the same with that for combining letters into words, that a few original ideas may be made to signify a great number of effects and actions, it is necessary they be variously combined together: and to the end of their use be permanent and universal, these combinations must be made by 'rule' and with 'wise

contrivance'.⁵³

A further point can be made in Berkeley's favour here. To suppose that God could, at a whim, give us any pattern of sensation, with any degree of complexity or systematic organisation, *without* employing any simpler mechanism in the act of that production is, I fear, to rely on the inexplicable and incoherent notion of magic. For, if we assume — as Berkeley does — that God is ultimately pure and simple, then God's creation of anything must proceed by way of evolutionary stages or emanations. Immense complexity cannot spring, already formed, from something that is absolutely simple. Rather, God must go about the creation by means of simple creations first, which are then utilised in more complex creations. What we see as the laws of nature are God's earlier and simpler creations, and what we see as the blind following of those laws in such diverse phenomena as meteorology, geology, and physiology is really the fuller working-out of God's creation, building on the earlier and simpler creations. In a sense, then, the mechanisms that we see operating in, say, the vascular system of a plant are reflections of God's thoughts, which proceed in a chain as God works out mentally how to create the sense-impression of seeing a flower. Therefore, far from being superfluous to God's creativity, those mechanisms are rather the hall-mark of it.

The modern discussion of this question has been contaminated somewhat by the idiotically simplistic notion that the only way in which God can be thought to operate is as a *deus ex machina* — by, as it were, waving a magic wand, and the desired outcomes *just happen*. In fact, nothing *just happens* in reality. Rather, things are made to happen by the concatenation of elemental acts of volition. It is tempting to suppose that the physicalistic scientists themselves have peddled this over-simplified idea of God, as an explanatorily impotent straw-man whose easy destruction makes the power of science look more impressive.

2.10 Berkeley's arguments

As I mentioned earlier, Berkeley's arguments are retrospective. By this, I mean that what is driving his philosophical beliefs is his vision of the world as a sort of divine virtuality reality, whereas the logical argumentation comes afterwards to try to make that vision seem reasonable to other people. Therefore, I do not want

to place too much emphasis on the arguments. At the end of the day, no sane person is going to be convinced of a philosophy as radical as Berkeley's just on the basis of rational arguments: you have to share Berkeley's vision, you have to see the world in the way that he did in order to have his conviction.

That is not to say that Berkeley's philosophy rests on a religious revelation. I would describe it rather as a mystical vision: it is a matter of seeing the same world that we all see every day, but seeing it from a new perspective. It is an insight into the constitution and nature of what is around us all the time.

In one respect, understanding Berkeley's vision is similar to understanding an abstruse mathematical theorem. On the one hand, you can plod through the detailed proof of a theorem step by step, and understand each step, and yet still not see the truth of the theorem. If and when you do get that insight, though, it comes in an instant: you just suddenly see the theorem from a new perspective, which reveals its necessary truth. Then, the detailed proof serves only as a corroboration of what has been seen through the insight.

Berkeley does not always present a clear, linear thrust of argument but rather meditates upon a number of considerations that either could be marshalled into an argument, or which follow from such an argument. For the sake of clarity, I shall pick out a number of lines of argument, and refer to them with names of my own choosing. Berkeley himself was never so fastidious as to enumerate his arguments or even present and name them explicitly as arguments.

2.10.1 Unintelligibility of absolute space

A pivotal concept in Newton's physics and philosophy is that of absolute space. Berkeley, however, had the remarkably modern insight that this was nonsensical. In fact, the necessarily relative nature of space did not gain acceptance in mainstream science until Albert Einstein's Theory of Special Relativity was published at the beginning of the Twentieth Century.

... it doth not appear to me that there can be any motion other than relative: so that to conceive motion, there must be at least conceived two bodies, whereof the distance or position in regard to each other is varied.⁵⁸

This observation does not really form part of any of Berkeley's arguments, but rather paves the way to his central argument from the unintelligibility of matter. It adds to the sense of cumulatively eroding the persuasiveness of Newton's vision of the world.

By recasting physical concepts, such as space, in a form that is explicitly centred on the observer, and logically dependent on the observer's perceptions, Berkeley begins to strip away the veils of delusion with which Newtonian metaphysics shields reality from our apprehension.

2.10.2 Argument from the unintelligibility of matter

In the following passage, he emphasises the incoherence of the concept of matter, which is really the central and most secure plank of all his arguments, and I shall refer to it as the 'argument from the unintelligibility of matter', although it is often given the shorter title of the 'semantic argument':

when I consider the two parts or branches which make the signification of the words material substance, I am convinced there is no distinct meaning annexed to them.⁴⁴
... whether it be possible for us to understand what is meant, by the absolute existence of sensible objects in themselves, or without the mind. To me it is evident those words mark out either a direct contradiction or else nothing at all.⁴⁷

More specifically, he contrasts the vacuousness of the concept of matter with the sensible content of more mundane ideas:

The matter philosophers contend for, is an incomprehensible somewhat which hath none of those particular qualities whereby the bodies falling under our senses are distinguished from one another.⁵⁰

Whilst acknowledging that it has a limited, technical use in mechanics, he denies any wider significance in the word 'matter', or any synonymous expression such as 'the thing in itself' (a flimsy expression that Immanuel Kant many years later placed a lot of weight on):

... I know not what they mean by things considered in themselves. This is nonsense, jargon.²⁷

In the DIALOGUES, Berkeley examines, and denies, the claim that one can somehow give a meaning to the word 'matter' by asserting

that it refers to whatever it is that causes our sensory impressions:

Philonous: ... *You may indeed, if you please, annex to the word matter a contrary meaning to what is vulgarly received; and tell me you understand by it an unextended, thinking, active being, which is the cause of our ideas. But what else is this, than to play with words? ... I do by no means find fault with your reasoning, in that you collect a cause from the phenomena; but I deny that the cause deducible by reason can properly be termed matter. ... And doth not matter, in the common acceptation of the word, signify an extended, solid, moveable, unthinking, inactive substance?*⁶⁴

At this point, the logic of Berkeley's argument is almost identical to that of materialists and it had, in fact, earlier been used by his predecessor Locke (ESSAY IV.ii.5) The crucial difference between Berkeley and Locke at this point is that Berkeley infers the existence of something that wills our ideas, whereas Locke infers the existence of something that causes our ideas. From the former, Berkeley can easily reach the further inference that an external mind exists (his 'God') while Locke can infer only the existence of an otherwise unknowable universe. So, why is Berkeley right to infer that our ideas are willed by an external being, where Locke infers only that our ideas are caused?

The answer surely lies in an analysis of the root meaning of 'making something happen'. Causality is, in fact, a bastard concept, as it is derived by projecting our introspected notion of will onto the regular entailments of a theoretical construct, namely the physical universe. In the new Newtonian mechanics, with which Locke was familiar, as much as in the whole of modern physics, there is no such thing as 'causality'. Instead, there are propositions, expressed in mathematical formulae, that relate states and events. For instance, if we consider the state of a billiards game at some moment in time, when one ball hits another, then physics entails its state a moment before and a moment later. It is indifferent to the direction of time. (Indeed, the idea of time 'flowing' is unintelligible in the language of physics.) To say that antecedent events or states cause later ones is to jump beyond physics. The same applies even when we bring into consideration the laws of thermodynamics: that merely gives us a temporal

asymmetry, but it gives no sense of a preferred direction, one which in which time is supposed to flow, it gives us no concept of causation. Why, then, do we think and talk of ‘physical causes’ in everyday life? Because the forward march of psychological time (as distinct from physical time) makes the model of volition a convenient metaphor for things being made to happen in the physical world. What, then, are we to make of Locke’s suggestion that material substances cause our ideas? If we try to interpret it as logical entailment only, then we have an unbridgeable explanatory gap: for, the theoretical principles of physics determine only the occurrence of physical events, and we are left with the question of what makes the ideas occur in association with those events. The only alternative is to read Locke’s ‘cause’ as referring to the projected psychological component which is volition as Berkeley claimed.

The final retreat is to give up any claims of being able to say anything about matter at all, save that it exists. In response to Hylas’ last-ditch defence of matter’s existing in this entirely unknowable sense, Berkeley writes:

Philonous: *Now in that which you call the obscure indefinite sense of the word matter, it is plain, by your own confession, there was included no idea at all, no sense except an unknown sense, which is the same thing as none.⁶⁷*

And, as a general conclusion:

Philonous: *... So that in all your various senses, you have been shewed either to mean nothing at all, or if anything, an absurdity. And if this be not sufficient to prove the impossibility of a theory, I desire you will let me know what is.⁶⁸*

2.10.3 The fictive nature of the physical world

Berkeley occasional uses the term ‘fiction’ to describe the material world:

... we are taught to distinguish their real nature from that which falls under our senses ... though it be the fiction of our brain ...⁶⁹

This concept is, I think, essential for a clear and correct understanding of the basis for subjective idealism. Berkeley, however, did not seem to identify the fundamental rôle that it plays in the

foundational logic of his philosophy. It, perhaps, only with the profound perspective that we have gained from Wittgenstein's linguistic philosophy in the twentieth century that we can really see what underpins idealism.

2.10.4 Argument from mediacy

Next, Berkeley touches on the argument from mediacy, which I would say does no more than make subjective idealism plausible, without proving anything:

... what reason can induce us to believe the existence of bodies without the mind, from what we perceive, since the very patrons of matter themselves do not pretend, there is any necessary connection betwixt them and our ideas.⁴⁵

2.10.5 Argument from primary qualities

In section 9 of the PRINCIPLES, Berkeley gives the following argument, which I think is rather weak.

- 1 Matter is defined by extension, figure, and motion.
- 2 These are ideas.
- 3 Therefore, “the very notion of what is called matter or corporeal substance, involves a contradiction in it”.

His reason for saying that these properties must belong to ideas is that we cannot imagine them without some colour, texture, etc. This seems somewhat weaker than his earlier ‘semantic’ argument, that we have no concept of matter as a qualia-free substrate. For there is a sense in which we can have mathematical notions of motion and so on, but any such thing as is defined by mathematics (extension etc.) is fictive. The argument, as Berkeley presents it, is weak because it omits to make that step explicit.

One source of confusion is that Berkeley sometimes formulates arguments in a rhetorical style that makes them look superficially like experiments in introspection, as opposed to analyses of concepts. For instance:

Inasmuch that I am content to put the whole upon this issue: if you can but conceive it possible for one extended moveable substance, or in general, for my one idea or anything like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause.⁴⁶

David Berman interprets this as an argument from psychological empiricism, which I think is a completely mistaken interpretation of what Berkeley was getting at. I think it is evident from the general tone of Berkeley's writing that this form of words is merely a rhetorical device. What he means is not that one should actually perform this psychological experiment, but rather that one should reflect upon the concepts that are involved and just see that sensible qualities such as extension and motion must be in the mind of the observer.

The argument from primary qualities has a certain connection with the argument from the unintelligibility of matter, and on a superficial inspection one might be misled into thinking that they are one and the same argument. Here, for example, the emphasis is on what is meant by the word 'matter':

Philonous: ... *In the common sense of the word matter, is there any more implied, than an extended, solid, figured, moveable substance existing without the mind? And have not you acknowledged over and over, that you have seen evident reason for denying the possibility of such a substance?*⁶⁵

Here, Berkeley is starting from the confused concept of matter that people may think they possess if they have been influenced by the writings of natural philosophers such as Newton. At first, this argument sounds as if it is leading up to the argument from the unintelligibility of matter, although it is a somewhat disorienting way of doing it. What I take Berkeley to be saying is this:

- The proper concept of matter, as it is defined and used in the science of mechanics, is defined exhaustively in terms of the rôle it plays in mechanical processes, and has no content derived from our sensory impressions. Therefore, to assert the existence of such matter is really to say nothing. This is the argument from the unintelligibility of matter.
- There is also a bastard concept of matter, which has added into it the sensory qualities of extension and shape. Berkeley points out that this concept of matter is therefore self-contradictory, because such a matter must be both in the mind and not in the mind. Hence nobody can genuinely possess such a concept, and any assertion that matter in this sense exists is simply

nonsensical. This is the argument from primary qualities.

- Reading between the lines, I get the impression that Berkeley regards the latter argument as being, at least for some people, a preliminary to the more fundamental former argument. For, if you start off by thinking that matter is both an objective extra-mental substance, and that it nonetheless possesses the primary qualities; and if you are disabused of that notion by Berkeley; then you may retreat to the next defensive position, which is to assert that matter exists in the purely abstract sense of the physicists; that is, until Berkeley disabuses you of that too.

2.10.6 Argument from intentional reference

In one of his posthumously published notebooks, Berkeley sketches a completely fallacious argument, which emerges as occasional hints in the works that he published. I shall mention it here only because some people have quoted it to discredit him. I can only suppose that Berkeley was having a bad day when he wrote it. It certainly does not form a significant part of the grounds for his theory.

Contrary to what Berkeley says elsewhere (to the effect that bodies exist when they are perceived or in so far as they would be perceived), he writes in his notebook that something exists if it is mentioned or thought about, that is, if one intends a reference to it:

You ask me whether the books are in the study now when no one is there to see them. I answer yes. You ask me are we not in the wrong for imagining things to exist when they are not actually perceived by the senses. I answer no. The existence of our ideas consists in being perceived, imagined, thought on — whenever they are imagined or thought on they do exist. Whenever they are mentioned or discoursed of they are imagined & thought on, therefore you can at no time ask me whether they exist or no, but by reason of that very question they must necessarily exist.⁶

In fact, all that imagining proves the existence of is an imaginary something, not the real thing that we encounter in perception. This argument is therefore inconsequential. The correct view is that the object exists counterfactually as a power of God.³²

2.11 Why did so few share Berkeley's vision?

Berkeley wondered why it should be that a vision that was utterly clear and indisputable to him should be quite obscure to, and misunderstood by, everybody else. He attributed this obscurity to people's being tricked by themselves, thus:

I am inclined to think that the far greater part, if not all, of those difficulties which have hitherto amused philosophers, and blocked up the way to knowledge, are entirely owing to ourselves. That we have first raised a dust and then complain, we cannot see.³⁹

Berkeley pinpoints the origins of the materialist misunderstanding in the prevailing belief that there are what he called 'general abstract concepts', and that our concept of matter is such a concept. This, he says, is down to language:

I come now to consider the source of this prevailing notion, and that seems to me to be language⁴²

This adumbrates the writings of Ludwig Wittgenstein, two and a half centuries later, where Wittgenstein blames the continuance of seemingly deep philosophical problems on our misunderstanding our own use of language, and says figuratively:

309. What is your aim in philosophy? — To shew the fly the way out of the fly-bottle.

For Berkeley, the 'general abstract concept' is the slipway by which the doctrine of materialism is launched. Really, this is a technical detail, and you can understand what Berkeley's theory says without knowing anything about any 'general abstract concept'. Nevertheless, this notion is a key to understanding what Berkeley saw as the veil of ignorance that bars people from sharing the vision that he had had. For, matter is the most general and most abstract of any concept, and Berkeley states over and over that it is devoid of any sensible meaning: hence it is unintelligible to claim that matter really exists. But, he reasons, the root of this problem is our willingness to believe in abstract general concepts at all. If we can stop ourselves picking up this bad mental habit in the first place, we shall be less vulnerable to the temptation to believe that there is anything in that most general concept, namely matter.

Berkeley uses the following terminology. An ‘abstract idea’ is any idea cut out from particular ideas. It can be an area of a visual image, or a segment of some sound. For instance, from this page, you might mentally abstract the letter “e”. Berkeley does not allow the term ‘abstraction’ to mean cutting out an aspect of some particular idea, such as the shape of the letter “e” as opposed to its colour. That somewhat goes against the modern usage of the word “abstract”, but we shall return to this later. A ‘universal concept’ is a concept that encompasses a (broad) range of particulars. For example, Berkeley would say that we carry in our mind a number of instances of the letter “e” to serve as exemplars: whenever we subsequently recognise an instance of the letter “e”, we do so by comparing the new letter with the examples we have seen before, although this comparison and recognition happen quickly and automatically, so that we are not normally aware that we are doing it. Only if we were recognising characters from a language that we do not know, for example Arabic or Japanese, would we be consciously aware of making those mental comparisons. Berkeley stressed that a general term signified a collection of particular ideas:

... there is no such thing as one precise and definite signification annexed to any general name, they all signifying indifferently a great number of particular ideas.⁴⁵

Finally, a ‘universal abstract concept’ is an impossible mixture of a range of particular concepts, as opposed to an assembly of particular exemplars. This was the key to John Locke’s theory of how we recognise things, and Berkeley emphatically rejected it. Let us take a simple example: how do you recognise the letter “e” when you see it in various typefaces, in newspapers, books, magazines, and road signs? Locke thought that we form a general picture of, say, the letter “e”, which lacked the details of any individual, particular letter that we have ever seen; and when we recognise something as the letter “e”, be it printed or handwritten, we do so by comparing it with that universal idea. Berkeley’s argument against this was that it was simply nonsense to suppose that anyone could have such a ‘universal’ idea. Every idea we have is particular, and has specific details. You cannot have in your mind a general picture of the letter “e”, you can have only a specific one.

I must emphasise the connection with the idea of matter. The view advocated by Locke, which was the prevailing view at the time, was that we have universal abstract ideas of all sorts of things and, in particular, the word ‘matter’ refers to the idea of stuff in general, the substance that underlies all that we see in the world. Now, according to Berkeley, we can never have any abstract universal idea at all, because every idea we have is of some particular thing we have seen, felt, tasted, smelled, or sensed in some way. So, whenever we say, for example, that horses exist, then we are referring to occasions when people have seen horses, or touched them, or sat on them — in short, occasions when we have had direct sensory awareness of them. The sentence, “Horses exist”, means something definite because it relates to particular experiences; likewise, the sentence, “Unicorns do not exist”, again means something definite because of particular experiences of seeing pictures of mythical unicorns. These sentences do not refer to any abstract, general ideas, but rather they refer to collections of particular ideas. And, if someone were to say that things in general exist, this means only that we have some sense experiences of some things. But if someone were to claim that ‘matter’ exists, and does so independently of anyone’s perceiving it, then we have lost any definite, sensory meaning: we have slipped into meaninglessness. We have been tricked by our belief that we have abstract universal ideas, into thinking that ‘matter’ refers to something separate from any sense experience.

When we try to grasp the notion of ‘matter’, we find ourselves conceptually empty-handed, with nothing but the vacuous medieval concept of ‘quiddity’ or ‘thingness’, which is as empty as a concept can be:

*... the vague and indeterminate description of matter or corporeal substance, which the modern philosophers are run into by their own principles, resembles that antiquated and so much ridiculed notion of *materia prima* to be met with in Aristotle and his followers.⁴³*

Berkeley is, I think, entirely right in his analysis of the meaning of the term ‘matter’, and his critique of what he calls ‘abstract universal ideas’. He may not, however, be right in thinking that this accounts for the popular resistance to his philosophy. Personally, I think that what he has described is more like a surface

symptom of the veil of ignorance, and the root cause lies in the somatic models that we automatically build up of our immediate surroundings. As I have said, this issue is not central to our concerns. We need to focus on Berkeley's metaphysics, rather than on the sociological reasons for the popular rejection of it. The validity and usefulness of Berkeley's philosophy does not hang on this question.

2.12 Berkeley's view of angels

As far I can see, Berkeley nowhere mentions 'angels'. At several points, though, he does mention non-human, or 'superior', spirits, in the plural. Evidently, he believed that besides human spirits and God there were other, disembodied spirits. For instance, in his unpublished student notebook, he wrote:

*Tis a perfection we may imagine in superior spirits that
they can see a great deal at once with the utmost clearness
& distinction whereas we can see only a part.²⁸*

Of course, one of the liberating features of Berkeley's philosophy is that it offers no fundamental obstacle to the existence of disembodied spirits. Indeed, there is a sense in which we humans are all disembodied anyway, since our material bodies are fictions. But the specific sense in which we mean 'disembodied' here is that these 'superior spirits', such as angels, are not locked into the virtual reality that we think of as the physical world. What world they do inhabit we must discuss elsewhere.

In his later work, SIRIS, in 1744, Berkeley refers approvingly of the Neo-Platonist Plotinus, in connection with the latter's mystical account of the One. Plotinus also, however, wrote much about disembodied entities and the realm they inhabit, but this is ignored by Berkeley. Berkeley seems curiously reticent about this, given the high regard in which he held Plotinus. At one point, though, he does let slip one relevant remark from Plotinus:

*... as Plotinus remarks,²²⁵ incorporeal things are distant
each from other not by place, but (to use his expression) by
alterity.⁷²*

The term 'alterity' is not defined, but this concept of non-spatial separation adumbrates Swedenborg's later observation that the angels have a non-spatial experience of separation, in his book HEAVEN AND HELL (1758):

[Angels] have no distances, and having no distances they have no spaces, but in places of spaces they have states and their changes.³⁰³

Why Berkeley brings up the subject of ‘incorporeal things’ and then disregards it is not clear. It is even more puzzling when we consider that the Great Chain of Being, which is the central theme of SIRIS, was used by the Neo-Platonists as their chief theoretical reason for the existence of angels. If angels did *not* exist, they argued, then there would be an exceptionally large gap in the chain of command and control between God and the manifest world. As such a gap is implausible, there must exist angels to administer God’s will.

This principle, by the way, also informs good software design, in which the architecture of any complex software is built around levels, each comprising distinct modules or daemons that perform comparatively narrowly defined functions within the overarching chain of command. An analogously hierarchical organisation can also be seen in the architecture of biological information handlers, such as brains.

It is possible that Berkeley’s reluctance to discuss angels is connected with the general thrust of the Protestant movement to stem the flow of modern revelation and trace all religious beliefs exclusively to the Bible. Within the Roman Catholic Church, however, beliefs about angels came largely from the sixth century Neo-Platonist Christian, Pseudo-Dionysius — who, throughout the Middle Ages, had been mistakenly believed to have been a pupil of St Paul in Biblical times, and had therefore acquired a quasi-Biblical authority. The Protestant reformers such as Calvin had rejected all such speculation on the grounds that it had no Biblical authority. Berkeley may have feared that encompassing angels in his philosophy may have been construed as sympathy for Papism — perhaps a dangerous thing for an Anglican bishop in the eighteenth century.

2.13 Berkeley versus Eastern philosophies

Berkeley’s philosophy is often thought to be similar, in some ways, to the metaphysical systems found in Eastern traditions, such as Hinduism and Buddhism. There is some truth in this, but there are also differences. Interestingly, the largest differences have to

do with the methods of philosophical inquiry, and the motivation. It is as if both Eastern and Western mystical philosophers have obtained the same insight into the nature of the world, but they seek to express that insight in terms of different concepts, they present different arguments to defend their vision, and also they see different reasons for pursuing the truth and different ethical implications of it. In some respects, the early Berkeleyan philosophy (which is clearly stated in the PRINCIPLES and the DIALOGUES) does not penetrate as deeply as some Eastern doctrines, such as those of the Advaitan (non-dualistic) school of Vedānta. Nevertheless, the philosophy that Berkeley intimated in his later life (in SIRIS, published thirty-four years after the PRINCIPLES) does approach a genuinely mystical absolute idealism that draws close to that of the Vedānta. Berkeley seems never to have had the opportunity to study the Hindu texts, but traced this deeper ontology to the Neo-Platonists. The Neo-Platonists formed a dominant intellectual school from the third to the thirteenth centuries CE, and resurfaced in various guises in later centuries. Nevertheless, Peter Kingsley has shown¹⁶³ that they transmitted a much earlier tradition, which was attributed to Pythagoras and may well have had its ancient origins in common with the Hindus. Certainly, Berkeley seemed to be aware of these beliefs' having ancient roots, as he wrote in SIRIS concerning Plato's works:

... which seem to contain not only the most valuable learning of Athens and Greece, but also a treasure of the most remote traditions and early science of the East.⁷³

In the following sections, I shall give a brief outline of some of the Eastern systems, and compare them with Berkeley's philosophy.

2.13.1 Vedānta philosophy of Hinduism

Hinduism is not a single system, but rather a family of independent traditions with many shared images, beliefs, and aims. There is no authoritative leadership (like Christianity's Pope), nor a single authoritative scripture (like the Bible), although there are numerous ancient writings such as the Vedas, the Sutras, the Tantras, and the Mahābhārata which serve both as a canonical literature and religious framework.

It is sometimes denied that Vedānta agrees with Berkeley's

subjective idealism. Whatever differences there may be, the fact of an important overlap is clear from the following passage. In the Vedāntic philosophy, the manifest world is considered to be like a dream, as the mystic and scholar Śankara wrote in the ninth century CE:

*The world, filled with attachments and aversions, and the rest, is like a dream: it appears to be real as long as one is ignorant, but becomes unreal when one is awake.*²¹⁵

There is, however, rather more to the Vedānta than this. The main concerns of the Vedānta run more deeply than merely asserting this world's dreamlike ness.

An initial outline of the metaphysical philosophy of Hinduism can be seen in this passage in the Katha Upanishad:

*Beyond the senses is the mind, and beyond the mind is reason, its essence. Beyond reason is the Spirit in man, and beyond this is the Spirit of the universe, the evolver of all. And beyond is Purusha, all-pervading, beyond definitions.*¹⁵⁹

Berkeley's God corresponds to the "Spirit of the universe", but the main focus of interest in Hindu metaphysics is the Purusha, or Brahman. In this sense, Hinduism concerns itself with a deeper, more spiritual perspective, in contrast with the mentalistic concern of Berkeley's early philosophy. Only at the end of his dialogues does Berkeley allow himself the pleasure of revelling in the natural world that God has created, but even here he makes no allusion to anything like Brahman. In his final work, SIRIS, however, Berkeley writes approvingly of the Neo-Platonic concept of the 'One' as found in the writings of Parmenides, Plotinus, and Proclus:

*The ONE ..., being immutable and indivisible, always the same and entire, was therefore thought to exist truly and originally, and other things only so far as they are one and the same, by participation of [the One]. This gives unity, stability, and reality, to things.*⁷⁴

*The simplicity of the [the One] ... is conceived such as to exclude intellect or mind, to which it is supposed prior ...*⁷⁵

In his later years, Berkeley, having been suffused with his Neo-Platonic studies in the quietness of Rhode Island and rural Ireland, formed the following beliefs. That, out of the primordial 'One' there somehow emanates the mind of God, known in Greek

philosophy as the *Logos*, or the Word; and from the *Logos* in turn emanates the *Anima Mundi*, or the World-Soul. (The verb ‘emanates’ here is used non-temporally, neither in the present tense, nor in the past tense.) The parallel with the Vedānta in this connection is very suggestive.

Śankara is the leading exponent of the Advaitan school of Vedānta but, like other Vedāntic mystics, his writings are often quite terse and elliptical. The clearest exposition of Vedānta that I have found so far is Swami Nikhilananda’s introduction to Śankara’s SELF-KNOWLEDGE or ĀTMA BODHA, published in 1946, and I shall draw heavily on his work in the following sections.

The following aphorisms (collected by Nikhilananda²²⁰) may help to give something of the flavour of Vedāntic writing. Some of them are quite famous and tend to circulate as soundbites in popularisations of Hinduism.

- “It is not this, it is not this”, which is more succinct in the original “Neti, neti” (Brihadāranyaka Upanishad II, iii, 6). This is a way of saying that Brahman cannot be identified with any particular thing that one could point to, either with one’s hand or with one’s mind.
- “That thou art” (Sāma-Veda, Chhāndogya Upanishad VI, x, 3). This an expression of the ultimate unitiveness of the universe: that if you drill down far enough, you will find that you are the same being as the desk at which you sit.
- “This Ātman is Brahman” (Atharva-Veda, Māndukya Upanishad 2, Brihadāranyaka Upanishad II, v, 19). This also express the universal unity, this time focussing on the identity that exists between the personal soul and the universal soul.
- “Consciousness is Brahman” (Rig-Veda, Aitareya Upanishad V, 3). This draws attention to the claim that what we construe as our own private consciousness is ultimately one and the same with the pure consciousness of everyone else, and of Brahman.
- “I am Brahman” (Yajur-Veda, Brihadāranyaka Upanishad I, iv, 20). Likewise, this is telling us, in quite a dramatic expression, that each of us is ultimately an emanation of Brahman, and that the pure consciousness of each is the same.

2.13.2 Background to the Vedānta

The anonymous writings that make up the Vedas, which are the main Hindu scriptures, can be traced back for millennia. They are generally reckoned to have been written between 1500 and 800 BCE, but there is evidence that they may go back further, perhaps for one or two thousand years. (In contrast, Pythagoras, — to whom Berkeley traces his later Neo-Platonic mysticism — lived between approximately 580 and 500 BCE.) This ancient body of writings is structured as follows. There are four Vedas: Rig-Veda, Yajur-Veda, Sāma-Veda, and Atharva-Veda. Each Veda is divided into four sections, of which the last comprises the Upanishads, or philosophical commentaries. It is the Upanishadic writing that interests us here. There are a total of 108 known Upanishads, distributed amongst the four Vedas. Of these, eleven are considered to be of especial philosophical importance: Aitareya, Taittiriya, Chhāndogya, Brihadāranyaka, Mundaka, Māndukya, Iśa, Kena, Katha, Praśna, and Śvetāśvatara.

The term ‘Vedānta’ refers to ‘what comes at the end of the Vedas’, and includes both the Upanishads and commentaries on them. It is in the Vedānta that we find the highly interesting mysticism and profound philosophical theories. Because much of the Upanishadic material was written in a terse, even cryptic, style, there is a lot of scope for interpretation.

The first major attempt to interpret and reconcile the Upanishads was that of Vyāsa, who composed a treatise known as VEDĀNTA-SŪTRAS or BRAHMA-SŪTRAS. (The word “Sūtra” means ‘aphorism’.) This became the standard textbook on the Upanishads, and the term ‘Vedānta’ is usually considered to cover the Upanishads, the BRAHMA-SŪTRAS, the Bhagavad Gitā (itself sometimes considered an Upanishad), and the commentaries elucidating these texts. Detailed commentaries on the Vedānta were later written by Śankara.

Although there is no central body governing Hinduism, Indian philosophy is considered to comprise orthodox and heterodox schools. The orthodox systems are characterised by deriving their authority from the Vedas, and asserting the existence of the Ātman, or soul, as distinct from and independent of, the body and mind. In contrast, there are three heterodox traditions:

Buddhism, which denies the authority of the Vedas and the existence of anything permanent, such as the soul; Jainism; and materialistic Chārvākism.

The reliance on the Vedic scriptures is not very great, however. The Vedāntic writers tend to proceed with their own agendas, and rely on their own mystical insights. For example, Śankara wrote:

*Study of the scriptures is fruitless as long as Brahman has not been experienced. And when Brahman has been experienced, it is useless to read the scriptures.*¹²⁸

*Teachers and scriptures can stimulate spiritual awareness. But the wise disciple crosses the ocean of his ignorance by direct illumination.*¹²⁸

Indeed, he places more emphasis on the mystical experience than on rational deliberation:

*the pure truth of the Ātman, which is buried under māyā, and the effects of māyā, can be reached by meditation, contemplation and other spiritual disciplines such as a knower of Brahman may prescribe — but never by subtle arguments.*¹²⁹

which is, I believe, rather disingenuous, for ratiocination is necessary to arrive at a correct understanding of any mystical experience, and indeed Śankara himself engages in quite a lot of “subtle argument”.

2.13.3 Vedāntic ontology

To understand the metaphysics of the Vedānta and to see how Berkeley’s philosophy stands in relation to it, we must differentiate between ‘surface ontology’ and ‘deep ontology’. I shall describe as ‘surface ontology’ questions about what kinds of things exist, for example whether they are mental or physical. Berkeley’s doctrine of subjective idealism is a surface ontology in this sense: it claims that all existents are mental, and that physical things are fictive. And I shall describe as ‘deep ontology’ questions about the nature of existence itself. It is with the latter that the metaphysical doctrines of the Vedānta are principally concerned.

Śankara’s treatment of the Vedānta is the most interesting and penetrating of the many canonical commentaries on the Vedānta. There are two main strands in his treatment. First, there is the ultimate unreality of all conceptual things in the world in which we dwell. Second, there is the identity of the personal soul or Ātman

with the universal godhead or Brahman. These two strands are, however, connected, in so far as the way in which the private and embodied mind is delusory is essentially the same as that in which the objects around us are delusory. Let us look at each of these two strands in turn.

Māyā: manifesting the world

An analogy that is often used in Vedāntic philosophy, to describe how the world comes to be constructed or manifested, is that of a rope that is mistaken for a snake in the dark. As long as you think there is a snake there, you may talk about ‘the snake’ as if it were real, and you may refer to its substance. When you realise there is no snake but only a rope, the snake seems to vanish, and you see that the snake’s existence consisted in a superimposition of snake attributes onto the rope. According to the Vedānta, the whole of the manifest world is built up in this way, through superimposition or ‘adhyāropa’. Nikhilananda writes:

Adhyāropa denotes the illusory superimposition, through ignorance, on account of which one thing is perceived as another and the properties of one thing are attributed to another.²⁰²

Connecting this to Berkeley’s philosophy, we may say that our conception of material objects is superimposed on our sensory experiences. You look at a red book on the table, and you thereby have a certain visual experience: you then superimpose on that visual experience the concept of an independently existing physical book on a physical table in three-dimensional space. That superimposition is what the Vedāntists call ‘adhyāropa’.

There is a difference between the Berkeleian and the Vedāntic philosophies in this connection. (I am referring here to the early Berkeleianism, as expounded in the PRINCIPLES.) Berkeley ceased his analysis at the bed-rock of conscious experience, and up to that point the Berkeleian and the Vedāntist agree. But the Vedāntist goes further and asserts that the conscious experience itself is ultimately a delusory substance constructed by adhyāropa from an enigmatic substrate called Pure Consciousness or Brahman. It is thus that we move from the surface ontology of Berkeley to the deep ontology of the Vedānta.

Within the context of the illusion of the snake, we may speak of the substance of the snake. It later turns out that this is a delusory, and hence non-existent substance. While the illusion persists, however, it is as if the substance were real. In the bigger illusion, of the universe as a whole, the Vedāntists use the term ‘Prakṛiti’ to refer to the supposed substance of the material world, which seems real but is actually delusory.

A more common term in use is māyā, which refers to the general process where maybe the world of material substance, or Prakṛiti, is concocted by superimposition, or adhyāropa. Related terms are avidyā and ajñāna, which refer to the state of ignorance and delusion that the subject rests in when under the influence of māyā. (The prefix “a-” is a negative, while “vidhya” and “jnāna” refer to knowing.) Nikhilananda summarises this thus:

Vedāntists use such terms as avidyā, ajñāna, and Prakṛiti as practically synonymous with māyā. The word māyā generally signifies the cosmic illusion on account of which Brahman, or Pure Consciousness, appears as the Creator of the universe. Under the influence of avidyā, or nescience, Ātman, or Pure Consciousness, appears as the jīva, or individualised self.²⁰⁴

Vedāntic writers tend to play fast and loose with their terms, which can be quite confusing for the Western reader (and perhaps for the Eastern reader, too). Things are identified under different modes of description, and the distinction between an abstraction and its support is blurred. In the following passage, for instance, Nikhilananda refers to māyā as the material of the universe. This, I think, is like saying that ‘a motor car is journeying considered as a vehicle’. It makes sense, but it is a looser use of language than we are accustomed to.

The word Prakṛiti (matter or nature) is used to denote māyā as the material out of which the universe has been created. But in actual practice these distinctions are not always maintained. The words are often interchanged.²⁰⁴

Māyā is really the process whereby we are deluded, and it is only by talking loosely that we can say that māyā is the delusory substance.

While we are discussing terminology, it is interesting to note the origin of the word māyā:

The word *māyā* was used in the *Rig-Veda* to denote a kind of magical power. There it is said that Indra, through the help of *māyā*, assumed different forms. In the *Upanishads* the word acquires a philosophical significance.²⁰⁴

Our immersion in a material world may be an illusion, but it is a real illusion. In popular western accounts of Hinduism, the Vedāntic ontology is sometimes soundbited as “The world is *māyā*, or illusion”, which is really misleading. Nikhilananda, like other Vedāntists, struggles to say that the world is real, but not real:

*But according to Śankarāchārya [i.e. Śankara] the universe of names and forms cannot be denied as a fact of everyday experience for people under the spell of ignorance. He is emphatic, however, that, from the the standpoint of Brahman, it is totally non-existent.*²⁰⁵

*... The dream experiences are real to the dreamer*²⁰⁶

The same difficulty faces the Berkeleian. There is an anecdote that, on one occasion when Berkeley visited his friend Jonathan Swift, the host closed the door in Berkeley's face, telling him that if the material door did not exist, then it could not stop him entering the house. Nowadays we have the metaphor of virtual reality, and he could now give the answer that although the material door does not exist, the virtual door nonetheless stops the virtual man from entering the virtual house.

One of the ways in which Vedāntic writers try to articulate the subtle distinction between the sense in which the manifest world is real, and the sense in which it is unreal, is to say that Brahman, or the true underlying reality, is ‘what is real in’ the manifest world. Again, this seems to be only suggestive, without giving a logically watertight account. Thus, from Śankara's ĀTMABODHA, with Nikhilananda's commentary:

[Śankara:] All objects are pervaded by Brahman.

*[Nikhilananda:] Brahman pervades all objects as existence (asti), cognizability (bhāti), and attraction (priya). What is real in the phenomenal world is Brahman.*²²³

A deeper solution comes from recognising that we have a conflict of Wittgensteinian language-games. There is one language-game in which we talk about the material world as if it were real, and in which we can carry out our day-to-day business. And there

is another in which we recognise a deeper reality, on which the delusion of material world is superimposed.

Although the world around us is generated by a central agency, through the universal māyā, a temporary world can be generated by the individual mind. Śankara describes this as occurring during dreams:

*In dream, the mind is emptied of the objective universe, but it creates by its own power a complete universe of subject and object. The waking state is only a prolonged dream. The phenomenal universe exists in the mind.*¹³⁴

But then he also points out that, strictly speaking it is ultimately the same process during wakefulness:

The mind of the experiencer creates all the objects which he experiences, while in the waking or the dreaming state.

The difference being that, in the waking state it is God's mind rather than the individual's mind that does the creating, although ultimately these are the same mind.

Nikhilananda seems to have a common misunderstanding of subjective idealism, thinking that it implies that the world (Prakriti) is generated by the individual mind. In fact, Berkeley made it quite clear that God was responsible for this.

*Śankara does not, like some Buddhist philosophers, uphold subjective idealism. He does not believe that the individual soul, or ego, creates the non-ego, or the universe. On account of cosmic illusion the ego and the non-ego come into existence and a fictitious relationship is established.*²⁰⁶

Likewise, Christopher Isherwood, in his introduction to Śankara's VIVEKA-CHUDAMANI, writes:

*Śankara should not, however, be regarded as a precursor to Berkeley: he does not say that the world is unreal simply because its existence depends on our perception.*¹²⁴

In fact, Berkeley and Śankara do agree on what I have called the surface ontology: that the physical world is a construct built on our sensory experiences. Where they differ is where Berkeley ceases his eliminative reductionism and Śankara continues it until there is nothing left but Brahman. Within the surface ontology, Berkeley and Śankara are also in agreement over the distinction between personal dreams or fantasies and the generative work of God or Brahman. This is noted by Isherwood:

[Śankara] draws a distinction between the private illusions of the individual and the universal or world-illusion. The former he calls *pratibhasika* (illusory) and the latter *vyavahariki* (phenomenal).¹²⁵

The control of the world through māyā is divided into three functional components:

*the projection or manifestation (srishṭi), the preservation (sthiti), and the dissolution (laya) of the universe.*²⁰⁸

Since the manifest world has no self-existing substance, it needs active preservation. The illusion needs to be sustained actively. Māyā cannot just manifest the world and leave it on its own. In both the Berkeleian and Vedāntic philosophies, things exist only through active consciousness. These three functions are performed with two powers, “the power of concealment (āvaraṇaśakti) and the power of projection (vikshepaśakti)”. The rôle of the former is to obscure the true nature of the underlying reality, while the latter projects the delusory concepts that we take to be a real, material world around us. Nikhilananda does not go into more detail than this, and I do not know whether other Vedāntic writers have drilled down into the nature and mechanisms of these powers.

There is a sense in which it is misleading to speak of concealing and projecting here. For, ultimately, the Ātman and the Brahman are one, and the operations referred to as ‘concealing’ and ‘projecting’ really come from within: they are not things done *to* the subject, so much as things done *by* the subject, so we may say that the subject deludes itself. It does so, I would suggest, by acting ‘as if’ the delusory substance were real. We may think of this as a gigantic mime. When a mime artist acts out a mime on the stage, she behaves as if she had real, tangible props, and encountered real, solid walls. By acting ‘as if’ these things were real, she creates the illusion of them, and may delude the audience into believe them to be real. If she forgets that she is miming, then the mime artist may also delude herself. It is in just this manner, I believe, that Brahman mimes the world into apparent existence.

Another word that is used to describe the action of māyā is ‘lila’, which literally means ‘play’. This term refers to the forms of play that young children engage in, when they imagine that a favourite teddy bear is a sentient being, or they have purely imaginary friends. This form of play is much more than merely

imagining the other being, though. For, the child behaves as if the other being were really there, and may apply herself so diligently and single-mindedly to the playing that she genuinely believes it herself. Thus, in the microcosm of human play, we seem the same process of lila that Brahman engenders in the macrocosm.

The loose language of Vedāntic philosophy has a tendency to tie itself in knots in this connection. Nikhilananda writes:

The projecting power of māyā creates the entire universe (Brahmānda) and all objects dwelling therein. Therefore Brahman, in association with māyā, may be called the Projector or Manifestor of the universe. But this projection is only an appearance; it is not real.²⁰⁹

This leaves us with a dizzying bafflement, which can be remedied only by carefully dissecting what is going on in terms of Wittgenstein's language-games.

Whereas Brahman is the ineffable and undifferentiated basic reality, the creation of the world through māyā requires the existence of an intermediate entity, which is an organising intelligence that governs the world. This entity is called Iśvara and, in the typical looseness of Vedāntic writing, is described as Brahman considered as a ruling Deity. It would be more correct to say that Iśvara is delusory, and that Brahman gives rise to Iśvara through māyā in much the same way that it gives rise to the universe itself. Iśvara may be thought of as a virtual entity that represents part of the functionality of Brahman.

In association with the cosmic māyā, ... Brahman appears as Iśvara, or the Personal God, and in association with the individual māyā, as the jīva, or individual soul.²¹⁰

Śankara also refers to Iśvara as "Saguna Brahman", as opposed to "Nirguna Brahman", or plain-vanilla Brahman. (The root "sa-" means 'with', "nir-" means 'without', and 'guna' means quality or property. Hence the word "saguna" means 'with qualities', and "nirguna" means 'without qualities'.) Iśvara is therefore the counterpart of Berkeley's God. As far as I can see, the term "Iśvara" in Śankara's philosophy refers to the same thing as 'Spirit of the Universe' in the quotation from the Katha Upanishad given earlier. Isherwood quotes Swami Vivekananda on this point:

Personal God is the reading of the Impersonal by the human mind.¹²⁶

which I take to mean that the ‘Personal God’ is a delusory construct that we impose by māyā on the ‘Impersonal’. Correspondingly, it is inappropriate to attribute anthropomorphic qualities to this impersonal ‘God’, as is normally done in religious rather than philosophical contexts:

Nor can it properly be said that Brahman is “good” in any personal sense of the word. Brahman is not “good” in the sense that Christ was “good” — for Christ’s goodness was within māyā.¹²⁷

Here it is worth noting that the term “Purusha”, which was used in Katha Upanishad quoted above, comes from the earlier commentator Sankhya, rather than Śankara. Isherwood differentiates thus:

This concept of Prakriti corresponds, more or less, to Śankara’s concept of māyā — but with this important difference: Prakriti is said to be other than, and independent of, Purusha (the absolute reality) while māyā is said to have no absolute reality but to be dependent on Brahman.¹²⁶

I believe that Śankara is correct on this point, although Isherwood is over-simplifying somewhat. In Śankara’s scheme as I understand, Prakriti is purely a construct, like the substance of the delusory snake, or like the imaginary wall that a mime artist runs up against. Nevertheless, māyā does possess a genuine reality, but only in the qualified sense that the illusory experience of it is a real experience. Likewise, although the snake does not exist, the observer’s apprehension of it is a real event; and although the mimed wall does not exist, the state of the mind that moulds itself around the imagined wall is real. Śankara also makes the same point in this passage:

When a man lives in the domain of mental ignorance, the phenomenal universe exists for him.¹³⁴

Of course, we cannot take literally the notion of ‘existence for’ someone. Existence is not a subjective quality (nor, in most logicians view, is it to be considered a quality at all, although I personally have my reservations about that). Existence is necessarily an objective condition. But, although we cannot take Śankara literally here, it is clear that what he means is what we have been discussing: the process of māyā that generates the phenomenal world is real, but the delusory world that it generates is not.

It is Iśvara that is considered to performs the three functions of manifestation (srishti), the preservation (sthiti), and the dissolution (laya), which we discussed above. It is accordingly referred to under its corresponding three aspects or modes of description as Brahma (creator), Vishnu (sustainer), and Shiva (destroyer) which are popularly conceived of as gods.

Elements

Vedāntic philosophy describes the manifestation of the world as taking place through several stages, and involving various elements. This is a complex topic, and I will only touch upon a few details that seem to bring us back to the Berkeleian view of things. To what extent the details of this part of the Vedāntic system are correct is not clear to me.

In the first stage, Iśvara produces the subtle elements. Nikhilananda explains;

The first element to evolve is ākāśa, which is usually translated as “ether”, “space”, or “sky”. From ākāśa evolves air (vāyu); that is to say, Brahman, associated with māyā, appearing as ākāśa, further appears as air. From air evolves fire (agni); from fire, water (ap); from water, earth (prithivi).²¹¹

If we take this account literally, it seems quite absurd. On the assumption that the Vedāntic scholars were not fools, we may suppose that a symbolic meaning was intended, and that such familiar terms as “water” and “earth” were used as codes for more abstract ideas. (Rather as modern particle physicists ascribe colour, charm, and strangeness to quarks.) Nikhilananda offers the following interpretation in terms of the five senses:

From the standpoint of sense-perception there are only five elementary objects in the universe, namely, sound, touch, form, taste, and smell. That is why Vedānta speaks of five elements only. The unique characteristic of subtle ākāśa is sound; of subtle air, touch; of subtle fire, form; of subtle water, taste; and of subtle earth, smell. These traits cannot be grasped by the sense.²¹²

What this symbolism seems to be driving at is that the basic building blocks of conscious experience, and hence of the world as a whole (on a Berkeleian perspective) are the sensory modalities. There are five elements just because the Vedāntists considered

there to be five sense. (Nowadays, we might want to consider that there is a larger number of senses, including proprioception, balance, and so on. So, we would have to increase the number of elements.) The subtle elements have to undergo further evolution before they become gross elements, which are then available for conscious perception. On this view, the subtle elements are proto-sensory.

It is interesting to note the recurrence in Greek philosophy of the notion of four elements making up the manifest world, which Empedocles (c. 490-430 BCE) introduced. There was, however, a lot of confusion about the identity of one of the elements, fire, and whether it was the same thing as ether.¹⁶³ We might wonder whether Empedocles was importing a distorted version of the Vedāntic five-element scheme, which was already centuries old when Empedocles lived.

Corresponding to the five elements are the five sense organs. Initially, however, there are subtle organs:

*By an organ is meant not the outer instrument, but something subtle, made of finer matter, which functions through the physical instrument. ... According to the Vedānta, the mind is material in nature, because it is produced from the five material elements. Prakṛiti, or primordial matter, includes everything — inorganic, organic, and psychic. Brahman, or Consciousness, which is self-luminous, is utterly different from it.*²¹³

The reference to ‘finer matter’ should not be taken literally to refer to a different kind of physical matter. In fact, it is not matter at all as we would understand the term. It may be regarded as a construct in a pre-mental domain, prior to the formation of sensory modes that we are conscious of, and certainly prior to the formation of physical matter. By ‘prior’, I mean logically prior, not chronologically prior. Nikhilananda’s description of the mind as material is quite confusing to Western readers. The reason for this apparently odd choice of terminology is, I believe, that the Hindu carves up the conceptual space differently. Whereas we are accustomed to seeing the major divide between mind and matter, they tend to see the major divide between the manifest (Prakṛiti) and unmanifest (Brahman): the former is roughly translated as ‘material’ because there is no precise English translation. Since

the mind is part of the manifest world, Nikhilananda classes it as material. He is emphatically not proposing the conscious mind is reducible to physical matter.

A clearer view of ‘subtle matter’ comes from Śankara’s remark:

The dream-state belongs pre-eminently to the subtle body.

*In dreams, it creates its own kind of matter, and shines with its own light.*¹³¹

It is quite obvious that the stuff of which dreams are made is literally insubstantial. Again, the word “body” is used in a broader sense than is normal in the West, as Nikhilananda explains:

*The body includes the senses, mind, discriminating faculty, ego, and mind-stuff.*²²¹

Structure of mind

Vedāntic philosophy proposes a scheme for the structure of the mind, involving various ‘sheaths’, the first of which is this one:

*The buddhi, or the determinative faculty, together with the five organs of perception, constitute a unit called the vi-jnānamāyākośa, or sheath abounding in intelligence.*²¹³

The suffix “māyākośa”, or ‘sheath’, refers to a construct that shields the Brahman or underlying reality.

*Pure Consciousness, limited by the upādhi of this sheath, appears as a phenomenal being or individualised soul, called the jīva.*²¹⁴

The term upādhi is defined by Nikhilananda as “a limitation imposed upon the Self or upon Brahman by ignorance”. This is difficult to follow, but in this context it seems to denote a construct of māyā. What Nikhilananda seems to be saying here is that this sheath is the most basic construct that can count as a mind — what we would call an individuated mind, distinct from the rest of the sea of experientia in God’s mental universe. I will not examine the sheath model further here: more details will be found in Chapter 2 of the TAITTIRIYA UPANISHAD, and in Nikhilananda’s Introduction to Śankara’s ĀTMABODHA.

Nikhilananda describes the jīva, or embodied soul, thus:

*the jīva is like a being seen in a dream. Brahman, or Pure Consciousness, under the influence of māyā, dreams, as it were, that It has become a man, an animal, or an inanimate object.*²¹⁴

In the Vedāntic tradition, ‘enlightenment’ involves waking up from that dream:

*Since the very notion of jivahood is due to delusion, it ceases to exist when the delusion is destroyed by the true Knowledge of the Self. ... The false superimposition that accounts for the individuality of the jiva can be directly destroyed only through the Knowledge of Brahman.*²¹⁶

An implication of this is that the sheath is not destroyed by the death of the body, but persists through successive incarnations until it achieves enlightenment. In between incarnations, strange experiences may be had:

*From the Vedāntic standpoint dying may be compared to falling asleep, and the after-death experiences, to dreams.*²⁰¹

For reasons that I do not grasp, the Vedāntists seek the destruction of the jiva. Personally, I would prefer continued existence to the dissolution of my individuality.

A corollary of the illusoriness of the individual, private mind is the claim that all minds are one in some ultimate sense:

*The Soul in all is indeed One. ... The diversity of souls is like the diversity of the reflections of the moon in the waves.*²¹⁸

The metaphor of reflection is, however, somewhat contentious, as it suggests that the individual souls exist independently, but take on the borrowed characteristics of a universal soul.

Three states of mind are normally distinguished:

*Ātman, or the Self, is the unchanging Consciousness which is the Witness of the gross experience of the senses during the waking state, the subtle experiences of the mind during the dream state, and a blissful experience characterised by absence of the subject-object relationship during the state of dreamless sleep.*²²²

(The term “bliss” is used a great deal in Vedāntic writing, but its meaning is far from clear. It appears to mean a contentless state of mind, and is called ‘bliss’ only because of the Hindu ethical stance that deprecates the sensual world. I do not think that this is what we mean by “bliss” in the West. Here, we use the word to denote a state of extreme happiness, rather than a state of emptiness. The meaning carried by the word is, to be sure, blunted somewhat by the banal omnipresence of the word in advertising and the tabloid

media.)

Elaborating on these states of consciousness, Śankara himself wrote:

*When the objective universe is being perceived, this is known as the waking state of consciousness.*¹³⁰

Unreality of things

At first sight, the Vedāntic claim that all things are unreal seems trivially false if taken literally. After all, the page you are now reading must be real, otherwise you would not even have been able to read the Vedāntic claim that nothing is real. You might be inclined to assume that it is a poetic riddle of some sort, like the haikus of the zen buddhists. Actually, it is meant quite literally, but we have to be really careful about its intended meaning, to avoid a gross misunderstanding. In fact, we have to view the Vedāntic claim through our Wittgensteinian glasses, as it were. Just as the correct understanding of Berkeley's ontology requires that we stand back from our customary use of language, and see how apparently conflicting statements can be supported provided that they are seen in the context of their respective language-games, so the Vedāntic ontology.

'Dualism' is a key idea in Vedāntic thinking. The specific sense in which 'dualism' is meant is that every concept that we have, or ever could have, is essentially an artificial bisection of the undifferentiated underlying reality. In formal terms, every predicate P is defined by the set of things of which P is true, as opposed to those for which P is not. Take, for instance, the concept of a table (so the predicate P is ". [is a] table"): this concept is exhaustively defined by its drawing a line between things that are tables and things that are not tables. Thus it essentially reduces to the dualism of table versus non-table. Śankara's insight was to see that this dualism is artificial, and is imposed by the mind: in nature, there is no such thing as a table, there is just a continuum of reality. This insight, when applied to the physical world, accords well with the modern scientific world-view. As far as physics is concerned, what we call a table is just an assembly of atoms surrounded by another assembly of atoms that we call the room. So, even within physical science, it would be correct to say that the table is unreal, meaning thereby that the concept of the table

is projected onto the world by the mind, although the underlying substance is nonetheless real.

So much for universal concepts such as that of ‘table’. What about particular concepts, such as individual visual experiences? Look at the black typeface on this white page. According to Śankara, black and non-black is a dualism projected by the mind just as table and non-table is. This claim is harder to swallow, because the distinctive quality of light and dark seem to be given to us as unique and irreducible: they seem to be brute facts existing in the world whether we experience them or not. Well, imagine a page printed with a gradation of grey: where does dark end and the light begin? That, uncontroversially, is a matter of judgement, a projection of the mind. Yet, what we call the black and white on this page are just points on the same continuum: if you looked at this page in the brilliant glare of a powerful lamp, what you had thought of as black and white would seem like shades of grey. This notion takes some getting used to, but in fact black and non-black is a mentally projected dualism.

What about colours? Again, Śankara’s claim is that they too are projections. One way to begin to fathom Śankara’s insight here is to imagine what it would be like if you saw everything in shades of, say, red. Imagine wearing permanent contact lenses coloured red. After a while, what you saw would no longer seem red! Redness is experienced as such only when it is possible to contrast it with non-red. But the essence of any perceptual quality, such as a colour, or a sound, or a smell, is just what it is experienced as. So the essence of redness lies in its contrast with non-redness. And that contrast is manifested in the mind as a judgement that the two sensations are different: it is there as a projected dualism. Redness is, in this sense, unreal.

How can this be true of different colours, though? Hold a blue flower and a red flower side by side. Even if one were to accept that red and non-red is somehow a projected dualism, surely it must be a qualitatively different dualism from blue and non-blue? Well, it may seem that way, but only because the distinction is so deeply ingrained in us. When, through mental concentration, we can dismantle that distinction, and discriminate the projected concept from the underlying reality, then it will become clear that the colours are not real.

At least, that is what Śankara says. As I have not yet reached the requisite state of enlightenment, I cannot vouch for this from my own experience or reasoning.

Unreality of minds

The preceding section discussed the unreality of things or objects according to the Vedāntic philosophy. Vedāntism also maintains that the subject of experience is also unreal, and for similar reasons.

The Self (Ātman) ... appears as a Jīva, or phenomenal being — physical entity subject to hunger and thirst, disease and death, and the other limitations of the relative world.²⁰²

Again, this discussion is at the level of deep ontology. Consciousness superimposes the construct of a mind onto the underlying reality and then mistakenly identifies itself with it. Here the underlying reality is Ātman, rather than Brahman; but Ātman itself is just Brahman considered as the underlying reality of the mind. (Again, we have the confusion of an identity under different modes of description.)

As the mind itself is a product of māyā, one cannot, through reasoning, know the cause of māyā. It is māyā, ignorance, that produces the illusion of desa, kala, and nimitta — time, space, and causality — which hides the true nature of Pure Consciousness and projects the multiple universe.²⁰⁷

Part of the effect of māyā is to induce the mistaken identification of the subject with an object in its experience, which is really just a construct superimposed on the experience. For example, it may lead the subject to believe that it is a body (materialism), or that it is the stream of consciousness (Humeanism). As Śankara writes:

Ego is the self-consciousness which arises when the mental organ identifies itself with the body.¹³²

So, Vedānta recommends the distinction of the true subject from its objects. Nikhilananda writes:

Discrimination between the “Seer” and the “Seen” is the road leading to the realization of Truth. The “Seer” is the unchangeable and homogeneous Consciousness, or the knowing principle.²⁰³

This distinction between the mind as such and pure consciousness as such is at the centre of the Vedāntic model of mind. Śankara wrote in Ātmabodha:

*agency, enjoyment, and other limitations, which belong to the mind, are falsely attributed to the Ātman.*²¹⁹

This will at first seem an odd distinction to readers in the West, where we tend to think of consciousness as being just another function of the mind. The Vedāntic conception involves the subtle separation of consciousness in its own right, which is unchanging, from the contents of consciousness, which are constantly changing. Of course, making this distinction confronts us with David Hume's objection that consciousness *per se*, also known as the Self, is not something that one can detect in and amongst the contents of one's mind. Naïvely, therefore, one may want to say that it does not exist. To be sure, one cannot know of the existence of one's self in the same way that one can know of the presence of, say, a visual image of a desk.

In the following passage from Viveka-Chudamani, Śankara again emphasises the distinction between Pure Consciousness and the workaday mind:

*The Ātman is the Witness — beyond all attributes, beyond action. ... Its appearance as an individual soul is caused by the delusion of our understanding, and has no reality.*¹³⁵

*The Ātman is Pure Consciousness, cleanly manifest as underlying the states of waking, dreaming, and dreamless sleep. It is inwardly experienced as unbroken consciousness, the consciousness that I am I. It is the unchanging Witness that experiences the ego, the intellect and rest, with their various forms and changes.*¹³⁶

Ātman and Brahman

One of the more famous slogans of Vedāntic philosophy, which is quoted almost everywhere, is "That thou art", which signifies that your personal soul, the Ātman as embodied in your jiva, is one and the same thing as the world soul, the Brahman as embodied in the Iśvara. Nikhilananda makes the following comment on this:

It is obvious that That and Thou, endowed with contradictory attributes, cannot be identical from the standpoint of the direct meaning of the words, that is to say, in a literal

sense. ... [T]he contrasting attributes which distinguish Iṣvara from the jīva are not ultimately real but are due to superimposition.²¹⁷

So, when you sit at your desk, and say, “I am not this chair, I am not this desk”, you are reporting only on the virtual world that is constructed by your projecting the concept of solid matter onto your conscious experience. If you cease to superimpose that projection onto the conscious experience, and then cease to project the more subtle construct of the sensory data themselves, then you will see that the underlying current of consciousness in you and in the desk and the chair is one and the same.

If you drill down deeply enough into yourself and into the seemingly external world, you will reach the same point.

This is an insight that may be realised intellectually through philosophical deliberation, or experientially through meditation or psychotropic substances. A recurring observation from people who have returned from the altered states of consciousness that may be reached through either mind-altering spiritual practices or mind-altering chemicals is that of oneness with other things in the environment. There is, reportedly, an ineffable experience of actually being one with the desk and chair. These reports are, I think, sometimes misunderstood and misrepresented as being about a sense of belonging to the same universe as the objects around us, a sense of sisterhood with the earth and sky, as it were. My understanding is that the experience is of an ontological unity, rather than a merely conceptual and collective unity: that of oneness at a deep and essential level.

There is, of course, an element of inference in equating the ontological identity of Ātman and Brahman with the experiential identity of self and world. It is logically possible that the experience of identity is just an odd, non-functional or even dysfunctional state of mind, with no veridical content, which has nothing whatever to do with the ontological identity of Ātman and Brahman. The apparent oneness may just be in the imagination. To paraphrase Thomas Nagel, the experience of oneness raises the question, “What is it like to be a desk?”. The classical answer is that it is not like anything to be a desk, as the desk has no mind and therefore no first-person perspective. Even if the desk did have a mind, it lacks the wherewithal to tell us about its mental

life, so we would never know in advance what it is like to be a desk. Hence, if in the course of some meditative or drug-induced high, one has some odd experience that one is tempted to call, ‘Being a desk’, the crucial question naturally arises of how one could possibly recognise it. Let us call the experience in question, X. How do you recognise X as the experience of being one with a particular desk, rather than that of being one with the ceiling, or indeed just imagining oneself to be one with the desk.

This is a question about the logic of mystical experience that is often glossed over by the mystics, precisely because the experience itself is so convincing.

A veridical experience of this oneness is possible only in a Berkeleian universe. This is because the mystical experience of oneness can be veridical only if both elements of what is involved in that oneness are present in the contents of the mystic’s conscious mind. Otherwise, if one element is omitted, then one would have to rely on inference from some theoretical presupposition. If so, it would cease to be a direct experience of oneness. Now, by ‘elements’ here I mean the subject’s perception of something that is seemingly external, and that external thing itself. If these are to be present in the subject’s conscious awareness, then they must be things of the sort that can apprehended directly in consciousness. Only in a Berkeleian universe, however, where everything is experiential, will this necessarily be the case. For, according to the Berkeleian philosophy, the ordinary perception of, say, a desk is generated directly by another mind — with no extra-mental substance intervening. There is no non-mental thing between, on the one hand, the metamental volition that instigates the perception and, on the other hand, the subjective perception itself. My hypothesis is that the complete structure, from volitional instigation to final experience, is presented in the consciousness of the observer as a unit.

Just as I can look at a piece of string, and have a unitary visual experience comprising both ends of the string, and know, without needing to use any inference, that they are the top and bottom of the same image — so in similar fashion the mystic can experience both ends of an act of perception. It makes sense to put forward this hypothesis only with the prior assumption that nothing exists but experientia and their experiencers — which is

just the core assumption of Berkeleyanism.

It should be noted that what we are considering in this perception of unity is at the level of mind rather than that of soul. The Ātman and Brahman, the souls of the person and the world, respectively, are themselves featureless, as Śankara writes:

*Brahman is without parts or attributes. ... Brahman is indefinable, beyond the range of mind and speech.*¹³⁷

2.13.4 Ethical stance

My main concern in this book is with metaphysics rather than ethics, but the gulf between the ethical stances of Śankara and Berkeley is, perhaps, revealing of a more fundamental difference in their world-views. In short, Śankara was body-negative: he despised the human body, and physical human life in general, which he viewed as a vehicle of disease, deception, and pain; whereas Berkeley was body-positive: he welcomed physical enjoyment and praised it as one of God's gifts. In this respect, Berkeley was closer to the Tantric tradition, which had origins at least as ancient as the Vedas, and which flourished in both Hinduism and Buddhism.

Śankara wrote in his CREST-JEWEL OF DISCRIMINATION:

*This body, which is made up of skin, flesh, blood, arteries, veins, fat, marrow and bone, is full of waste matter and filth. It deserves our contempt.*¹³⁰

*It is the ignorant man who identifies himself with the body, which is compounded of skin, flesh, fat, bone, and filth.*¹³³

In total contrast, Berkeley wrote in his posthumously published notebooks :

*Sensual pleasure is the sumnum bonum. This the Great Principle of Morality. This, once rightly understood, all the doctrines, even the severest, of the Gospels may clearly be demonstrated.*¹⁹

*Sensual pleasure qua pleasure is good & desirable, by a wise man, but if it be contemptible tis not qua pleasure but qua pain or cause of pain, or (which is the same thing) of loss of greater pleasure.*²⁰

This difference of perspective is undoubtedly related to different views on the after-death state. Throughout Hindu and Buddhist thinking, there is a pervasive concern with escaping the supposed cycle of rebirth, called 'samsara'. Why? The desire to escape

from life presupposes that life is undesirable, which is just what Śankara and other Hindus claim.

Correspondingly, the life that Śankara depicts for the enlightened ones seems quite unpleasant:

He gets his food easily by begging alms, without anxiety or care. He drinks from the clear stream. He lives unfettered and independent. He sleeps without fear in the forest or on the cremation-ground. He does not need to wash or dry his clothes, for he wears none. The earth is his bed. He walks the highway of Vedānta. His playmate is Brahman, the everlasting. ... He may seem like a madman, or like a child, or sometimes like an unclean spirit. Thus, he wanders the earth.¹³⁹

This, to be fair, is more extreme than the philosophy of life found in the Bhagavad Gita, which recommends that the wise person should continue to discharge his or her social obligations, but to avoid being attached to the fruits of the labour. Nevertheless, in both the Gita and Śankara, and indeed the whole of Hinduism, one finds the persistent belief that this life is bad, and that the oblivion of nirvana is the ultimate goal.

Śankara's pessimism is, I fear, symptomatic of a larger divergence of Hindu thinking from Western thinking. There is an emphasis on an acceptance of life that borders on passivity, in contrast with the West's emphasis on intervening to acquire and maintain dominion over the natural world. Both Berkeley's metaphysical philosophy and his philosophy of life were embedded in the emerging tradition of British empiricism, and engaged with the aims of humanistic Christianity to harness the world for human benefit. Just as one person can see a glass half-empty where another sees the same glass half-full, so Hinduism saw life as a an immersion in suffering, from which escape into the oblivion of nirvana was sought, while the West saw life as the continuing pursuit of happiness and freedom.

Robert Monroe had a similar reaction when he started having out-of-body experiences. In his book, ULTIMATE JOURNEY, he relates that a psychologist whom he consulted for advice suggested "indeterminate years of study under a guru in India", which Monroe rejected:

*I needed answers, and I was sure I would not find them in an Indian ashram. My thought processes were the product of Western civilisation for good or ill.*¹⁷⁹

2.13.5 Buddhism

Buddhism may be thought of as a later outgrowth of Hinduism, founded about seven centuries BCE by the Indian prince Guatama Siddartha, who was later given the honorific title of Buddha, or ‘enlightened one’. At this time, the Vedas were already ancient, possibly by thousands of years. Guatama lived a millennium and a half before Śankara brought his own insights to the Vedānta. Nevertheless, the Vedic literature already contained in cryptic and mystic form the doctrines that later Indian commentators brought out in their exegeses, and one can see that these ideas also informed the world-view of Buddhism to some extent.

Buddhism is primarily a practical discipline. It is supposed to be method of achieving enlightenment. It concerns itself with metaphysics only in so far as this will help us reach the enlightened state. The main metaphysical premises are those of impermanence and emptiness. Everything comes into being and passes away again: nothing is permanent. Also, everything exists only in relation to other things: as the crest of wave on the sea has existence only in relation to the trough of the wave, and is therefore said to be ‘empty’ of any real, substantive existence, so everything is held to be ‘empty’.

The central platform of Buddhism practice is the law of karma. This is supposed to be a generalisation of the law of cause and effect that we observe in the material world, extending that law to moral actions. Whereas Newton’s laws of motion state (among other things) that every physical action has an equal but opposite reaction, so the law of karma is supposed to tell us that every evil action is automatically answered by later suffering of the doer, and every good action automatically engenders happiness in the doer. This, however, rests on a confusion between statements of fact and expressions of value. The karmic scheme would make sense only if the morality of an action and the happiness of an outcome were objective measures. In fact, they are not. It is a matter of subjective opinion whether something is good or evil, and how grave or noble it is; likewise, it is a matter of subjective

opinion whether an experience is good or bad, and how intensely good or bad it is.

The goodness and wickedness of deeds, and the pleasurableness or displeasingness of experiences have no real existence in the world: they are subjective labels projected by our minds onto the outer world. It follows that there cannot be a real law of karma, nor can any interaction or balancing between these poles play any real rôle in the dynamics of the world. For this reason, Buddhism is profoundly mistaken.

In Tibetan forms of Buddhism, there is less emphasis on a naïve, bipolar law of karma, and more on the idea that our actions do not simply take place and then pass away in the river of time, but rather that there is a continuing presence of our past actions throughout our lives. This is more open to the Humean consideration that whether actions are good or bad, and whether experiences are pleasant or not, is a matter of subjective evaluation. (Also, Tibetan Buddhism moves away from a simplistic notion of reincarnation in which a personal soul bears a certain freight of positive or negative karma from one body to the next, and toward a notion of the individual mind as being like a transient vortex in a sea of consciousness.)

The yogacara school of Buddhism is the one that is most often likened to Berkeleyan philosophy, as it claims that consciousness is the only reality. There are, however, subtle but important differences in the interpretation of that doctrine. Moreover, the intellectual context in which it makes that claim is completely different.

Somewhat surprisingly, Buddhist immaterialism has been explicitly denounced by the Dalai Lama. At a time when the West is groping toward an acceptance of spiritual realism, the East is trying to go in the opposite direction.

I will not examine Buddhist metaphysics in detail, as they inherited much of their basic ideas from Hinduism, which we looked at above.

2.13.6 After Berkeley

Schopenhauer had the advantage of access to Upanishadic literature, which Berkeley was unaware of the existence of. The only reference I have seen in Berkeley's writings to Indian culture is in

the PRINCIPLES, where he comments in passing on the Indian and Arabic contributions to mathematics.

Here is Mascaró's account of how the Upanishads came to be available to Schopenhauer:

When prince Dara Shukoh, the son of the emperor Shah Jahan who built the Taj Mahal, was in Kashmir in 1640, he heard about the Upanishads and he had fifty of them translated into Persian. This translation was finished in 1657, and it was much later put into Latin by Anquetil Duperron and published in Paris in 1802. This was read by Schopenhauer, who said of the Upanishads: their reading 'has been the consolation of my life, and will be of my death'.¹⁷³

Unfortunately, this was also unavailable to Immanuel Kant, who died just a few years after the Upanishads were published. Whether he would have recognised their connection with his transcendental idealism is another matter. Certainly he was blind to the truth of Berkeley's metaphysics, so he may well have been unreceptive to Hinduism.

Schopenhauer, on the other hand, saw the value of both Berkeleyan and the Vedāntic philosophies. Schopenhauer was, unfortunately, eclipsed on the world stage of philosophy by Kant, Hegel, and others leading on to Marx, Lenin, and Stalin. Western interest in Eastern philosophy remained in the background until the 1960s. The exile of the Dalai Lama and his entourage in 1959, escaping from the Chinese invasion of Tibet, brought Tibetan Buddhism to the English-speaking world. And an English popular music band brought the Maharishi Mahesh Yogi and his stripped-down popularised Hinduism to the attention of the West. Nowadays, elements of Eastern thinking are in general circulation, especially around the New Age movement, in various degrees and forms of distortion. Berkeley, on the other hand, has disappeared below the horizon. But who knows when intellectual fashions will rediscover him again?

2.14 Hylas and Philonous revisited

In 1713, Berkeley published THREE DIALOGUES BETWEEN HYLAS AND PHILONOUS, in which he sought to make the immaterialist doctrine of his PRINCIPLES clearer to the general public. Continuing this tradition, I offer the following dialogue (set in 1727),

in the hope of making my interpretation of Berkeley clearer. This should also serve to round off this chapter on Berkeley's metaphysics. The three entries marked with an asterisk toward the end of this dialogue were added by Michael Lockwood in 1995, and my entries after those respond to his addition.

Hylas: Philonous, you allowed that I may retract whatever I had owned, if further deliberations alter my view.

Philo.: Indeed.

Hylas: You asked me how ideas, which vary with the observer's acuity and circumstances, could resemble objects in the material substratum, which stand unchanged when the observer or his condition alters. I confessed that I could find no answer.

Philo.: Have you now found one?

Hylas: I have. Here, I draw from my pocket a musical score. Grant me that in this pattern of symbols — this quaver and that filigree — we find a fixed *representation* of the mellifluous sounds of the flute; and that this representation is true even though the symbols themselves are inaudible and therefore have no sensible similarity to the fluctuating sound of the flute, only an abstract resemblance.

Philo.: I grant it.

Hylas: Well, then, I have thereby disproved your sophistry. For, in the exact same manner as these marks stand for the sound of the music in an abstract way, so too doth an idea stand for its material substratum in an abstract way. So, I say, an idea of the colour red stands for the peculiar surface of a red thing, such as — such as that rose before you!

Philo.: Do you forget, Hylas? Yesterday, you held the following conjecture to be the case; that, as a picture of Julius Caesar represents the man and is therefore a mediate perception of the man, so in like manner an idea represents an external object; and is therefore a mediate perception of the external object; but you conceded that those two cases were disanalogous. For, you admitted, it is only through oft-repeated connexions that flat surfaces of paint can put you in mind of tangible features you have found in men's faces. Whereas, you never perceived the material substratum; therefore, no idea can put you in mind of its appearance.

Hylas: You mistake me, Philonous; this is a different argument. My claim is *not* that our ideas sensibly resemble material objects, as pictures their subjects. Indeed, you cleared that false conjecture out of my head in our conversation here yesterday, quite as you say. Rather, mark you, I say that their logical structures are similar. I mean, the logical structure of the idea resembles the logical structure of the material substratum. You asked yesterday, "Can a real thing in itself *invisible* be like a *colour*; or can a real thing which is not *audible*, be like a *sound*?" I owned that it could not; yet I now withdraw that concession, and wave musical notes under your eyes as proof. These glyphs are not audible; yet they are indeed *like* the sound of a flute, in so far as they represent that sound.

Philo.: Alas Hylas! You rejig an old argument and think it as fresh as the morning dew. As you behold musical notations, your memory informs you which sound each symbol betokens; for, when you were a student, your teacher oftentimes played a note whilst pointing to the written signifier. *That* is how the musical score comes to bear meaning to your mind. Is that not so?

Hylas: Well, yes, but —

Philo.: Your ideas and the substratum, however, cannot be connected in any such manner; for, you cannot perceive the substratum in the first place. Hence you lack the wherewithal to set about creating the desired association and linkage. Having never beheld the substratum, thou canst not associate any idea with it.

Hylas: The origins of the representation are not to the purpose. I say, the idea represents the substratum, and I care not how men establish that representation in the first place; that is for historians to dwell upon. Only, mark this, I say it is *possible* for there to be representation without sensible similarity; and therefore the insensibility of the substratum no longer gives you your ammunition against my thesis. I admit the substratum is imperceptible, but accord no importance to that fact. For, now, I have proven that the mere fact of its being imperceptible is no argument against my thesis that perceived ideas *can* represent it.

Philo.: You ask me to accept a correspondence between ideas and external objects, whilst dismissing as irrelevant how we could ever be apprised of that correspondence?

Hylas: Even so.

Philo.: Let me expound my understanding of what you say, to be sure that I take you rightly. I gaze across the quadrangle and experience a visual idea, which I — like anyone else — call a ‘visible idea of a tree’; and you say that this idea represents an object in the material substratum, the representation consisting not in sensible similarity, as between a tree and a painting thereof, but in an abstract connection, as a written symbol represents a musical note.

Hylas: You rehearse well what I said.

Philo.: Pray tell me, Hylas, how could we create a correspondence betwixt the perceptible and the imperceptible? The substratum is not a sensible object and could never present itself to the mind for the formation of a correspondence.

Hylas: Ask not how it comes to be; only accept that it exists.

Philo.: Alas, we must pursue the question.

Hylas: But why?

Philo.: Because our ability to refer to the correspondence is only counterfactual, and can never actually be possessed.

Hylas: I see I have you on the run! Why dost thou hide behind jargon? What mean you by “counterfactual”?

Philo.: I mean, good Hylas, that *if* we could hold in our minds at the same time both an idea and a piece of the material substratum, and thereby construe an association betwixt them, *then* we could indeed possess a means of making reference to the substratum; and, as you say, we could then suppose there to be an abstract resemblance ‘twixt the idea and the substratum. Yet, the protasis of that condition can ne’er be fulfilled. It is a repugnance to suppose that any part of the material substratum could e’er be inside my mind and thoughts. Hence, the correspondence you mentioned is contrary to the facts, it is a counter-fact. Which is to say, ‘tis counterfactual.

Hylas: Why do you dwell still upon the question of *how* the association is started? Admit that the association is possible!

Philo.: An analogy might clarify my principle. Look at the Sun’s reflection in the fish-pond: let me grasp it and hold it up to the real Sun for comparison; I reach forward to pick it — yet I have it not! The reflection hath a definite habitation and, were it solid, I could pluck it thence, but it is not so. Likewise: I could refer to a correspondence between my ideas and the supposed ex-

ternal objects, were it discoverable to the mind, yet it is not. The substratum evades our minds, as the Sun's reflection evades our fingers. So, I can never hold in my mind the two correspondents, namely the idea and material substratum; hence I can never make reference to their connexion.

Hylas: You have restricted too tightly the means by which a correspondence could be created; I fear you take my musical analogy too literally. Although musical notation gets its meaning through human agency, the correspondence of ideas with objects need not be created by any human agent. Mayhap Nature, or God, doth create the correspondence. The only pertinent fact is that the connection exists.

Philo.: I see not how those possibilities aid your case. Even though God Himself grant you the existence of the correspondence, how wouldst thou ever know the correspondence exists? Let us consider your correspondence in its two parts, as follows. First, perceptible ideas; second, imperceptible objects in the substratum. Of the latter part no man has cognisance, so how can anyone discover correspondences 'twixt the latter and the former?

Hylas: Every infant discovers it in the very first year of life! In truth, every man on this planet knows the correspondence whereby the visible idea of a tree betokens an actual tree. I think you mock me in asking, "How doth one discover this correspondence?". Why, I'll tell you how to discover that a physical tree corresponds to your visual idea of a tree: just try walking through it!

Philo.: You have rashly forgotten what surprising concessions you earlier made upon careful consideration. Bear me out.

Hylas: Well, I'll listen to you, Philonous, but mark — I am not of such infirm mind that you'll lead me to hold what is repugnant to truth.

Philo.: I trust your firm commitment to reason. Now, dear friend, allow me to clarify my thesis, by comparison to a similar matter. You know my compatriot, Jonathan Swift?

Hylas: I enjoyed his fable, GULLIVER'S TRAVELS, which he had published last year.

Philo.: So, you know that the land of Brobdingnag is a fiction?

Hylas: All who read it know this.

Philo.: What makes it a fiction?

Hylas: Why, of course, that the land hath no existence.

Philo.: Not so!

Hylas: Play no games, Philonous. I know as well as any man that Brobdingnag proceeds from Swift's imagination, and your chicanery will ne'er persuade me otherwise.

Philo.: Weigh this point, Hylas, for 'tis pivotal to your comprehension of my thesis. I grant that Brobdingnag exists not; but something other than its mere non-existing makes it fictional. For, suppose that by an astounding coincidence a merchant navigator tomorrow lands in Plymouth and announces, and provides proof of, his having visited a very land of giants, that doth indeed call itself by the name Brobdingnag.

Hylas: Then Swift had received secret intelligence of that land.

Philo.: Allow the full force of my conjecture, Hylas, and suppose that Swift never heard a word about Brobdingnag before he himself wrote GULLIVER'S TRAVELS. Indeed, truly, he assured me at dinner last Sunday that it proceeded from the very bowels of his imagining.

Hylas: Still, a most implausible coincidence!

Philo.: True, but not to the point. Will you take my supposition for the sake of argument?

Hylas: As you wish.

Philo.: Would GULLIVER'S TRAVELS still be a fiction — though a land exists that meets the description contained therein?

Hylas: Why, yes. It is a fiction because it was written as such. The real occurrence of such a land is a curious coincidence, accidental to the novel.

Philo.: Well done! You have delivered my very point. Yet I would press the matter further, to express a principle that underlies your wise conclusion; which is this: GULLIVER'S TRAVELS's being a fiction consists in its having been written as an act of imagination, rather than by reference to perceptions of an independent reality.

Hylas: Accepted. But what you say only elaborates what I simply said, namely that the book was written *as* a fiction.

Philo.: My principle is more general; and I shall now apply this principle to our main discussion, concerning the supposed

correspondence betwixt ideas and the material substratum.

Hylas: Go on.

Philo.: You concede that the material substratum, if it exists, is not sensible; it follows that we should not count it among our perceptions of an independent reality.

Hylas: I agree.

Philo.: Then your account of a correspondence between our ideas and objects in the substratum was constructed as an act of imagination, and not by reference to perceptions of an independent reality.

Hylas: Hum! I guess at your conclusion.

Philo.: Therefore your theory of correspondence is fictional, a mere story that you made up out of the very air.

Hylas: I cannot counter you, so I accept your thrust. Nevertheless, I insist upon the possibility that there *might* be a material substratum and which *might* correspond to our ideas, though we can never discover it.

Philo.: What you say is contradictory. Hark back to what we said about Brobdingnag: because it was borne of Swift's imagination, it will always be a fiction; even if any real land be discovered that matches it, Swift's use of the name "Brobdingnag" will still refer to that fictional land; and can never refer to any actual land.

Hylas: Granted.

Philo.: Likewise, your term "material substratum" was borne of your imagination, not by reference to perception of an independent reality, so it must always refer to a fiction. What you think you are trying to say, Hylas, cannot be said; nor even meant. If there were an unknown somewhat in the world, outside the realm of the senses, you could never refer to it. Therefore, when you say, "Mayhap an insensible somewhat causes our perceptions", you utter words that could never bear intelligible meaning.

Hylas: How can any grammatical sentence necessarily be void of meaning? We can propose the existence of the material substratum; therefore its existence is a possibility.

Philo.: Less contentious sentences demonstrate the category.

Hylas: Really?

Philo.: Imagine a man saying that the geometrical figure of a triangle really possesses a fourth side, which is without any sensible qualities, and he concocts a story about the relation between

the fourth side and the three sensible sides; then we would say his utterances are not within the reach of comprehension, and necessarily so.

Hylas: What? Say you that my old belief, that I stand amidst solid bodies, lies outside the realm of what can be said? Must I resign myself to the view that I never really believed in the material world?

Philo.: Quite so.

Hylas: Your logic seems sound, yet your conclusion violates what I hold with every fibre of my being. My mind teems with difficulties that you underestimate.

Philo.: Such as?

Hylas: When I leave this quadrangle, and later return, I see the same tree in the same place — impossible if our visual idea of the tree resulted not from a physical object.

Philo.: Constancy in our sense ideas results from God's constancy of purpose in putting these ideas in our minds. While you are out of the quadrangle, the archetype of the idea dwells in God's mind.

Hylas: Archetype? What a sly rhetorician! Banish my substratum from your scheme, and in the next breath you sneak it in through the tradesmen's entrance by calling objects 'archetypes'.

Philo.: Archetypes differ radically from your unintelligible fiction of the material substratum; for the archetypes are known immediately to the mind — namely, God's mind; whereas your substratum is an unknowable somewhat. I fear that many will mistakenly suppose, as you do, that in my doctrine material objects exist but do so in God; for this is not the truth at all; I say that material things do not exist at all; only that God possesses in His mind archetypes of our ideas; and their constancy creates in us such a pattern of perceptions that our fiction of the substratum is a tool with which we may codify that pattern.

Hylas*: Yet again, Philonous, I am minded to retract what I owned yesterday. For, on mature reflection, I see that your ingenious comparison of my matter with Swift's Brobdingnag may be turned to my advantage.

Philo.*: How so, Hylas?

Hylas*: Was not this the burden of your reasoning? To wit, that a merely accidental correspondence betwixt Swift's Brobd-

ingnag and an existing land sufficieth not to turn the water of Swift's fiction into the wine of truth? But doth not this play into my hands? For if, in truth, my idea of the tree is *caused* by an insensible material substratum, then the correspondence betwixt the idea and this substratum is *no* mere accident — but rather, is ordered by Nature, in her wisdom. Hence, my idea of the material tree is no fiction, as you would urge, but is rooted (if you will forgive me!) in reality.

Philo.: Cause or no cause — it makes no difference in the case. As thou canst discover no association twixt your idea and its supposed substratum, then *a fortiori* thou canst discover no causal connexion either.

Hylas: Whether I discover it or no, the fact would still be that the material substratum was the cause of idea and therefore the idea would possess an abstract connexion with the substratum, though it be unknowable to me.

Philo.: Alas, Hylas, you take my point wrongly. 'Tis true that the merchant navigator's discovery of Brobdingnag reveals a merely accidental correspondence with Swift's Brobdingnag. Yet nothing in my argument hangs on the correspondence's being accidental. The point that I made use of, and which is therefore an essential link in my argument — and the target against which thou shouldst aim the firepower of your brain — is this: that the process going on in Swift's mind as he sat in the churchyard writing GULLIVER'S TRAVELS was an act of imagination, and not an act of reference. The Lord alone knows what caused him to write it. It can be conceived that the actual Brobdingnag was a causal factor that went into Swift's literary creation, without Swift's truly knowing of its so doing. For, answer me this: is it outside the bounds of imagining that he had overheard in some tavern the ballad of sailors wherein was told a tale of giants; and he had forgotten about that ballad; yet the notion of it left a clandestine trace in the unfathomable reaches of that great treasure chest that is Swift's mind?

Hylas: It is possible; and I have heard physicks talk of an inner mind containing obscured memories of that kind.

Philo.: And would Swift's Brobdingnag still be a fiction, by virtue of his having written it as an act of imagination, devoid of the intention to refer to any actual land; even although a buried

folk-memory of it gave him the inspiration?

Hylas: You may find yourself accused of chopping logic on this issue, Philonous, but I must concede that Swift's country is still a fiction; for, my reason for saying it is a fiction still holds — namely, as you say, Swift did not intend the word "Brobdingnag" to refer to the real country that bears the same name when he wrote his book.

Philo.: Likewise, even if it were possible that there were an insensible somewhat, which you wish to call material substance; and that it causes the idea of a tree to appear in our minds when we look upon the quadrangle; nevertheless you could not possibly intend the phrase "material substance" to refer to it. For you have no cognisance of it; and no man can form an intention to refer to that of which he hath no cognisance.

Hylas: What? Then do you now admit the possibility that there is a material substrate?

Philo.: No, Hylas, my argument was rather as the schoolmen call *reductio ad absurdum*. To wit, I supposed as an hypothesis that there were a material substratum, and then demonstrated that no term could ever refer to it; which contradicts the hypothesis.

Hylas: Your logic strikes a persuasive note, yet the stubborn fact remains that I do verily refer to the material substratum as: that which causes my ideas.

Philo.: What mean you by 'cause'? If this term denote a cause of the kind that a material thing can exert, then neither you nor I, not any man, can ever have cognisance of it, and no meaning can we attach to the term. On the other hand, if by this term 'cause' you mean will, then you must be referring to an active mind as originator of your ideas; which is to say, God is the cause of your ideas, not the material substratum.

Hylas: So that line of argument is blocked off, and I am thrown back upon my attempt to establish a reference to the material substratum directly.

Philo.: Which, you have conceded, is a doomed enterprise.

Hylas: This exhausts my thoughts for debate which, alas, we must postpone until after supper; for I hear the college-bell.

Philo.: Agreed.

Chapter 3

Psi phenomena

3.1 The shifting sands of terminology

What we now refer to as ‘psi’ phenomena have been variously described in the past as ‘paranormal’ (a modern-sounding term, congenial to scientists), ‘parapsychological’ (a term devised and much used by the early scientific or pre-scientific investigators of the nineteenth century), ‘psychic’ (a term in universal use outside academia), ‘occult’ phenomena (originally referring to knowledge and skills that were occult in the etymologically proper sense of being hidden from common view), ‘supernatural’ phenomena, and ‘magic’ (again referring to skills and knowledge required to bring about the phenomena). The mystery of the phenomena has itself hindered the development of a straightforward set of terms. For instance, whereas ‘magic’ originally referred to the skills and techniques of bringing about supernatural events, that is, the powers of the magi, it has nowadays come to refer to the ability of entertainers to trick an audience with ingenious but wholly natural deceptions. So, the expressions ‘stage magic’ and ‘magick’ have evolved to differentiate entertaining acts of sleight-of-hand from the invocation of psi phenomena. Meanwhile, the scientific and, latterly, the military, communities have had to keep on shifting their terms as each new term becomes tainted with association with extra-scientific mysterianism. Whereas once ‘telepathy’, ‘extra-sensory perception’, and ‘thought transference’ were thought proper and even technical, they are now taboo in scientific journals and conferences and researchers talk instead of ‘anomalous cognition’ and ‘remote viewing’. Yet the phenomena remain the same. One could take a principled stand and insist on calling a spade a spade. Indeed, in some circles this is possible. If, however, we want to

communicate with, and engage productively with, the scientific community, then we have to follow the pattern of terminological fads. This is one of the petty consequences of the politics of ontology. It is a game that recurs periodically through history. Thus, Berkeley had to use the label ‘God’, for otherwise he would lose his job as Bishop; I have to use the label ‘metamind’, for otherwise I am unlikely to be able to present my writing in scientific journals or conferences.

In the 1940s, two researchers in the Society for Psychical Research in England, B.P. Wiesner and R.L. Thouless, started using the word “psi” (pronounced “sigh”) to denote paranormal phenomena. This is the anglicised name of the twenty-third letter of the Greek alphabet, or ψ , which is the initial letter of the Greek word “psyche”, which can very roughly be translated as “spirit”, and which is the etymological root of such words as “psychic” and “psychological”.

For now, the term ‘psi’ has the right ring of sobriety about it, and the leading university research laboratories use this term, so I shall use it here. No doubt, in ten years time, scientists will sneer at ‘psi’ and some new jargon will come into vogue. One of the amusing side-effects of this terminological pilgrimage is that the older terms tend to get stuck to institutions while the discourse moves on. Thus, for instance, the Koestler Chair of Parapsychology at Edinburgh University has a web page on the internet that discusses, not ‘parapsychological’ phenomena, but ‘psi’ phenomena.

The visual sense has sometimes dominated the terminology of what I shall call ‘telecognition’. In earlier eras, and in many circles outside the scientific community, the term ‘clairvoyance’ is used to denote all forms of telecognitive perception. Similarly, the term ‘remote viewing’ has been given currency by the work of government research agencies in the USA.

Dale Graff, who started up the US Department of Defense’s Stargate project in 1975, and ran it until 1993, was dissatisfied with the “remote viewing” terminology that he inherited from previous projects:

Early in the SRI remote viewing research, almost total emphasis had been placed on the visual aspects of our viewers’ perception. ... I even thought of changing the term remote

viewing to remote (or extended) perception in order to include other sensory aspects, such as sounds or feelings, that might be experienced during a remote viewing session.¹⁰⁶

But the term ‘remote viewing’ persisted in SRI and SAIC government-funded projects, and has now been transmitted into the wider world through the intellectual diaspora that followed the closure and partial declassification of Stargate in 1995. It remains to be seen to what extent the new misnomer of ‘remote viewing’ will displace the old misnomer of ‘clairvoyance’.

According to SRI’s CONTROLLED REMOTE VIEWING MANUAL, the term ‘remote viewing’ also includes the acquisition of information, rather than of sensory imagery:

“the acquisition and description, by mental means, of information blocked from ordinary perception by distance, shielding or time.”²⁶⁴

This leaves open the possibility of getting information without any accompanying sense-impressions. The subject would have to engage in forced guessing to yield up the information, as in Weiskrantz’s blindsight experiments,³⁶³ where he gets cortically blind patients to guess correctly what their eyes are looking at it. Nevertheless, the reports that have emerged on the phenomenology of remote viewing mention only sensory telecognition, not ‘blind’ telecognition.

3.2 Evidence

3.2.1 Traditions, anecdotes, and data

The literature on what we are calling ‘psi phenomena’ is vast. There are thousands of traditions of both practice and theory, and innumerable practitioners and theoreticians. There is an ocean of published and unpublished anecdotes that report what appear to be psi phenomena. Finally, there are the data produced by scientific experiments and the systematic compilation and investigation of spontaneous reports; and there are the speculations proposed to account for them. How are we to find our way around this jungle of information? The answer, I believe, is quite simple: the scientific method is the only road to the truth.

There are a lot people who believe that psi phenomena are real but can somehow elude scientific investigation. Or, they talk

of ‘scientific reality’ as being only a small subset of the much grander total reality. Or, they talk of psi phenomena as being ‘real for’ some people but not for others. Or, they identify science with quantitative studies, and insist that psi phenomena are not measurable. Or, they identify psi phenomena with non-conceptual spiritual ‘truths’, which are beyond the reach of the black-and-white analyses of science. And so on.

All of this is wrong. Mainly, it is wrong because people are misled by the reification of science (and, indeed, of logic). If one construes ‘scientific truth’ as labelling a particular variety of truth, then one might naïvely suppose that there are other varieties of truth, which can be found out by other means: thus one might seek a ‘spiritual truth’, or a ‘holistic truth’, or a ‘truth for’ this person and a ‘truth for’ that person (so that I have ‘my truth’ and you have ‘your truth’). That, however, is a basic misconception. The concept of reality does not admit of varieties. It is built into the defining conditions of the concept of reality that there is only one reality. Likewise for the concept of truth. In this sense, phrases such as ‘scientific reality’ are misleading misnomers, whose only genuine significance is to emphasise the scientific method as a method for getting at reality.

A fundamental premise that I shall adopt, and which I hold to be self-evident and in no need for further discussion, is that there is only one reality. Psi phenomena may or not be a part of that reality. The only way to obtain a high degree of confidence about the existence, and characteristics, of psi phenomena, is to investigate them scientifically.

Some phenomena are very hard to investigate scientifically, because they are rare and unpredictable, or the conditions under which they occur are hard to control. For example, it is hard to study spontaneous incidents of telepathy precisely because they do not happen every day and we have no idea when they will occur. And it is hard to study psi phenomena that depend on human emotions and intentionality because the intervention of the investigative process itself may disrupt the conditions required for the phenomenon to take place. As J.B.Rhine found, if you put psychics in a laboratory and get them to guess zenner cards all day, the psychics become bored and you substantially degrade the psychic ability.

The inference from this is not that we must give up the scientific method, but that we should employ ingenuity and imagination to get as close to the ideal of the scientific method as possible, and recognise clearly and explicitly the limitations that the shortfall places on the confidence of any conclusions we may reach.

As we all know, some things are so obvious that the rigorous application of the scientific method would be otiose. For instance, I know perfectly well that flicking the light switch in my study will turn the light on or off: it works with such a high reliability that I can see that a scientific study of my light switch would unavoidably yield the conclusion that it works. As far as I am aware, however, very few — if any — psi phenomena exhibit that degree of reliability. Studying psi phenomena invariably involves extracting a signal from a lot of noise: the only credible way to do that is scientifically.

So, what is the scientific method anyway? I often wish, in this sort of discussion, that we could avoid using terms such as ‘science’ and ‘scientific method’ altogether. Instead of contrasting a ‘scientific investigation’ with a ‘non-scientific investigation’ (which makes it sound as if there is more than one way of investigating a phenomenon), I would prefer to contrast an ‘investigation’ with ‘a pretence of investigation’. Of course, if you just pretend to investigate psi phenomena, if you play-act, then you will obtain only pretended results.

We must make a distinction between the scientific method, as a fundamental mode of approaching the world, and the current theories and paradigms that make up current scientific knowledge. Theories and paradigms come and go; they evolve and change in response to new facts. Some of the paradigms that the scientific community now embraces will have to be expanded or replaced by new ones to accommodate psi phenomena. This will inevitably engender a lot of resistance, as indeed it is doing already, even though we do not yet have new paradigms to put in their place. Throughout all these changes, however, the basic tenets of the scientific philosophy will be unchanged. No matter what new theories are developed to understand psi, we will still formulate theoretical models, generate testable and falsifiable hypotheses, carry out experiments, rationally assess the results, probably us-

ing existing statistical and mathematical methods, and base our beliefs about the nature of the world exclusively on those results as opposed to anybody's preferred opinions. None of that is going to change. A science of psi is still a science.

3.2.2 US Government investigations

For two and a half decades, from 1972 to 1995, a secret programme of research into psi phenomena was carried in the USA, with funding from federal government agencies. The primary objective was to use telecognition for spying. For instance, a remote viewer would sit in a darkened room in California and mentally observe the layout of an embassy in Moscow. A secondary objective was to use telepathy for secret long-distance communication, again for intelligence-gathering purposes.

It was at first carried out at Stanford Research Institute in California, funded initially by the CIA and later by other government agencies. In July 1995, the US government declassified 270 pages of documents from the project, which has since received considerable publicity, usually in connection with 'remote viewing' (the military term for clairvoyance). The material released so far, however, is probably only the tip of the iceberg: "It is estimated that more than 80,000 pages of program documents remain highly classified".¹⁴¹ In addition, it has been reported that a large number of documents were shredded before the closure of the program in 1995.

The programme was first directed by Harold Puthoff (1972-1985), and then by Edwin May (1986-1995). Most of the publicity has so far surrounded work carried out under Puthoff's direction, although the bulk of the funded research was in fact carried out under May. May joined the team in 1976, and worked there for ten years before being appointed director. Under his directorship, the team obtained 70% of the project's total of twenty million US dollars of funding, and carried out 85% of the data collection.

Although the secret work was initially funded by the CIA in 1972, and the association with the CIA has given a certain media cache to recent publicity about the project, nevertheless the CIA contributed only a quarter of a million dollars to the project, out of a total budget of twenty million dollars over twenty-four years.

Throughout its life-span, the project was hidden by tight se-

curity. Therefore the scientific parts of the work (as opposed to the operational parts) were not subjected to the normal quality-control procedures of open research in universities. Eventually, two independent appraisals were made of the programme's work in 1995, by the American Institutes for Research (AIR) under contract to the CIA. These reports were written by independent university researchers Jessica Utts and Ray Hyman. The general conclusion that came out was that, although there appeared to be a genuine psi phenomenon involved in telecognition, it was not reliable enough to be of use in intelligence operations (a conclusion vigorously disputed by Dr May¹⁷⁶). Utts was more categorical in her assessment:

This is a robust effect that, were it not in such an unusual domain, would no longer be questioned by science as a real phenomenon.³¹²

Hyman was more circumspect, but it is clear from his line of argumentation that his objections have largely to do with conclusions that he had already reached prior to the study. Nevertheless, even he admitted that:

I accept Professor Utts' assertion that the statistical results of the SAIC and other parapsychological experiments "are far beyond what is expected by chance."¹²¹

I admit that the latest finds should make them [Professor Utts and other parapsychologists] optimistic. The case for psychic functioning seems better than it ever has been. The contemporary findings along with the output of the SRI / SAIC program do seem to indicate that something beyond odd statistical hiccups is taking place. I also have to admit that I do not have a ready explanation for these observed effects.¹²²

While Hyman was able to provide little more than gut-feeling to argue against the validity of the remote-viewing programme, Utts was able to tabulate statistically significant departures from chance outcomes. She was also able to point out the existence of published accounts of comparable research from other, public institutions. Although remote viewing, as practised by SRI and SAIC, has not been current in university research circles, the procedure known as 'ganzfeld' is quite similar and has enjoyed considerable success in duplicated trials at independent univer-

sities: at the Psychophysical Research Laboratory at Princeton (which has the largest collection of ganzfeld trials, from 1983 to 1989), the University of Amsterdam, the University of Edinburgh, and the Institute for Parapsychology in North Carolina. Both the observed capabilities and the statistics of the psi phenomena experienced during ganzfeld are similar to those found in remote viewing.

Largely on the basis of the two reports sponsored by AIR, the programme was closed down, with the cessation of government funding in parapsychology. Whether there is any other secret research being continued in psi phenomena is, of course, a matter of speculation.

As mentioned above, the earliest work was carried by Stanford Research Institute (SRI), under contract initially to the CIA, and later to other government agencies. In 1991, May moved the project to another contractor, Science Applications International Corporation (SAIC). Finally, in 1991, after the end of government funding, the project shifted again, to the Laboratories for Fundamental Research (LFR). The team itself has been designated the Cognitive Sciences Laboratory (CSL), both when it was in SAIC, and now that it is in LFR.

The research papers in the Journal of Scientific Exploration,¹⁴⁰ and the several good popularisations that have been published, enable us to establish some general features of the phenomenology of telecognition, which we will look at in detail below.

Hyman's critique

Ray Hyman has been a contentious and outspoken critic of parapsychology and his dismissive account of the remote viewing project at SRI and SAIC is hardly surprising.

The main substantive point he makes is that, whilst the experiments have established the existence of inexplicable statistical results, they have done nothing at all toward proving the existence of novel mechanisms of cognition and communication. In the absence of a theory of any such forms of perception and cognition, from which testable and potentially falsifiable hypotheses can be derived, nothing that is conceptually meaningful has actually been shown by the experiments.

One of the weaknesses of Hyman's position becomes apparent

only when one starts reading through the reports of individual experiments, as opposed to tables of statistical data. The accuracy of some of the remote viewing responses is astonishing. It defies the imagination to suppose that what occurred was anything other a form of remote cognition. These exceptional cases provided the psychological motivation for believing that there is a genuine informative phenomenon involved. The statistical conclusions provide corroboration of that understanding. Hyman has chosen to adopt a narrowly defined scientific, one might say scientistic, perspective, in which he disregards as anecdotal the massively impressive individual cases, and focuses exclusively on the statistical results. It is true, as Hyman says, that if we look only at the statistical data then all we have is mystery, rather than positive evidence for a new phenomenon. That, however, is a blatant failure to apply common sense, which is as much a part of the scientific method as numerical analysis is.

In addition, Hyman is unduly critical of general aspects of parapsychology, and this raises doubts about his lack of bias in approach the SRI and SAIC work:

Each of the major sciences began with phenomena whose presence was not in question. ... Only parapsychology claims to be a science on the basis of phenomena (or a phenomenon) whose presence can be detected only by rejecting a null hypothesis.¹²⁰

This is a sweeping generalisation, and a false one. One exception that I am familiar with is epidemiology, and I suspect that there are other branches of science that are similarly founded on statistical analysis. In epidemiology, the basic phenomenon that is being studied is the causal relationship between an agent of some sort — perhaps an environmental factor or a type of microbe, or a medical preventative or therapeutic measure — and some condition of illness or disease. Generally speaking, that causal connection is quite invisible and its existence might reasonably be doubted. It is a phenomenon whose existence is proven statistically and whose properties and characteristics are established statistically. It is, moreover, studied effectively and scientifically, and that study leads to important and useful conclusions for public health. That Hyman did not think of this elementary counter-example suggests a failure of imagination.

Nor should the small magnitude of psi effects worry us. Again, medical statistics provides counter-examples to prejudiced assumptions. For instance, in clinical trials of clot-dissolving drugs for patients with heart attacks, the drug may reduce the death rate only marginally — from, say, 12% to 10% — and a huge trial involving tens of thousands of patients may be required to establish the conclusion unambiguously. Nevertheless, the positive results that are obtained will nonetheless be important because such vast numbers of people will suffer heart attacks.

It is therefore a completely spurious worry that psi research is, at present, almost wholly dependent on statistical analyses, or that the psi effects observed are small. Those facts provide no reason at all for doubting either the existence of psi or the ability of rigorous scientific investigation to scrutinise the phenomena.

A third point concerns a peculiar problem that plagues parapsychology, and which seems completely to have fazed Hyman. This is the influence of the mental state of the experimenter upon the outcome of the experiment. He writes:

Scientific proof depends upon the ability to generate evidence that, in principle, any serious and competent investigator — regardless of his or her personality — can observe.¹²²

Unfortunately, science is not as simple as that. First of all, many experimental procedures in human and mammalian psychology depend crucially on interaction between the experimenter and the subject. If the experimenter is unable or unwilling to achieve a requisite degree of empathy with the subject, then she may well affect the experimental results adversely. Precisely the same is true in parapsychology. In addition, however, if the parapsychological hypothesis is true — that mental intentions can directly affect personnel and devices, then we must face the possibility that the experimenter's own beliefs may affect the experiment, in ways that are difficult to shield or detect. This does not mean we must abandon science. It means we must devise smart new methods to detect or eliminate the effect of the experimenter. Hyman's assertion that the existence of any experimenter effect automatically damns the experiment is clearly mistaken.

3.2.3 University research

Parapsychological research has featured in university laboratories since Joseph B. Rhine's pioneering research from 1927 to the 1960s in Duke University, in the USA, which is now continued in the Rhine Research Center (formerly the Foundation for Research on the Nature of Man). In the cautious way that academic research is carried out (especially when it is underfunded and under constant attack from mainstream scientists), to an outsider it might seem that little has changed. Indeed, one of Ray Hyman's infamous criticisms of parapsychology is that it is unique among the sciences in that it does not build itself up through transmission and development, but perpetually repeats the same inconclusive experiments. That impression, however, is misleading. Parapsychological investigation has steadily improved the rigour of its methods, to the extent that its experiments are now the most rigorous of any branch of psychology. It has had to do this in response to the ever-shifting goalposts of sceptics. In addition, new experimental techniques have been developed, such as the ganzfeld method, in which a mild state of sensory deprivation is induced. The field is surveyed very well in Dean Radin's book, *THE CONSCIOUS UNIVERSE*, and there is little point in trying to duplicate his survey here.

The most innovative and important research tool that has appeared in recent years is that of 'meta-analysis'. Whereas ordinary analysis will take as its data points the individual measurements and observations of laboratory studies, meta-analysis instead takes as its starting point the results of those empirical trials. The first benefit of doing this is that it enables conclusions to be drawn systematically from the vast reservoir of individual studies. A individual study might involve only a few hundred, or even just a few tens, of cases, and therefore the random play of chance may swamp any genuine psi effect that may be present. If, however, hundreds of such trials are aggregated in such a way as to respect the variability between trials, then the persistent psi effect can be brought to the fore as the random noise cancels out and fades into the background. By this means, the existence of genuine psi effects in processes such as telepathy and telekinesis have been established with unprecedented degree of confidence.

What is just as important, though, is that meta-analysis enables researchers to study the characteristics of the trials themselves. For example, one of the most frequent criticisms made of parapsychological experiments is that positive results are just due to poor quality of the experimental method. This claim is itself an empirical hypothesis, and can be tested using meta-analysis. Radin reports such a meta-analytic study of telekinesis on random event or number generators (REGs or RNGs).^{233, 227} He assigned each REG experiment a quality rating based on sixteen recognised criteria for good experimental design, “including factors such as whether control tests were conducted, whether data were automatically recorded and double-checked, and whether a tamper-resistant RNG was used”. He and his co-workers found that, contrary to the sceptics’ claim, “the observed hit rates were *not* related to experimental quality.” They also, incidentally, were able to confirm empirically the common belief in the parapsychological community that the quality of trials was gradually improving in time.

3.3 Characteristics of telecognition

Whereas the university research seems largely to have centred on endless repetitions of controlled experiments in order to derive ever narrower confidence limits, the US Government’s programme of remote viewing has been more adventurous in exploring different aspects of the phenomenon. The following notes are consequently based mainly on the reports that have come out of the SRI and SAIC work. Nevertheless, without the solid backbone of duplicated results from controlled university experimentation, which establish the existence of the psi phenomena, the remote viewing reports would have to be viewed with more suspicion — especially since, as Hyman emphasised in his critical review, SRI and SAIC had to work in secrecy and isolation from the normal checks and balances that maintain the quality of academic work.

My main sources have been: SRI’s training manual (1986), attributed to Ingo Swann, which was posted on the internet by P.J. Gaenir (1998), who has also done a lot of investigation; the technical papers published in the Journal of Scientific Research since 1996 by several researchers involved in the project, including Russell Targ, Harold Puthoff, and Edwin May; the book REMOTE

VIEWERS (1997) by James Schnabel, who also wrote the script for William Eagles' British television documentary, THE REAL X-FILES — which, in 1995, first brought the remote viewing programme to the public's attention; and popular books by former remote viewers David Morehouse (PSYCHIC WARRIOR, 1996), Dale Graff (TRACKS IN THE PSYCHIC WILDERNESS, 1998), and Joseph McMoneagle (MIND TREK, 1998); and Russell Targ's book, MIRACLES OF THE MIND (1998).

Despite the hype and mystique, the procedure of remote viewing is simple (although not necessarily easy) and similar to folk methods that have been in use for generations. You sit down in a quiet place, relax your body and mind, and allow pictures to come into your mind. In other words, it consists in little more than creating favourable conditions for the conscious mind to receive information from subtle sources. Do not be distracted by the encrustation of technical jargon that it has acquired through its contact with the CIA and the US Army. At the end of the day, we are looking at the same phenomenon that John Dee tried to exploit for Elizabeth I. It is an old but elusive phenomenon.

3.3.1 Theory and structure

SRI's conception of what they were doing was also very simple. The whole of SRI's remote-viewing 'theory' can be summarised in the following paragraph from their training manual:

*... remote viewing theory postulates a non-material "Matrix" in which any and all information about any person, place or thing may be obtained through the agency of a hypothesized "signal line". The viewer psychically perceives and decodes this signal line and objectifies the information so obtained.*²⁶⁵

No account was given of what the signal line actually was, or what its operational parameters were, only that it "transports the information". The manual asserts that the information is transported in a form different from the final sensory form experienced by the viewer (the so-called 'objectified' form). The manual gives no empirical or theoretical evidence to support this assertion. I suspect that it is a presumption that was derived from their background assumption that telecognition is like receiving information on a radio broadcast. In radio broadcasts, audio-frequency vibra-

tions in the air (that is, sound waves) are encoded by modulating radio-frequency vibrations in electromagnetic radiation (that is, radio waves); that radiated energy then travels outward through space and may be picked by a receiving aerial, and the original sound waves can be duplicated from the information contained in the radio waves. SRI assumed likewise that, in telecognition, information from the remote site was encoded by some (unknown) mechanism into some (unknown) format in some (unknown) medium which travelled through the intervening space and was detected by some (unknown) mechanism in the brain. Thus:

*The information conveyed on the signal line is “encoded”, that is translated into an information system (a code) allowing data to be “transmitted” by the signal line. Upon receiving the signal, the viewer must “decode” this information through proper structure to make it accessible.*²⁶⁶

In my view this assumption is unwarranted for the following reasons:

- It implies that inanimate objects such as buildings will actively be channelling resources (such as energy) into the task of broadcasting information for the benefit of sentient beings. This is massively counter-intuitive, and there is no evidence that inanimate objects ever encode information for our benefit.
- It implies that inanimate objects possess the requisite degree of intelligence to do the encoding — to which the same comment applies. Imagine, for comparison, how amazed we would be if we discovered that buildings and pieces of furniture had figured out for themselves — without possessing any intelligence — how to transmit their geographic coordinates in morse code on some radio frequency. Yet, SRI’s hypothesis is no less outrageous, for its supposes that those objects are sending encoded information on the psi ‘signal line’.
- It implies that the encoding algorithms used by inanimate objects are compliant with the decoding algorithms used by the human brain. Moreover, during ontogenesis, the human brain acquires knowledge of this encoding protocol without ever having to learn it consciously. This would be quite astonishing. Whereas we have to *learn* to walk and talk when we are infants,

SRI assume that we are either born with an understanding of the telecognitive coding, or we acquire it without consciously learning it.

- It assumes that the transmissive medium is physical, and that it passes through space and yet can be halted and detected by human nervous tissue. But one of the few consistent findings of psi research, including SRI's own work, is that telecognition is unimpeded by distance or intervening material obstacles.

Instead, I would propose that telecognition is achieved by direct, non-local contact with the target object, and that the medium in which information is exchanged is that of raw sensory experientia. There is no encoding, no transportation, and no decoding. I will expand on this Berkeleian model in a later chapter. For now, I just wanted to float this idea so that you will know where I am going in this account.

Russell Targ, who was one of the two principal investigators in this SRI project, in his later book with Jane Katra, *MIRACLES OF MIND*, has also expressed the view that there is no transmission involved in telepathy or telecognition, but that the information is already present and has only to be tapped into.

One of the innovations of the SRI practice, as opposed to the clairvoyance that has been carried out for centuries by traditional methods, is the claim that there is an objective temporal structure to a session of remote viewing. Some antagonists have claimed that this structure is an artefact. They argue that it was imposed by Ingo Swann's prior assumptions. We cannot judge these competing claims with comparative studies.

In the SRI procedure, the type and volume of information that is delivered by the signal line varies as the remote viewing session proceeds, and SRI manual divides it into Stages I to VI. Except for Stage V, these are all carried out in real-time, bringing the contents of the signal line directly into consciousness, whereas Stage V works to digest stored memories of the information.

Without an operationally-defined technical vocabulary, the SRI manual struggles with mixed metaphors to describe the process and phenomenology:

The aperture (which was at its narrowest point during Stage I) opens to accommodate Stage II information. ... It is ac-

*accompanied by a correspondingly longer signal “loiter” time — the information comes in more slowly, and is less concentrated.*²⁷⁵

*Stage II dimensionals are individual aspects of the site, while Stage III dimensionality is a composite of inherent site aspects.*²⁷⁹

The manual does not define the meaning of the ‘width’ of the ‘aperture’; nor, for that matter, does it define ‘aperture’, although it is used as a synonym of ‘signal line’. At times, the author seems to imply that a ‘wider’ aperture is one that allows larger *amounts* of information through in a given unit of time; at other times, it seems to be defined as allowing larger *pieces* of information, such as dimensionals — as if the fact that a size denotes something big implies that that piece of information is itself big; at other times again, it implies that the information portrays a *larger* aspect of the target, as opposed to a detail.

Stage IV consists in digesting the information in a way that is more object-oriented rather than perception-oriented. It identifies the following elements: emotions, either in the people at the site, or linked somehow to the site itself; tangible objects such as furniture, machinery, vehicles; intangibles entities, such as organisations, purposes, categories; translucent overlays that can be used to get information about the site; more detailed kinds of dimensionals (e.g. “spired”, “twisted”, “edged”, “partitioned”). Stage V involves going back over memories of the information to extract more systematic and detailed classifications. Stage VI, which need not be last, involves modelling the site, for instance in clay.

Besides the method of exchanging information, the SRI manual also discusses how it is stored in the external world, taking what it calls “Jung’s Cosmic Unconsciousness” as its starting point:

*This Matrix can be envisioned as a vast, three dimensional geometric arrangement of dots, each dot representing a discrete information bit. Each geographic location on the earth has a corresponding segment of the Matrix corresponding exactly to the nature of the physical location.*²⁶⁷

An auxiliary part of the SRI theory was that the incoming telecognitive information was initially stored in the brain subconsciously, as well as being made instantly available in Stages I

through IV. It can later be retrieved into consciousness, in what they called Stage V:

*This information is deposited in earlier stages [Stages I to IV] when the signal line passes through the system and “imprints” data on the brain by causing cognitrons to form through the rearrangement of the brain’s neuronal clusters into the appropriate patterns ... Information “stored” in a cognitron can be accessed by a certain prompting methodology.*²⁸⁵

The word “cognitron” is a loosely defined term that just refers to a small amount of information stored in the brain.

A recurring problem in remote viewing is that the experienced imagery may be contaminated with imagery from other, irrelevant sources. This is referred to as ‘overlay’, and contributes heavily to the high ratio of noise to signal in the remote viewer’s reports. Typically, only about 15% of what the remote viewers report is valid.

*Essentially, the mind jumps to one or a number of instantaneous conclusions about the incoming information without waiting for sufficient information to make an accurate judgement. This process is completely reflexive, and happens even when not desired by the individual involved.*²⁶⁸

Overlay can come from one’s own mind (‘analytic overlay’ or AOL), or from others (‘telepathic overlay’). The viewers found it is hard, and often impossible, to differentiate the genuine data from its contamination. Paradoxically, one clue was unusually high clarity:

*A mental image that is sharp, clear, and static — that is, there is no motion present in it, and in fact appears virtually to be a mental photograph of the site — is also certainly AOL.*²⁶⁹

*Stage II visuals or other true signal line visuals of the site may be distinguished from an AOL in that they are perceived as fuzzy, indistinct and tending to fade in and out as one attempts to focus on its constituent elements rather than the sharp, clear, static image present with AOL.*²⁷⁷

It offers no reason as to why the telecognitive impressions should be so hazy. This may tell us something about the limitations of the telecognitive channel itself. The manual claims that the genuine signal can sometimes be differentiated from the overlay

on phenomenological grounds alone:

*It is ... possible with practice to distinguish the vague parameters of the true signal line “behind” the bright, distinct, distinct, but somewhat translucent image of the AOL.*²⁸³

If the telecognitive information were being delivered in an encoded, imperceptible form, and then converted into something perceivable ('objectified' in SRI's terminology), as SRI assume, then surely this could be made vivid by suppressing other sensory noise?

Another sign of overlay was the use of non-simple words:

*When objectified words go beyond the “basics” they are considered “out of structure” and therefore unreliable.*²⁷⁴

Conversely, overlay can be introduced through the monitor's choice of words when giving instructions to the viewer:

*“Motion words” (“move”, “shift”, “go”, etc.) were also avoided. ... [This type of word] tends to cause the viewer to take an active role, directly attempting to perceive the site instead of letting the signal line bring the information to him.*²⁸²

The manual recommends the use of “hypo-stimulative” words²⁸⁶ throughout the remote viewing session, to reduce this risk.

3.3.2 Range of sensory modes

So-called ‘remote viewing’ is not limited to vision, but can engage the full range of all human sensory modalities. For this reason, I shall use the term ‘telecognition’. As Schnabel notes, subjects can use telecognition to pick up

*... not just images but sounds, smells, tastes, textures, emotions, vestibular sensations ...*²⁴¹

The experiences are localised in the body, as these examples from Morehouse show:

*I felt cold on my face and warmth on my back.*¹⁸⁸

*I'm having trouble breathing; my throat's sore. It feels like it's being burned inside. ... The atmosphere is very strong and caustic; it makes my skin tingle.*¹⁹⁶

As well as conscious external perceptions, there are also experiences of emotions and reactions to what is being observed. The manual states:

*AIR [Aesthetic Impact Response] is the viewer's personal, emotional response to the site: "How the site makes you feel". It can be a manifestation of sudden surprise, vertigo, revulsion, or pleasure.*²⁷⁸

As an example of a psychological, rather than genuinely sensory impression, Schnabel recalls an occasion when a remote viewer was targeted on the Khyber Pass:

*The coordinates precisely described a precipice over the Khyber Pass, and the vertiginous kinesthetics of the site were apparently so strong that Hammid's hand, forming the initial ideogram, went sharply down, off the paper and off the table.*²⁵⁹

(The 'ideogram' is an initial sketch that the telecogniser makes to kick-start the process.) Here is another example, given by the manual:

*A pulp mill might trigger an [aesthetic impact] reaction of revulsion because of the nauseating smells.*²⁸¹

Interestingly, the manual notes that some individuals may have difficulty recognising the emotions they are hit by.

*Some viewers who in the past have had little experience with direct contact with their emotions may have difficulty recognizing that they experience AI [Aesthetic Impact], and may even be convinced it doesn't happen to them.*²⁸¹

The manual therefore advises the monitor to look out for body language in the viewer that suggests an 'aesthetic impact', and alert the viewer, who must then let it pass before continuing with the remote viewing.

The sensory impressions that the telecognisers receive always appear as if the viewers were bodily at the target site. That is to say, they do not access the physical matter directly. Instead, they get a simulation of the output that would be produced by a physiological transducer, namely the body's sense organs, as if they were at the target. This is a crucial point, and we will look at the implications in the next chapter.

Nevertheless, there seems to be some difficulty in defining the spatial position at which the remote perceptions are suppose to take place. Here this difficulty is noted by the manual:

The concept of "the viewer's perspective" must, however, be avoided ... in Stage III. ... Generally, the viewer himself

*is not precisely aware of his own perceptual relationship to the site and therefore not consciously aware of the true relationship of all the dimensional components.*²⁷⁹

And yet the having of any sensory impression at all implies a specific position at which the implied virtual sense organ is situated. For instance, a visual image entails a particular viewpoint where the rays of light are focused into an image. Therefore, this difficulty must be interpreted in terms of there being multiple possible vantage-points, and remote viewing process takes time to settle down to one single vantage-point.

As mentioned above, the training manual indicates that the nature of the imagery varies as the remote viewing session proceeds. The first pulse of telecognitive information ('Stage I') has a somewhat schematic but nonetheless sensory form:

*There are at least five possible types of feelings: solidity, liquidity, energetic, airiness (that is, where there is more air space than anything else, such as some suspension bridges might manifest), and temperature. Other feeling descriptors are possible, but encountered only in rare circumstances and connected with unusual sites.*²⁷⁰

These initial sensory forms are not very directly connected with the actual appearance of the target, nor with its orientation:

The objectification of the ideogram is completely independent either of what it looks like or its orientation on paper.

*... There is no viewer site orientation in the dimensional plane.*²⁷¹

At this stage, it is not clear whether there is any genuine perceptual imagery of the site: the manual is just not specific about such phenomenological detail. If there is perceptual imagery, there must be an implied vantage-point; otherwise, there may be schematic information, albeit in sensory form. The imagery then becomes more bodiform:

*Stage II presents to the viewer's cognition signal line data relevant to physical sensory input. The classic explanation of this is that such data are exactly equivalent to "sensations the viewer would experience were he physically present at the site."*²⁷²

Judging from the many anecdotal descriptions given in the popular books on remote viewing, this is the form of the bulk of the

information that was telecognised. At the end of Stage II, more dimensional information becomes available:

Generally received only in the latter portion of Stage II, dimensional are usually very basic — “tall”, “wide”, “long”, “big”. More complex dimensionals such as “panoramic” are usually received at later stages characterized by wider aperture openings.²⁷⁶

which is sharpened in Stage III to:

1. *Diagonal: Something that extends between two or more other things; a line connecting two points of intersection of two lines of a figure.*
2. *Horizontal: Parallel to the plane of the horizon.*
3. *Mass: Extent of whatever forms a body, usually matter.*
4. *Space: Distance interval or area between or within things. “Empty distance.”*
5. *Vertical: Perpendicular to the plane of the horizon; highest point / lowest point (i.e., height or depth).*
6. *Volume: A quantity; bulk; mass; or amount.²⁸⁰*

A puzzling aspect of this list is that it mixes perceptual components — such as horizontal, vertical, or diagonal lines, which can be discerned in visual imagery — with conceptually inferred properties — such as mass, which cannot be seen directly. It seems improbable that the telecognition itself should deliver such inferred properties. More likely is that the author has not clearly separated the different kinds of information. This might reflect a theory-driven bias — for, as noted earlier, the SRI author had a background assumption that telecognitive information was generated by the objects in encoded form, which include imperceptible properties such as mass.

The telecognition was generally done in a state that is wakeful but very relaxed. It can also occur in dreaming sleep, as Graff notes:

Psi dreams occur when we have the intention to be open to them.¹¹⁴

3.3.3 Schematic impressions

Besides sensory impressions and sensory-related psychological reactions, telecognisers also often got schematic impressions of non-sensory things. The training manual, for instance, refers to tele-

cognising

"energetics" (i.e.g, magnetism, strong radio broadcasts, nuclear radiation, etc.²⁷²

Morehouse gives us examples of the schematic experience that is associate with the point of observation's passing (i.e. the observer's passing) through solid obstacles:

*I flinched as the roof passed by, but it felt like nothing more than a soft puff of air, like a mild aftershock or blast concussion.*¹⁹²

[Kathleen:] '... I want you to move ahead through the stone wall and describe what you see.' [Morehouse:] 'I'm moving now.' The wall pressed against my phantom form with the sound of Velcro tearing open; in the center of the wall it was dark.¹⁹⁴

Obviously, these perceptions cannot be related to any possible real experience. The soft tissues that make up the human sense organs would be crushed by any successful transit through a wall. Whatever Morehouse is experiencing here is accessible only in telecognition. Schnabel also refers to technological schematics:

*In his hypnotic visions, the burly warrant officer seldom failed to see a green haze around any kind of radioactive or fissionable material....[Compare with] Superman ... where deadly Kryptonite gave off the same greenish glow.*²⁴²

In another case, the target was a new aircraft, and the telecogniser saw its fibre-optic cables as light-filled 'strings'. This has to be regarded as a schematic view, because the light in a fibre-optic cable can be seen only through its severed end. In an operational aircraft, the light-carrying property would not be visible.

*Atwater later found out why Riley had described 'strings' with 'light'. To reduce the bomber's radar signature, the Air Force had decided to use fibre-optic control wires instead of traditional electromechanical or hydraulic lines.*²⁴⁴

Another example from Morehouse mentions the use of instruments in schematics:

*... I remember looking at human cells as if I were right there, microscopic.*²⁰⁰

The occurrence of schematic views reinforces the conclusion that the telecognisers are not simply accessing the physical processes at the target site. What they see has been intelligently pre-processed

in some intermediate step. There are also some schematics to do with the telecognition process itself, as Morehouse observes:

Briefly, I felt as though I were falling in a bright tunnel; then the sensation ended abruptly. It came and went over and over, the images always following it.¹⁸⁷

The ‘stars’ suddenly blurred into horizontal streaks of light. I felt myself accelerating, faster and faster, falling toward the target as if through a tunnel of light¹⁸⁹

Also, Morehouse describes the schematic experience of scanning through time:

Now time scrolled forward, stopped briefly, then scrolled forward again: the signal line was moving me at will, allowing me to see the room at various points in time. Finally it stopped completely, at a point it must have ‘felt’ was critical to the mission.¹⁹⁵

3.3.4 Vicarious perception

Sometimes the remote viewers would observe scenes as if they were being seen by someone at the remote site, which we may call ‘vicarious seeing’; at other times, they would observe the site from an arbitrary point in space, which could be moved around at will in all three spatial directions. Here Morehouse refers to vicarious seeing, by himself and by other remote viewers:

... Where was I, anyway? And why did I feel like I was looking through another set of eyes?¹⁹³

... the viewers described, as if seeing through the eyes of the crew members, what each one experienced in his final moments.¹⁸²

In the latter case, the remote viewer is observing a fatal helicopter crash that had occurred some time previously, through the minds of the now deceased crew.

3.3.5 The format of psi data

There seem to be repeated patterns in the format of data received by telecognition. The manual asserts that the information at first presents itself as small-volume, large-scale items of information:

Essentially, when the remote viewer first detects the signal line ... it manifests itself as a sharp, rapid flux of signal energy — representing large gestalts of information. This

*situation, we therefore speak of a “narrow” aperture, since only a very narrow portion of the signal line is allowed to access the consciousness. In later stages involving longer, slower, more enduring waves, the aperture is spoken of as being “wider”.*²⁶⁷

The training manual describes the sensory data as being reported in small clusters, thus:

*Stage II responses tend to come in groups or “clusters” of words — usually 3–4 words, though sometimes more — pertaining to different aspects or gestalts of the site. ... Frequently, types of sensory responses will come together. For example, two or three tastes, smells, colors, or textures may cluster together as the viewer objectified his perceptions on the paper.*²⁷³

The telecognisers also experienced receiving their impressions in discrete packets, rather than as either a continuous stream or single delivery, as Schnabel reports:

*The impressions seemed to arrive in brief, wavelike bursts of images and other sensory data ...*²⁴⁹

Either the size of these individual packets, or their frequency, seems to increase as the remote-viewing session proceeds. The psychic Ingo Swann, who was working on the SRI research team, realised that, as a consequence, the conscious mind received a larger proportion of meaningless noise at the start of the session, when the viewer's unconscious mind added in its own interpretation of the meagre psi signal; whereas, toward the end of the session, the *bona fide* data becomes more substantial, so the unconscious needs to interpolate and extrapolate much less. Swann coined the term ‘AOL’ or ‘Analytical Overlay’ for the arbitrary interpretative material that the subconscious mind churns out when the real psi signal is weak. Schnabel writes:

It became clear to Swann that remote viewers should postpone the more information-rich AOL-type data until the end of the session and should start the session by accepting only the more raw and basic data. Swann later spoke of the psi signal, or the ‘signal line’, as a flow of information through an ‘aperture’. At the outset, the aperture was tiny and the flow was merely a trickle, but as the session wore on, the aperture widened and the trickle grew to a flood.

Remote viewing, in other words, had a natural structure. ... In the terminology [Swann] later deployed for his training course, a remote viewer could stay ‘on the signal line’ only if he stayed ‘in structure’.²⁵⁶

At least in Swann’s experience, the first packets of psi data were presented as kinaesthetic impressions. Referring to the key elements of the image as a whole, Schnabel continues:

... [the information] was available to a remote viewer in an almost instantaneous burst at the start of session — in fact, the moment the coordinates had been read. But the strange thing was, this information wasn’t available in visual form so much as in an autonomic, kinaesthetic form. Swann would feel his writing hand making motions to describe the basic feature of a target — say, a rapid diagonal up, diagonal down for a mountain ...²⁵⁷

We should, however, be wary of reading too much into that observation. It is well known that different people vary in respect of which sensory modality they tend to find easiest to work with. Some people are visual, others are verbal, others again are kinaesthetic. It is possible that Swann happened to be a person of kinaesthetic type. Certainly, a number of the other telecognisers found Swann’s method of starting with the ideogram to be more of a hindrance than a help. Moreover, it is not entirely clear whether the psi data arrive as kinaesthetic data, or whether they arrive in a neutral form that the viewer can then render in kinaesthetic, visual, or other sensory form.

It seems that there may be a common format that nature uses when information is exchanged through psi channels. This format should not be thought of as a code, for reasons that I discussed earlier. A code implies *two* formats, the coded and the uncoded. Rather, this format would be the basic form of experientia used in sentient beings, both in internal processing and in exchanging with other beings. The main evidence for this claim is that the remote viewer is able successfully to target a wide range of objects and other people. Further possible evidence of this commonality can be found in ‘telepathic overlay’. One of the obstacles faced in testing telecognisers is that information may ‘leak’ out of the minds of the experimenters and contaminate the remote-viewing signal itself. Yet, the telecogniser can discern no difference

between the *bona fide* telecognition and the telepathic contamination, as Schnabel notes:

*There was also the very strange phenomenon of ‘telepathic overlay’. Sometimes the remote viewer reproduced in his RV session erroneous data that some other viewer had come up with or data in the mind of the monitor. It was the kind of thing that had been reported since the early days of mesmerism and hypnosis, and there didn’t seem to be much one could do about it, aside from keeping the monitors blind to the targets in operational sessions.*²⁵⁸

Premature recognition of sensory impressions obtained from telecognition continually dogged the remote viewing program. It is not always clear, however, where the misclassification enters into the phenomenology of telecognition. Graff gives this example of mis-recognising the Capitol Building:

*For example, a viewer might perceive and sketch a ‘large white dome’ and call it an observatory, when in fact it was the Capitol Building in Washington, D.C.*¹⁰⁷

A question that arises here is whether the viewer gets just the non-visual idea that the image is that of an observatory, or whether she actually begins to see in the image details that would be pertinent to an observatory, such as a large sliding door, and maybe even a telescope. Graff suggests that it is just the idea that is wrong in these cases:

*It is not uncommon for remote viewers to miss the analytical aspects of the target. Specific names, numbers, and functions are difficult for remote viewers to detect and are not nearly as reliable as drawings or sketches.*¹⁰⁹

Nevertheless, in one of Graff's own exercises in telecognition, the image itself incorporated very vividly the misinterpretation. In this case, a helicopter at the target came through as a propeller-driven aeroplane:

*My airplane-design experience while I was an aeronautical engineer probably influenced the way I perceived the helicopter at [the target] site, and I subconsciously added a front-end propeller to the basic remote viewing image.*¹¹²

This distinction could give us a useful clue to the nature of the underlying mechanism of communications. What exactly is it that is exchanged: sensory experientia, or abstract ideas? Many of

the reports of remote viewers suggest that the process of telecognition provides packets of sensory impression, which must be assembled and interpreted by the remote viewer. If so, then we would not expect the remote viewer's conceptual error to affect the imagery itself. One possible way of reconciling this hypothesis with Graff's experience would be to suppose that sensory packets may be assembled into a whole picture before being presented to full conscious awareness: so that Graff saw the propeller correctly, but his own mind had put it in the wrong position when building up the picture. We would also have to suppose that the viewer's mind may fill in any gaps in the picture, again before it reaches full awareness. A key question then would be whether the propeller itself looked the same in the imagery as in real life: if even that was different as well, then it would suggest a more complicated picture, in which the remote viewer's experientia may or may not be identical with the experientia transmitted by the beacon person. Graff also indicates that the sensory information comes in discrete packets:

At first, the images were fragmentary; then they formed discernible patterns and shapes. I attempted to make a composite and put them into proper spatial relationships.¹¹⁰

3.3.6 Locomotion

Locomotion is inevitably problematic for a disembodied mind. For, they cannot rely on any Newtonian method of locomotion such as can be used by embodied beings. In general, you move about in this world by applying a mechanical force, which produces a proportionate acceleration that depends on the mass being moved. And you steer your body by altering the direction of the applied force. This fundamental concept applies to whatever mode of travel you use, be it walking, sliding, flying, or swimming. Since a disembodied mind is massless, there is no such useful relationship between the acceleration and any force that might be applied. You cannot push a spirit. So, how does the remote viewer propel her point-of-observation through space, and how is this propulsion steered? According to Morehouse's experience as a remote viewer, it is achieved by visualisation and intention, although the mechanism by which that visualisation is translated into motion is not explored. In this passage, Morehouse visualises

his destination from afar:

In the strange apparitional way one moves in the ether, I moved to the break in the undergrowth. My gaze fixed on the distant hills and rock formations; I lost track of the ground beneath me.¹⁸³

Whereas, in this one, he visualises the outcome of the required action:

... by focusing my thoughts into visual patterns, I could control my movements in this phantom state. If I wanted to stand, I visualized myself standing; similarly, if I wanted to move left or right, I pictured myself turning that way.¹⁹¹

How are we to understand this? When Morehouse refers to ‘visualising’ himself moving or turning, he cannot be not referring to some second vantage point from which he imagines seeing his body move or turn. He must, rather, be referring to the first-person view-point of observing the surroundings move in relation to him. The trouble with that, however, is that if Morehouse is deliberately visualising his field of vision change from one view to another, then he would have to be deliberately visualising the new view. That, however, would contradict the basic hypothesis that what he is seeing has come to him through telecognition, and not from his own imagination. A likely solution to this problem is that, when Morehouse visualises himself moving or turning, he is imagining only an incomplete experience, perhaps imagining the somatic feeling of moving or turning his body without picturing what he will see, or visualising only an incomplete picture, and allowing the telecognition itself to fill in the details.

Related to the problem of locomotion *per se* is the question of how a disembodied mind can navigate in this domain. Since this domain is not traversed by transporting an inertial object through space, one cannot utilise dead-reckoning based on one’s own movement, nor can there be maps as we think of them, directing the remote viewer through possibly hundreds of kilometres in an instant. Rather, the mode of travel suggests that the remote viewers are operating in a ‘content-addressable’ domain. By focussing on a feature possessed by the target, the viewer is at once placed in informatic contact with the target.

3.3.7 Coordinates

When the experiments in remote viewing began, they operated on the basis that a ‘beacon person’ would go and visit the target site, while the remote viewer herself would try to pick up clairvoyantly an impression of the place where the target person was standing at that moment. This worked well, although there was uncertainty as to whether the remote viewer was getting her information and impressions exclusively by telepathy from the beacon person, or whether she was gaining access to the target site in a more direct manner. To be sure, there were numerous instances where the viewer would pick up on the beacon person’s subjective judgements about the site, or emotional reactions to what was going on there. So, at least some of the data must have originated telepathically.

The SRI team then had the idea of giving the viewer the geographical co-ordinates of the target site, and asking the viewer to visit the site mentally, even though there was no beacon person there. This worked well. Known as ‘co-ordinate remote viewing’ (CRV), this became the standard method in SRI for a while. Then someone had the further idea of using encrypted co-ordinates, or even dummy co-ordinates — four random numbers that superficially looked like co-ordinates but in fact had no connection with the target, except that they were being used as an arbitrary label for it. It was apparent that the remote viewer was getting the real identity of the target from the mind of the monitor. From this, it was a short step to working without even any pretence of co-ordinates, and explicitly getting the target specification telepathically, as Schnabel notes:

As far as Harary could tell, the use of coordinates only seemed to hurt the overall technique. When Harary heard a set of coordinates at the start of a session, his mind couldn't help trying to calculate where the target was. If the coordinates were something like 5°S, 30°E, AOL images of humid African jungle would immediately start to flash into his mind, although the target might be something significantly different. ... Nor did remote-viewing accuracy seem to suffer when Puthoff scrambled the geographical coordinates of the target with an encryption algorithm, and

gave them to the viewer. Nor did accuracy suffer when Puthoff gave encrypted coordinates to viewers who didn't even know that the coordinates were encrypted; in other words, the numbers they had were random as far as they knew. Finally, one day, Puthoff was in the remote-viewing room with Harary, about to start a session, and Harary in exasperation said, 'Why don't you just say, "Target"?' 'Okay', said Puthoff, 'Target'. Both remember that Harary nailed the site.²⁶⁰

This is an important discovery, as it shows that an act of remote viewing can be routed automatically through someone else's mind, without the viewer even knowing that that is happening. According to Morehouse, this happens continually throughout telecognition, not just when contact with the target is still established:

*[Riley:] 'We've done some experiments to see what effect switching the target folder might have, and the results were fairly astonishing. If I were working you on Target X, and during a break I substituted Target Y's folder without telling you, you'd start describing aspects of Y.'*¹⁸⁶

In a footnote, Morehouse offers the only hint of explanation of the psi process in his book:

... the numbers assigned to a target are inconsequential; they are randomly generated and assigned. What, how, and where they come from means nothing. However, once they're assigned to the target, they become an address for the target (wherever it is) in the matrix of the mind. The theory stems from Dr Carl Jung's concept of the 'collective unconsciousness' [sic] of the human mind. If an individual is cognizant of the target, or aspects of the target, and then assigns a number to that target, then, in theory, those numbers will represent an address for that target (or for the knowledge of it, or the concept of it). These coordinates make the target accessible to any human being capable of entering an altered state and searching for that particular address. In theory, and practice, if I am given the coordinates of 12345 67899 on Monday, and if those numbers are assigned to a bag of rice, I should be able to describe the bag of rice and its surroundings. If Mel is given the same coordinates on Tuesday, he, too, should be able to describe

the same bag of rice. If Lyn were given the coordinates one year from today, in theory, he would be able to describe the same (now mouldy) bag of rice.¹⁹⁰

Graff is more confident about theorising, although his ‘theory’ seems to have more to do with suggestive jargon than explanatory structure:

... it will be gratifying to know that a simple physical, informational structure called the quantum hologram, which is associated with the nonlocal wave characteristics of every physical object, is likely the proper explanation of [the] data.¹⁰⁵

I have no idea what Graff means here by “quantum hologram” or “nonlocal wave characteristics”, and I have a suspicion that Graff has no idea either.

Perhaps a wavelike phenomenon similar to electromagnet-ics carries signals between minds? The mind may not be all “in the brain”. We may all be part of a cosmic hologram. Something quantum physical, a ‘tunneling’ effect similar to the way in which elementary particles move across bound-aries, may have some rôle in psi phenomena.¹¹⁵

Here we have four different theories in as many sentences. I would make the following remarks on these successive theories. First, we know that the psi is not conveyed anything quite like electromagnetic radiation because it is unimpeded by distance or material barriers. Second, the mind is not “in the brain” at all, so it is unhelpful to ask whether it is *all* in the brain. Third, we are obviously not all part of a hologram in a literal sense, and it is completely unknown what figurative meaning Graff might want to attach to the phrase. Fourth, quantum tunnelling effects as we know them could not possibly transport signals across the large distances that psi effortlessly operates over.

Even if, *per impossible*, any those theories could account for a signal transmission of the right kind, there is still the formidable problem of explaining the informatic aspects of psi, such as the task of *finding* a telepathic or telecognitive target, often given the barest clue of its location.

3.3.8 Psychometry

Psychometry is the psychic ability to pick up experiences and information concerning an object’s past by touching it. In tele-

cognition, it seems that the remote viewers can do the same thing remotely. This may be a significant clue to the nature of what is going on.

The SRI reference manual groups together the accessing of the emotions of humans at a given site and the accessing of emotions psychometrically associated with a site. In its list of information types that can be obtained in Stage IV, it includes:

Emotional impact: the perceived emotions or feelings of the people at the site or of the viewer. Sometimes the site itself possesses an element of emotional impact, which is imprinted with long or powerful associations with human emotional response.²⁸⁴

In the following case, Morehouse is sent to remote view a museum of the American Civil War, and he touches an exhibit associated with a Union solder who had died many years ago.

[Riley:] 'Touch one of the objects and tell me what you see and feel inside yourself.' I reached for an object near me.

[Morehouse:] 'I see a man walking. He is filthy, covered in smoke and blood. He smells like an animal! His hair is long, and so is his beard; he's moving in a line with a lot of other men just like him.'¹⁹³

In the following somewhat bizarre case, Morehouse is remote viewing the surface of Mars:

[Kathleen:] 'Touch one and see what you get.' [Morehouse:] 'I'm touching it now, and I ... these are not natural. I mean nothing fell out of the sky and skidded here; these were made by something or someone.'¹⁹⁷

At one point, it seemed that Morehouse was engaged in the universal mystical experience of the independent active mental life of objects:

... in the center of the wall it was dark. It was at times like this that I learned that everything indeed has a spirit. The wall had its own history, and it seemed to weep as I passed through it. I left the darkness feeling as though I'd left a painful, clutching memory behind.¹⁹⁴

This is an interpretation that we will return to more systematically below, when discussing a Berkeleian model for these phenomena.

Robert Monroe makes the following interesting remark about his findings in out-of-body experiences:

... it may be that the older radiation [mental activity] is layered over so all one perceives is the current emission.¹⁸¹

Despite his use of a metaphor of energy and radiation, this notion of the accumulation of experientia without annihilation of the past makes contact with the Berkeleyan model that I will be developing.

3.3.9 Mental access and dialogue

Besides remote-viewing the visible surroundings at the site, the viewers found that they could also read the minds of any people who happened to be at the site. The first hint of this seems to have come in the course of remote viewing, where the emotional state of the beacon person interfered with the transmission of perceptions about the site. For instance, Graff was surprised to find that emotional states can dominate the selection of information for telepathic communication:

I had latched onto the most interesting — the most emotionally and physically disturbing — part of [the beacon person's] environment. ... For me, that unexpected incident was easier to sense during my remote viewing session than the static scene. Apparently, intense feelings and emotions — and images that cause them — can be picked up, even at transcontinental distances.¹¹¹

Graff's comments also raise the question of whether the ease of remote viewing emotions is due to their being more easily emitted from the target mind, or more easily conveyed to the remote viewer's mind, or more easily picked out from amongst the material in the viewer's mind.

In the following example from Morehouse, the access to the target's private thoughts blends in with observing his overt behaviour. In this instance, it is not clear whether the apparent perception of the target's emotions is really an access to the target's mind or a projection by the telecogniser of what he imagines the emotions to be.

[Monitor:] 'I want you to access the mind of the key individual present and tell me what he or she is thinking. Do you understand?' [Viewer No. 66:] 'Yes, I understand. The key individual is an older man sitting at the head of the table. He's very bitter about something, very angry at some of the people in the room. He's pointing his fist at

*them, shouting at them.*¹⁸⁵

At other times, we cannot judge to what extent the telecogniser relied on verbal cues:

From the ether, we hunted Pablo Escobar and other drug kingpins, accessing their minds to reveal elements of their plans ...¹⁹⁹

In one particularly interesting form of this, the viewer engages in a telepathic dialogue with someone at the target site. This cannot so easily be attributed to the remote viewer's unconscious interpretation of remotely viewed verbal and other cues, since the remote viewer himself is able to initiate and direct the interrogation in any way he likes.

At this point, Atwater quietly suggested that Bell 'talk' to the KGB man, telepathically coaxing the information out of him. It was a strange technique, and perhaps only a metaphorical device that got remote viewers past psychological barriers within their own heads. But the remote viewers seemed to think that they really were 'asking' their targets, and in any case, it had seemed to work for them on many occasions.²⁴³

As is often the case in work that involves intense use of imagery, there is sometimes a subtle confusion between the imagined model and independent reality. Where Schnabel notes that the remote viewers thought they were really talking with the targets, this must be understood as describing the remote viewers' experience only, and does not attest to any additional evidence that *bona fide* communication was established. Consider that, in a dream, you may converse with other characters who are just figments of your imagination. Your mind thus has the ability to generate convincing dialogues with non-existent beings. The ensuing dialogue does not, by itself, explain itself.

McMoneagle decided to ask the man in the car, 'What are you going to do with that fishing pole?' This was an especially strange use of the telepathic interrogation technique, since the target was not only at a different place, but at a different time, at least several days in the past.²⁴⁵

As Schnabel points out, it is not clear whether there is a real interchange going on between the viewer's mind and the target's mind, or whether the dialogue is simulated inside the viewer's

own mind only. Internal dialogue is an established practice in some forms of hypnotherapy: to extract information from, or to influence, your own subconscious mind, you may engage in an introspected conversation with it. It is entirely plausible that this happened in the two cases mentioned above: the conscious mind may have carried on a dialogue with the subconscious part, in order to extract information that is otherwise inaccessible, but that dialogue was not reflected in the straightforward information transfer between the two minds. That is certainly the simpler hypothesis.

The alternative would be to suppose that the two minds are really conversing just as they appear to be. In the second of the two cases quoted above, where the conversation is happening with someone in the past, there is, one intuitively feels, a fundamental objection based on the premise that the past cannot now be altered. Whatever was the state of the target person's mind at the earlier time, it did not include the conversation with the remote viewer. Therefore the remote viewer cannot now be having a conversation with the target person's past mind. So, if taken simply and literally, the claim that McMoneagle was telepathically conversing with someone in the past is just nonsensical.

One possible explanation of the apparent past conversation is that the viewer's mind is actually engaging in a dialogue with the target person's mind in the present, and that the target person's mind is retrieving its own memories (or imaginatively extrapolating from its memories) and thereby imagining how it would have answered those questions. That explanation preserves our intuitive sense that, whatever happens, it happens in the present.

Colin Wilson reports an anecdote in which someone used a remote viewing technique to visit a friend, and there had a conversation with him: afterwards, it was confirmed that what the remote viewer had seen was correct, and the information obtained in the dialogue was correct, but the friend had no recollection at all of any such conversation taking place. This, at least, corroborates our claim that the telepathic dialogue is not a real dialogue with the target's conscious mind.

Can we, however, salvage the simple and straightforward, and yet paradoxical, idea of conversing with the past? Is there some sense in which we could understand there to be a real conversation

with another mind in its past? Well, we could do so if the mind as a whole were functionally separable into the consciously aware self on the one hand, and an automatic mechanism that nonetheless had an ability to comprehend questions and provide meaningful answers. Then the apparent conversation with the mind in the past would really be a conversation with a somnambulistic, unconscious part of the mind, which, since it had no awareness of the flow of time, would be trans-temporal rather than genuinely in the past.

The notion of ‘trans-temporality’ is quite subtle but can be compared with that of minds’ being non-spatial in the Berkeleyan universe. For, by being outside the physical world, minds are strictly without spatial or temporal location. The only real time is psychological time, which is generated internally by the succession of conscious experiences and volitions. If, however, there were some unaware component of the mind that could process linguistic and other complex information, then it would be a timeless entity, which could be accessed from any time.

3.3.10 Intentions & memories of buildings

Remote viewers did not always detect buildings and other structures as they actually stood at the time of viewing. Sometimes they saw structures that used to be there, but have since been demolished, although memories may persist. Other times, they saw the absence of structures that were planned to be demolished, or which were already in the process of being dismantled.

Kenneth Kress, CIA Project Officer for the remote viewing programme, records an illustration of this.¹⁷⁰ In one case, the viewer Pat Price could no longer see derricks at a Soviet site, claiming that they had been dismantled, but subsequent satellite photographs showed that, at that time, only two of them had been partially dismantled. Other buildings, which were still under construction in the satellite photograph, Price could see clearly.

One explanation that has been floated is that in these cases the viewer is cognising through time, into the past or into the future. It seems to me that a more plausible hypothesis is that the remote viewing of the site is contaminated by the thoughts of people who have memories of how the place used to look, or who possess plans for how it is going to look. If the latter hypothesis is correct, then

it would imply that telecognisers are able effortlessly, and without conscious intention, to extract information from multiple minds as well as from the target objects, and seemlessly to put together a realistic image from those disparate sources. That would also be consistent with the schematic remote viewing discussed earlier — in which a remote viewer sees, say, a schematic representation of electromagnetic radiation superimposed on a naturalistic scene.

3.3.11 Out-of-body experience

Telecognition in general, and the US Government's remote viewing especially, is phenomenologically very similar to the out-of-body experience (OBE). The main difference is that in an OBE, you retain a phantom body, whereas in remote viewing you are completely disembodied.

Robert Monroe started having involuntary OBEs in 1958, which led him to set up a research division in the 1960s, which eventually became the Monroe Institute. At first, this group carried out semi-secretive research, but then came into the open with Monroe's publication of his book, JOURNEYS OUT OF THE BODY in 1971.

Monroe summarises the experience of the phantom body thus:

In the early stages of OBE activity, you seem to retain the form of your physical body ... As you become more familiar with this other state of being, you may become less humanoid in shape. ... it takes only a thought for you to become totally human again in shape and form.¹⁸⁰

The simplistic view that in an OBE you possess a real 'body' made of some astral stuff instead of the normal body made of material stuff is mistaken. On the Berkeleyan analysis, neither body has an independent reality. Both are constructs built on conscious sensory experiences. The key difference between the two kinds of body is that the form of your normal body is given to you by what Berkeley called God, whereas the 'astral' body is purely a construct of your own imagination. This hypothesis is consistent with the observation that the subject of the OBE can modify the form of the astral body at will; it is also consistent with the observation that, in remote viewing, one has an experience just like OBE but the mind does not project an astral body.

The status of the astral body in OBEs is, on this view, identical

to the body that you have when dreaming.

Your astral body, or dream body, is built up from memories of the sense impressions that you get throughout your waking, embodied life. The shrinking of the astral body into an amorphous blob is no more than the mind neglecting to keep up with the wholly unnecessary projection of a bodily form during OBE. It corresponds to the often observed shrinking of phantom limbs in amputees: at first, the phantom arm or leg is the same length as the original, but over the months and years, it shrinks into a stump.

There is, I would stress, no actual, independently existing astral body, dream body, or phantom body — any more than there is an actual, independently existing physical body. They are constructs built on sense-impressions: the former derived from memories, the latter from fresh impressions given by Berkeley's God.

3.4 Characteristics of telekinesis

'Telekinesis' is the process of moving physical objects by mental intention, without any known physical mechanism. It includes modifying the mechanical, chemical, or physiological state of things by mental intention, for example altering someone's skin conductivity by focusing your attention on him or her. In those cases, the conceptual emphasis is not on moving things through space, but on changing the properties of things located in space. Nevertheless, one could regard such changes of state as being achieved by micro-telekinesis at a molecular level. 'Micro-telekinesis' works on things too small to be seen by the naked eye; 'macro-telekinesis' works on larger things. Another term that is in widespread use is 'psychokinesis' (PK). I prefer the term 'telekinesis' because it indicates that the moved objects need have no proximity to the subject; whereas 'psychokinesis' entails only that the movement is done by the mind. On etymological grounds, therefore, one should expect 'psychokinesis' to include such mundane things as moving your hands, since that is ultimately done by the mind, but in practice the words "telekinesis" and "psychokinesis" are synonyms. (Another reason for preferring "telekinesis" is that the word "psychokinesis" happens to have already another, unrelated use in psychiatry.)

3.4.1 Micro-telekinesis

It is interestingly in keeping with the elusiveness of psi phenomena, that there is very little evidence for macro-telekinesis, the visible movement of objects that are big enough to be seen. Helmut Schmidt, a pioneer of research in telekinesis, notes:

A great surprise of the early work was that psychokinesis affected only rolling dice, but could not be measured as a force acting on a stationary die on a sensitive scale. Psychokinesis seemed to act only where chance processes were involved. This suggested that psychokinesis could not be considered as a force, comparable to electric or magnetic forces.²³⁸

This is, I believe, an important clue to the nature of psi phenomena, which I will come back to later. Nevertheless, it is also frequently quoted by sceptics to defend their ignoring the experimental data. They feel frustrated that parapsychologists cannot provide massive public demonstrations of telekinesis, and feel that this must be because the phenomenon is unreal. This is not, however, an appropriate response. The statistical data are, in fact, very robust and reliable, and it just has to be accepted that this elusiveness is one of the characteristics of psi phenomena.

Schmidt has, in fact, articulated this elusiveness by proposing that any given instance of telekinesis will respect the laws of physics, and will merge in with the random noise. This is his “Weak Violation Hypothesis”:

Laboratory experiments suggest that [telekinesis] might violate the conventional laws of physics only in the weak sense, in that only the outcome of chance processes is affected whereas the non-statistical laws of physics like the conservation laws for energy, momentum, symmetry, etc., are upheld.²³⁸

There is, I think, an important element of truth in this, but unfortunately the distinction between ‘statistical’ laws and ‘conventional’ laws is not as clear-cut as Schmidt’s hypothesis implies. In fact, what we take to be classical laws of physics at the large scale of everyday objects are really statistical was when analysed into the microscopic level. For instance, if I place a kettle on the stove, I always find that it gets hotter and eventually the water boils.

That looks like an invariable law of nature. In fact, however, the heat itself is really just the agitated movement of the molecules that make up material substances. When a hot thing (e.g. the hot-plate on the stove) comes into contact with a cold thing (my kettle), the fast-moving molecules in the hot-plate bump and jostle the slow-moving molecules in the kettle, with the result that the kettle molecules eventually become as agitated as those in the hot-plate: we describe this as heat ‘flowing’ from the one object to the other. Since the movements of molecules are quite random, however, there is a possibility (albeit exceedingly remote) that the molecules might interact in such a way that the heat does not flow at all. We would then have the seemingly miraculous observation that the hot-plate failed to pass on its heat. Yet, this eventuality would not genuinely violate physics at all. The chances of this happening are so slim that we would have to wait for many times the duration of the universe to stand a good chance of observing it. Therefore, if it were to happen not just once but repeatedly, then we would be in the somewhat grey area of a phenomenon that complied with the strict laws of physics but nonetheless violated the statistical expectations to such a degree that we would find it hard not to think of it as a violation of classical physics.

We may use the term ‘thermodynamic telekinesis’ to refer to a process in which the random movements of molecules are manipulated by telekinesis so as to cause a flow of heat on a macroscopic scale. There is some evidence for this, although I do not know of any rigorous laboratory studies supporting it. For instance, Tyrrell, in his 1943 monograph on apparitions, noted the well-known and widespread anecdotal reports of coldness:

Another characteristic of apparitions, not invariable but fairly frequent, is that the percipients experience a feeling of cold....[T]he consensus of statements about them further endorses the truth of the accounts. It will be sufficient to give a string of extracts from cases on this point. ‘I ... felt myself growing perfectly cold.’ The experience was like ‘a jug of cold water poured on the nape of my neck.’ ‘As if the blood was like ice in my veins.³⁰⁸

The suggestion here is that thermal energy is removed by the means described above, and becomes available for other purposes, such as the poltergeist phenomena of sounds and thrown objects.

This hypothesis relies on the well-established fact that different forms of physical energy are inter-convertible: thermal energy is really the kinetic energy of molecules, and there is no fundamental reason why it could not be concentrated into an impulse of kinetic energy applied to a household object, causing it to fly across the room. Likewise, the energy could be used to make sudden, tiny vibrations of large bodies such as walls and roofs, thereby generating sounds such as bangs.

Schmidt makes the following very interesting point, which has implications beyond what I think he was aware of:

If our world were governed by classical physics, with the motion of all atoms ruled by deterministic laws, then an element of randomness, and with it psychic effects, might enter only through the statistical initial conditions.²³⁸

Most of the universe's initial conditions have not yet been revealed to us. A great many, perhaps even the majority, of the dynamical process in the physical world, especially those involving fluids, are 'chaotic' in the strictly defined mathematical sense that their macroscopic behaviour is sensitive to arbitrarily small changes in initial conditions. The atmosphere is the *locus classicus* of chaotic systems. Even if the universe, including the atmosphere, were completely deterministic and therefore every day's weather was determined in advance at the time of the Big Bang, we would still not be able to predict it, because however accurate and detailed our measurements of the atmosphere, there would almost certainly be variations in the initial conditions that are smaller than the resolution of our measurements, but which nonetheless have an important effect on the weather.

Now, suppose that a psychic power could, in some sense, go back in physical time and change those unobserved initial conditions. It could thereby produce a telekinetic effect in the present, and yet would violate no law of physics, since the initial conditions had, *ex hypothesi*, not yet been observed. How can we coherently formulate the notion of changing the past? We will discuss this in the Berkeleyan model of psi, below.

3.4.2 Macro-telekinesis

Laboratory studies have had very little success in macro-telekinesis, which is the moving objects that are large enough to be seen by

the naked eye, by distances that are also large enough to be seen — by means of mental intention. Indeed, the empirical evidence for this phenomenon is so skimpy, then Dean Radin omitted the topic entirely from his book, **THE CONSCIOUS UNIVERSE**.

The suggested explanation is that, when the mind carries out telekinesis, it can generate only very small quantities of energy. To move a large object such as a glass of water, requires just too much power.

I feel very uncomfortable with this explanation. For, it implies that the process of telekinesis involves adding energy to an object, in violation of the law of conservation of energy — which, although conceivable, is massively implausible. A preferable model would be one in which the telekinetic mind does not shift quantities of energy around, but merely modifies the probabilities of nondeterministic events.

Now, if we are considering only events that are nondeterministic within the framework of physics, then we have to consider quantum-mechanical events. In this case, the implication would be that telekinesis can operate only on tiny events at the quantum level.

In fact, the data that have been reported suggest that telekinesis can operate on events that are small but classical. If we look at this from within the framework of physics, this is very hard to understand, because such events will be deterministic, and so the telekinetic action seems to violate the conservation of energy.

If, however, we look at it from the a Berkeleian perspective, we can see that a macroscopic event that is affected by small, unobserved initial conditions, will be indeterminate until it is observed, and there is therefore scope for the telekinetic mind to affect it. On this model, there should be no upper bound for the mass of the objects that can be moved by telekinesis. We can, in fact, envisage a huge apparatus in which a massive robot will throw dice, each weighing a ton, but the dice will remain unobserved by any conscious mind until a large run has been compiled. The dice score in this experiment should be as amenable to telekinetic influence as any other random process.

3.5 How the mind accesses psi

3.5.1 Subliminal knowledge

In general, sensory impressions from remote viewing do not present themselves immediately in the consciousness, as ordinary perceptions do. Instead, they seem to arrive below the threshold, or limen, of the conscious mind and to need to be extracted deliberately and consciously. The conscious mind may, indeed, be quite oblivious of the existence of the impressions until they are revealed by the exercise of an access procedure. For instance, the remote viewer may visualise travelling downward in an elevator or on a stairway, in order to enter into a deep state of mental relaxation; and then imagine looking into the sea, or at a television set, or into a mist, and seeing the target; or may allow her hand freely to draw or write a response.

Puthoff and Swann and the others at SRI began to notice now that remote-viewing data resembled the kinds of data generated by test subjects who had been exposed to subliminal stimuli. They did freehand, autonomous sketches that they often were unable to label accurately. They reported very rough sense perceptions and emotions such as ‘red’ or ‘makes me sad’. They gave out error-prone high-level descriptions — ‘like a gold fleur-de-lis’ — as their minds desperately tried to make analytical sense of the subliminally faint stimulus.²⁵⁵

Conventional subliminal stimuli are presented very quickly, so that the conscious mind does not have time to gain awareness of them, but the information nevertheless enters into some unconscious processing. There is no reason to think that psi information is subliminal because it is presented for only a short time. Rather, it may be subliminal because our brains simply have not been wired to make it available to conscious awareness.

There is also a close similarity here to the cases of ‘blindsight’ described by Professor Weiskrantz and other neuroscientists. In this well-established phenomenon, the subject has accidentally received some damage to her optical cortex, which is the part of the brain that processes vision. Such damage may lead to the subject’s being blind in at least part of the visual field. In these cases, the eyeballs themselves are undamaged and still fully working, still

receiving and processing optical images, and conveying information as normal down the optic nerve to the brain. In the brain itself, though, the wherewithal to register the optical information as a conscious visual experience is missing, at least from some parts of the field. So the subject reports she is blind and claims to have no knowledge of whatever may be visible in the affected parts of the field. Nevertheless, information from those parts still reaches the brain and is available unconsciously. Now, in order for the conscious mind to drag that information across the liminal boundary from unconscious to conscious, it must perform some mental action to invoke it. In Weiskrantz's research, he found that asking the subject to 'guess' what was to be seen in the parts of the visual field where she was consciously blind enabled her to access that unconscious information. That is not to say that subjects could learn to 'see' in their blind areas, but that they could learn to 'know' without seeing what was there.

The similarity between remote viewing and blindsight lies in the fact that the subject must make a deliberate mental effort to gain access to knowledge that is not automatically presented in the usual stream of conscious experience. One difference is that, in blindsight, the information would normally be presented straight away in the individual's stream of visual experiences, but brain damage prevents this from happening. Whereas, in remote viewing, it may be that the relevant brain circuitry has never existed.

Once we realise that that is what is happening, then a lot of divinatory techniques begin to make sense. For example, gazing into a flame or into tea-leaves, provides a randomly fluctuating sensory input in which the conscious mind can 'guess' at unconscious knowledge, which might have come from a psi source. Traditional crystal balls (as opposed to the glass balls that are sold in shops under the title of 'crystal balls') have a misty opaqueness that varies subtly as the light changes or as the viewer moves her eyes. Again, like the flame, it offers a chaotic sensory input onto which the subconscious can project its own coherent pictures. An innate drive to make sense of what we perceive compels the mind automatically to assemble random impressions into a meaningful whole. It does so by interpreting those impressions with reference to knowledge or images that it already internally possesses.

The crystal ball or flame does not, in itself, confer any psychic powers, of course: it is like a mirror in which the mind can see reflected its own unconscious knowledge. Methods such as these are often mocked by sceptics on the grounds that, say, a mere crystal ball is just an ordinary material object and cannot plausibly give access to psi channels. But that is to miss the essential point that these tools are just props, and that the psi channels themselves are in the mind.

In parapsychological laboratories, the principle of these traditional methods has been engineered into the ganzfeld method. The subject has an opaque white hemisphere strapped over each eye, and wears ear-phones playing ‘white noise’, an artificial sound that has been completely scrambled to remove all structure. In these conditions, subjects have successfully been able to participate in experiments in telepathy.

We can extend this analysis to methods, such as the reading of Tarot cards or I Ching sticks, which assist the psi process at a higher level of cognition. By this, I mean that instead of the subconscious mind projecting a sensory image directly onto a randomised perceptual field, it projects it onto a highly structured pattern that has been randomised in a specific dimension. The tarot, for example, comprises 78 well-defined cards that are shuffled into a random order and orientation, and a random sample of, say, twelve cards is pulled out and placed in a predefined layout. An interpretation of those laid-out cards is only nominally guided by the canonical meanings of the cards themselves: expert tarot readings are done intuitively rather than mechanically. Just as with the candle flame, or the crystal ball, or the tea-leaves — the mind’s own knowledge or imagery is projected out into the cards. That inner knowledge may originate from conventional sources, or from psi channels.

3.5.2 Left-brain disablement

A consistent finding in the SRI research, and elsewhere, is that the remote viewer cannot recognise linguistic information that is presented in the remote imagery. For instance, Schnabel reports:

... counting, or reading numbers or letters during remote viewing, was as hard as it was in dreams; it seemed to pull the mind out of its groove. Whenever McMoneagle tried to

*count like that, he would become lost after a few seconds.*²⁴⁶

This seems to be a near-universal rule, but there were exceptions, as Schnabel later notes:

*One of the most promising things about [Price] was that he seemed able to pick up not only visual and other sensory data, but also alphanumeric data, words and numbers. Swann, by contrast, would be able to pull accurate alphanumeric information from a target only two or three times in his life, and always in visual rather than verbal form, not recognising at first that the shapes he drew belonged to an alphabet.*²⁵¹

This is a common experience in dreams and guided imagery. Time and again, people receive some important message, but then find that it completely eludes recall.

The processing of language is localised in the left hemisphere of the brain, while the right hemisphere focuses more on emotions. This has been dramatically revealed in ‘split-brain’ patients, in whom the nerve fibres that connect the two hemispheres have been surgically cut. (This is often done as a last-resort remedy for epilepsy, as it stops the electrical disturbance that causes epilepsy from spread through the whole brain.) By simple but ingenious experiments, it is possible to communicate independently with the two separated hemispheres, and it is found that the left hemisphere can understand and use language just as well as the whole brain could before the operation, but the right hemisphere, in most patients, can neither understand nor use language at all.

It might seem, therefore, that in remote viewing the left hemisphere is disengaged from the stream of consciousness.

The process is not that simple, though. For, throughout the remote-viewing session, the viewer gets oral instructions from the supervisor and gives oral reports on what she is seeing or experiencing. That is all going on in the left hemisphere. A possible clue is the fact that the remote viewers generally remain conscious of their bodily surroundings even while they are viewing the remote site. Perhaps we can conceive of the viewer’s mind as comprising two streams of consciousness: one based in the right hemisphere that does the remote viewing but has no linguistic ability; and the other based in the left hemisphere that maintains contact with the bodily location and has full verbal power, which it uses to report

on experiences that are furnished by the right hemisphere.

Robert Monroe used a technique called 'hemi-sync', which was adopted by the DIA remote viewers, in which controlled stimulation is used to synchronise the electrical waves of the two hemispheres. We might speculate that this is necessary for the left hemisphere's stream of consciousness to have access to the right hemisphere's imagery, and indeed for the right hemisphere to receive instructions from the left hemisphere.

But, if the right hemisphere hands over its remotely viewed imagery to the left hemisphere, surely the left hemisphere can just read whatever writing happens to be in the images? In fact, it cannot do so because recognising letters is done as part of the 'pre-processing' of the visual information. By the time the visual imagery reaches the consciousness of the left hemisphere, it has already been subjected to the automatic and pre-processing that enables us to see the world as an intelligible assembly of objects such as cars and buildings rather than as merely an array of coloured pixels. One of the functions carried out as part of the pre-processing to detect special features such linguistic items, faces, tools, and so on. You can observe this process in yourself when you recognise familiar patterns in blurred or scrambled pictures. What the left hemisphere may get is not the raw data, but something packaged into recognised objects and features. This would explain how Swann found in his imagery shapes that, when he reflected on them, he discovered that they were letters. For the shapes were there, but had not been pre-processed into recognised letters, so he had consciously and deliberately to decipher them.

We can only guess why Mr Price could so easily read alphanumerics in remote viewing. It is worth noting, however, that people do vary in respect of the lateralisation of brain function. A small proportion of individuals have, in their right hemispheres, functions that would normally be expected in the left hemisphere. The most visible instance of this is left-handedness, but psychological experiments have shown the presence of linguistic powers in some individuals' right hemispheres. Our guesses about Mr Price might, therefore, include the possibility that his right hemisphere possessed language skills.

While we are making guesses, we might be tempted to speculate on the traditional association of left-handedness with occult

powers. This is largely ignored in our scientific and egalitarian times, but in former centuries was taken seriously. For instance, it is reflected in the ancient Roman use of “sinister” (which literally means “left-hand” as opposed to “dexter”, which means “right-hand”) to signify ominousness. It is a usage that persists in the English language. We might, for instance, speculate that people who exhibit left-handedness also possess a linguistic ability in the right hemisphere that enables them to verbalise psi experiences. But this is just guesswork.

3.5.3 Accuracy through repetition

Despite coaching to improve psychic performance, remote viewing, telepathy, and other forms of psi cognition remain unreliable. The success rates remain at levels that lie above chance to a degree that is statistically significant, but rarely practically useful. Part of the problem here is that the psychic cannot tell how reliable any given psi signal is. Contrast this with, say, radio transmission: when the radio signal is broken up, you can tell just by listening to it that you are not receiving the broadcast. Whereas, a remote viewer will, instead, get plausible images and ideas from his own unconscious imagination, and have no means of ascertaining which images originate from psi sources and which from the imagination.

Sometimes, the ‘noise’ (or ‘overlay’ in SRI’s terminology) can be differentiated because it is more vivid, but this does not seem to have been foolproof.

An engineering solution to the problem is to repeat the psi operation until the information stabilises with sufficient accuracy. This is an easy principle, but it is hard to apply in practical situations.

Schnabel reports the Czech scientist Milan Ryzl, who tried to do this in the mid-1960s:

A 50-bit target sequence of ones and zeroes was generated randomly. Ryzl, who did not know the sequence, then asked the psychic Pavel Stepanek to repeatedly guess each bit in the sequence, going back and forth (in an order unknown to Stepanek) through the sequence again and again. Ryzl combined Stepanek’s guesses using a majority-vote error-correcting protocol, a technique like those used by telecommunications specialists to clean up signals on noisy trans-

mission lines. After several days and twenty thousand guesses, Ryzl was confident that Stepanek had got the entire 50-bit sequence right. And he had. Of course, with such a lengthy error-correcting protocol, the effective bit-rate for the experiment turned out to be only about 0.0003 bps (one word per day).²⁴⁸

Repeating the same transmission many times will obviously tire both the sender and receiver, and will be subject to the law of diminishing returns.

3.5.4 Inadvertent PK

Does anything observable happen at the target, when it is being remote viewed? The dearth of observations of any such side-effects suggests not. It seems, rather, that a remote viewer can examine a particular location without anything unusual being perceptible or measurable at that location. Schnabel reports only one exception to this. Ingo Swann was asked to remote-view a magnet

In the very first psi experiment [Puthoff] had run while at SRI, he had asked Ingo Swann to affect the output of the Stanford magnetometer, and Swann had seemed to do so only when he was trying to remote-view its insides.²⁵⁴

There is nothing in the Berkeleian theory that I shall be putting forward that would suggest that remote viewing should produce any physical side-effects at the remote site. Perhaps it is just a matter of the remote viewer's volition not being precise enough. Of course, the only way to test this would be to get a large body of empirical measurements of the physical conditions at the remote site.

3.6 Psi versus physics

3.6.1 Evidence against physical mechanisms

Until recently, the most popular attempt at explaining psi phenomena such as telepathy and remote viewing was to suppose that the brain transmits and receives electromagnetic energy in which thoughts, emotions, and information about remote locations can be encoded or represented in some way. For example, in certain states the brain's electrical activity oscillates at 40 cycles per second, so it has been suggested that electromagnetic transmissions at 40 Hertz could be used. Graff notes that some theorists,

including Soviet ESP researcher I.M. Kogan, had proposed that low-frequency brain waves have a rôle in psi.¹⁰⁸

There are several fundamental theoretical difficulties with this idea, but there is also a basic empirical question of whether psi data transfer is affected by distance and intervening material barriers: these are unavoidable properties of electromagnetic transmissions, and would therefore be apparent in psi phenomena if they were electromagnetic in nature.

From any source, electromagnetic energy radiates outwards in spherical waves. (For simplicity, I will refer to them as waves of energy, but in the light of quantum mechanics they could also be thought of as waves of probability for detecting photons.) Inevitably, therefore, the strength of the signal diminishes with the distance from the source. In fact, it follows by elementary geometry that the strength of the signal will reduce according to the reciprocal of the square of the distance. This is referred to as the ‘inverse-square law’. For instance, if you double the distance, then the signal is reduced to a quarter of what it was. (To see this, just consider that, in the absence of any obstacles, the electromagnetic energy will radiate outwards from a point source as a perfect circle, and the energy will be distributed uniformly over that sphere. As the sphere grows bigger, the energy is more thinly spread out. In fact, you will recall from high-school mathematics that the area of a sphere is proportional to the square of its radius, so the electromagnetic signal will reduce in the same ratio.)

So, if psi information were carried by electromagnetic waves, then we should be able to detect some attenuation or loss of quality when the psi is operated over very long distances. In fact, no such attenuation is observed. Jessica Utts reports in her review of the SRI and SAIC research in remote viewing, involving 26,000 individual trials on 227 subjects:

*Distance between the target and the subject does not seem to impact the quality of the remote viewing.*³¹⁰

In fact, as Schnabel reports, no effect of distance is found even in
*... long-distance outbound remote-viewing experiments, spanning thousands of miles.*²⁵²

In addition, one would expect electromagnetic psi to be attenuated when passing through large amounts of matter. Again, no such attenuation was observed. Utts also reported:

Electromagnetic shielding does not appear to inhibit performance.³¹⁰

According to Schnabel, some *ad hoc* experiments were carried out that involved transmitting to and from a submarine:

At the submersible's depth during the experiments, the sea water should have reduced such ELF [extremely low frequency] waves, at the expected frequencies (which were supposed to be in the same range as brain-wave frequencies), to less than 1 per cent of their strength above the ocean. Had the ELF hypothesis been correct, Swann and Hammid should have noticed a major reduction in their remote-viewing accuracy. But their sensations were as quick and as accurate as any they had conducted at short ranges on land.²⁵⁰

Graff refers to Stargate experiments, involving successful remote viewing with a beacon person 600 miles away.¹⁰⁸ He also records that the NASA astronaut Edgar Mitchell carried out a telepathy experiment from the Apollo 14 spacecraft:

his records and the impressions of the four participants were provided for analysis to Dr Rhine's laboratory, which is now the Rhine Research Center in Durham, North Carolina. Dr Karlis Osis at the American Society for Psychical Research in New York City performed additional analysis. Results were statistically significant, suggesting that a psi link had occurred.¹¹³

Furthermore, electromagnetic psi transmissions should be wiped out by conductive metal barriers but, as Schnabel notes, this is not the observed behaviour:

To maintain its sensitivity, [the magnetometer] had to keep from its inner sanctum all the electromagnetic noise of civilisation, with barriers that included copper, aluminium, a special metal that confined magnetic fields, and a super-cooled superconductor. ... After a while [Swann] declared that he would first try to see clairvoyantly inside the magnetometer, to get a better psychic grip. As he did so, the magnetometer's steady output, printed on a nearby strip chart recorder, suddenly changed. ... And when [Puthoff] and Swann eventually left the lab, the output returned to its baseline value.²⁴⁷

If psi were electromagnetic, then we should also expect strong extraneous radiation to interfere with it. In fact, as Schnabel again reports, no such interference was observed:

... neither proton showers nor X-ray flares nor full-blown geomagnetic storms kept SRI's psychics from their appointed rounds through time and space.²⁵³

In some respects, an even stronger argument against physical explanations is that telecognition can sometimes exhibit what appears to be local intelligence at the remote site. Graff reports remarkable experiments to read pages of closed magazines by telecognition:

My objective was to see if I could describe via psi any of the specific features on the designated page.

This turned out very successful. In another experiment, the target was a card bearing a photograph, contained in a sealed envelope (in a submarine, as it happens). It later transpired that these cards had accidentally been prepared with pictures on both sides. Since the remote viewer was unaware of that fact, his intentionality targeted the card as a whole, rather than just one side, and consequently the telecognition yielded both sides intermixed:

I must have sensed both sides of the target page and my first dream combined my impressions of both of them.¹¹⁶

3.6.2 Psi and relativity theory

Telepathy is often assumed to be instantaneous in delivering experientia to another mind. As far as I am aware, there is no direct evidence of this as nobody has carried out experiments in which the distances were large enough and the timing precise enough to determine the speed at which telepathic exchange is achieved. Telepathy experiments have been conducted from NASA spacecraft, but the distances were not big enough to have provided an easily observable delay in electromagnetic transmissions. So, we do not know for sure whether telepathy is instantaneous, or whether it occurs at the speed of light, or whether it occurs at sub-luminal speeds (or, indeed, whether it occurs as some finite supra-luminal speed).

Nevertheless, according to the Berkeleyan theory (which will be detailed in a later chapter), telepathy occurs in a non-spatial domain, and we should therefore expect it to occur instantaneously.

That is to say, since all minds are interpenetrating in the mental universe, there is no distance between minds, and therefore no time at all is required for experientia to reach one from another. Unfortunately, this conflicts with the well-established impossibility of instantly transmitting information through physical space. So, we have to address the question of how non-spatial telepathic communication can be reconciled with what we know from the Special Theory of Relativity published in 1905 by Albert Einstein (1879-1955).

Put briefly, the problem is that simultaneity is not a universal absolute throughout the universe, as one would intuitively expect it to be, and as Newton explicitly stated it to be. Instead, it is relative to the ‘inertial frame of reference’ in which you are located. Events that are simultaneous for you will not be simultaneous for someone else who is moving in relation to you. So, what does it mean to say that telepathy transmits experientia simultaneously?

Of course, for the speeds at which our present-day engineering allows us to travel, the difference is negligible for all practicable purposes. Likewise for the other relativistic effects, such as time dilation and bodily elongation. At extremely high speeds, namely those near to the speed of light, the difference can be large. In view of this, you might be tempted to say that we do not need to consider this problem (of simultaneity in telepathy) for many years to come, as nobody is going to be conducting telepathy experiments at relativistic speeds for many decades, or even centuries, to come. That, however, would be a misjudgement. For the relativity of simultaneity is really a fundamental feature of the physical universe, and if telepathy is supposed to be instantaneous over arbitrarily large distances, then we have a fundamental problem in understanding the nature of telepathy and how it engages with the physical world.

It is not appropriate here to give an exposition of relativity theory. What I will try to do, though, is to describe enough of it for you to see why simultaneity is relativised. Then I will propose a simple but slightly surprising solution to the problem of the speed of telepathy.

The theory of relativity is built on a simple but fundamental piece of experimental data. This key datum is that the speed of light (in a vacuum) is constant irrespective of the direction and

speed at which the source of the light and the observer are travelling in relation to each other. If you think about this carefully (as Einstein did at the turn of the century), you will find it deeply puzzling. That the speed of light is indeed a constant has been established beyond any reasonable doubt by precise measurements duplicated by many researchers. This fact has forced physicists to revise the intuitive notions of time and space that humankind has always taken to be self-evident, and which were codified in mathematical formulae by Sir Isaac Newton.

If you are having any difficulty in being puzzled by the constancy of the speed of light, then let us briefly consider the speed of things other than light waves, as an example. Suppose someone fires a missile across a desert test range at 500 m.p.h. Suppose that you are now travelling alongside it in a jet-propelled vehicle at 200 m.p.h. (assuming that you set off slightly earlier), and you measure the speed of the missile. Well, you will observe it to be travelling at only $(500 - 200) = 300$ m.p.h. relative to you, even though its ground speed is 500 m.p.h. If your vehicle had been travelling at 400 m.p.h. and again you measured the speed of the missile, you would then have found that it is travelling at only $(500 - 400) = 100$ m.p.h. relative to you. This much is obvious. And, finally, if your vehicle travelled at 500 m.p.h., the same speed as the missile, then the missile would seem stationary alongside you. Now, suppose that instead of firing a missile, we fire a laser beam. The ground speed is 186,000 m.p.h., but what will the speed be when we observe it from our fast-moving vehicle? By analogy with the missile, we should expect the observed speed of light to be reduced by the speed of our own vehicle. In fact, it is not. No matter how fast our vehicle is, we still observe the laser light to be travelling at the constant speed of 186,000 relative to ourselves. This remains true even if we have an ultra-fast vehicle that can attain speeds approaching the speed of light itself. Now, you should be puzzled.

This is impossible from the perspective of Newtonian physics, and from our intuitive notion of time and space. Surely, if the light is travelling at 186,000 m.p.h. in relation to the ground, and you are travelling alongside it at 185,000 m.p.h., then you must observe the light crawling along relative to you at a mere 1 m.p.h.? No, the well-established fact is that, even in your ultra-

fast vehicle, you will still observe the light travelling at 186,000 m.p.h. relative to your vehicle.

It should be obvious that, to understand how this can possibly be, we must make a radical and massively counter-intuitive change to our notion of time and space. That is what relativity theory does. Here, however, we do not need to go into the whole of relativity theory, so I am not going to explain how relativity theory predicts the constant speed of light. You could read Russell's ABC OF RELATIVITY to get a fuller picture. Here, I want to isolate just one aspect of the theory, which is directly relevant to telepathy, namely simultaneity.

Let us now move from the desert test range into deep space, because our next experiment is rather more expansive. Consider an immensely long tubular spacecraft, a mothership, travelling at a steady speed through space. Suppose it is going past an asteroid at a quarter of the speed of light. In your mind, you can imagine the STAR WARS sound effects, if it helps to make your imagination seem more real (even though, paradoxically, there is no sound in space). At each end of the mothership, on the inside, is a flashing light, and the experimenters on board the mothership have synchronised these two lights so that the light from both lamps reaches an observer, who is standing in the middle of the mothership, at the same time. Let's call these lamps F and R because they are at the front and rear of the mothership as seen from the asteroid. Now, the onboard observer knows that light always travels at the same speed, and she knows that she is standing in the exact centre of the long spacecraft, so she confidently infers that the two light flashes that arrive together must have left their respective lamps at the same instant. That is, we have a clear definition of simultaneity with respect to the 'inertial frame of reference' of the spacecraft. For instance, if the spacecraft is 100 miles long, then the observer can conclude that both lamps flashed at the same time, just under a second ago. Now, we are supposing that this spacecraft is sweeping past a small asteroid on which another observer is securely placed with his own measuring equipment, with the spacecraft travelling from East to West. Of course, he observes the two pulses of light arriving at the central observer together, but he does not observe them leaving their respective lamps at the front and rear of the spacecraft at the

same time. Suppose that the centre of the spacecraft, where the onboard observer sits, passes the asteroid at precisely the moment when the two flashes arrive. Where were those two flashes a second ago? Well, the front flash would have been at a position in space fifty miles to the West, and the rear flash would have been at a position fifty miles to the East. Since the spacecraft is a hundred miles long, we can say that, if it were stationary, then the flashes would have originated at the rear and front lamps at the same time. But the spacecraft itself is travelling at a quarter of the speed of light, so one second ago, the whole spacecraft would have been about twelve miles to the East of its present position (as twelve is roughly a quarter of fifty). So, we can infer that the flashes cannot have been made at the same time. In fact, the front flash must have been made less than one second ago, and the rear flash must have been made more than one second ago. We might say that the front flash has a head start and the back flash has to catch up. Thus we see that two events that were simultaneous in the onboard frame of reference are not simultaneous from the asteroid's frame of reference.

It gets worse. A small patrol spacecraft flies past on the other side of the asteroid, in the same direction as the mothership, but at twice the speed. An observer on this patrol craft will see the mothership travelling from West to East at a quarter of the speed of light. Following precisely the same reasoning as before, we can conclude that this observer will see the F lamp at the front flashing first, and then the R light at the rear: from the patrol craft's perspective, the R light has a head start and the F light has to catch up, which is the opposite of what the asteroid observer sees. Hence not only is simultaneity relativised, but the ordering of events is relativised, too.

So, how can telepathy be reconciled with the theory of relativity? Well, let us expand the thought-experiment to include telepathic signals as well as light signals.

Suppose that, standing beside each lamp is an assistant who, when she switches the lamp on, broadcasts a telepathic message. The onboard observer would expect to receive the two telepathic messages simultaneously, one second before the two flashes of light arrive. The asteroid observer would expect to receive the telepathic message from assistant R first, and then the telepathic sig-

nal from assistant F. Conversely, the observer on the patrol craft would expect the telepathic messages to arrive in the reverse order. This already seems paradoxical, but it becomes genuinely paradoxical if we add the following rule. When the asteroid observer receives the assistant R's telepathic message, he himself then sends a telepathic signal to the assistant F, ordering her not to switch on the front lamp. Likewise, when the patrol craft observer receives assistant F's telepathic message, he sends a telepathic message to assistant R, telling her not to switch on the rear lamp. We thus have a contradiction. According the asteroid's frame of reference, the exchange of telepathic signals will result in R flashing but not F, but according to the patrol craft's frame of reference, it is F that flashes, but not R.

Some people have taken this line of thought to be a very strong argument against even the logical possibility of faster-than-light transmission. Hence, it is supposed to be a knock-down argument against instantaneous telepathy, and thereby implying that if telepathy does exist then its medium of transmission must just be a novel physical phenomenon.

There is, however, a simple solution. Bear in mind that, according to the Berkeleian metaphysic, mental time is not the same thing as physical time, even though they generally go hand in hand. We therefore have some latitude in modelling the points of connection of physical and mental time. Therefore, let us suppose that the times at which telepathic messages are sent and received are displaced by intervals that will precisely nullify the effect of non-simultaneity. That is, let us suppose that when you send a telepathic message to someone who is travelling toward you, it arrives in the physical past and when you send one to someone travelling away from you, it arrives in the physical future. What I mean by arriving "in the physical past" is that it will arrive at a point in the recipient's history that is in the past according to the sender's frame of reference. Conversely, if you get a telepathic message from a sender travelling toward you, then it will have been sent at a time in your past; and if the sender is travelling away from you, it will have been sent at a time in your future. The amounts of those two time displacements are diminished to zero as the sender and recipient come to rest in relation to each other. So, if the recipients are themselves in the same frame of

reference, then they will get the telepathic messages at the same time, as reckoned by their frame of reference. (For instance, the two recipients could signal each other as soon as they receive the telepathic message.)

How does this help resolve the contradiction that we had derived from the theory of relativity? Well, recall that assistant R broadcasts a telepathic message to the asteroid observer: but, according to our new hypothesis, since the sender (assistant R) is moving towards the recipient (the asteroid observer), the message is received at a time that is (in the asteroid observer's frame of reference) after the message was sent. At the same time, the asteroid observer will also get a telepathic signal from F, even though this time is before the time at which F sends her telepathic signal (again, in the asteroid observer's frame of reference). There is now no use in the asteroid observer's sending a telepathic message to F, to telling her not switch on her lamp, for he knows that it will arrive at a time in his future, at a point after she has already switched it on.

The observer on the patrol craft is in a similar position, but vice versa. So, the telepathic messages do not, in effect, reach their recipients in time to stop the lamps being switched on. Hence all three observers will agree on the events that happened.

3.7 Psi in time: precognition and retrokinesis

So far, I have largely discussed 'synchronic' psi phenomena: telepathy, telecognition, and telekinesis taking place in real time. The subject gets information about the contents of someone else's mind, or about the outside world, as it is at that moment in time. In some cases, information is obtained about the past, as if the telecognition were actually reaching back through time and engaging with processes as they were happening in the past. This is a form of 'diachronic' psi, but one that does not trouble us very much. We have also seen that telepathy and telecognition over long distances where relativity theory comes into play, must involve communicating with the past and the future. But that relativistic diachronicity occurs in such an attenuated way that it does not disturb us too much. And, from a practical perspective, it does not matter because we do not ordinarily travel over such vast distances or at such enormous speeds.

Now, however, I want to consider two extreme kinds of dia-chronic psi phenomena: ‘precognition’, in which the subject obtains knowledge about the future; and ‘retrokinesis’, in which the subject changes events in the past. We all, I think, feel a strong intuition that these are genuinely impossible: no matter how open-minded we may be about telepathy, telecognition, and telekinesis, we cannot surely be expected to swallow precognition and retrokinesis. I shall argue below that precognition is indeed impossible, but that retrokinesis is not only possible but has been experimentally demonstrated.

3.7.1 Precognition

Before examining the apparent psi phenomenon of precognition, we need to look carefully at the very idea of predicting the future. Other psi phenomena, such as remote sensing, violate what we know of physical laws, but this need not worry us overmuch, as it entails only that physical science needs to be augmented or even replaced by some new scientific principles. Some of the claims that are made for precognition, however, are more deeply problematic. Put simply, since the future is not yet determined, nobody can cognise it. The following discussion expands on this remark.

To a limited extent, it is possible to predict the future. For example, if I hold a pen about four feet off the floor and let go of it, then I can predict that it will hit the floor a fraction of a second later. This is because I have a stable, deterministic model of things falling under the influence of gravity. The same principle holds on a larger scale: meteorologists can predict the weather, very accurately over the next hour, less accurately over the coming hours, and even less so over the coming days. Likewise, with other natural phenomena. In some cases, the predictions are only statistical: I cannot predict which way a coin will land when I toss it, but I can predict that the proportions of heads and tails will approach 50% as the number of tosses grows. Likewise, statistical aspects of voluntary human behaviour can, in sufficiently constrained circumstances, be predicted. For instance, the movement of road traffic can be modelled successfully, even though each motorist has free will, and this is because most motorists act rationally in accordance with known motives.

In practical terms, the limits of prediction are drawn by com-

plexity on the one hand and free will on the other. We cannot predict the precise weather conditions in a year's time because we do not practically get enough detailed information about the present state of the atmosphere and the many factors that influence it, and we would not have enough computing resources to do the modelling even if we did have the data. On the other hand, I cannot predict what a person will voluntarily say or do even in the next few minutes because she is free to choose what to say or do.

Those are the limits as seen from a practical perspective. The first of these, however, can ultimately be whittled down to deeper limits. Even if we had indefinitely large resources for monitoring and modelling the atmosphere, it is believed that we still could not predict the weather in a year's time. This is because there is a property of sensitive systems that is known by the technical mathematical term of 'chaos'. Mathematics has a tradition of hijacking terms from everyday speech and loading them with precise, technical definitions. The word "chaos" is an instance of this: in mundane usage, it means a condition of complete disorder; but in mathematical usage, it means a condition of something's being so highly sensitive to changes in the surroundings that its future behaviour cannot be predicted, no matter how much information we acquire about its present state and about the influences acting on it. Something that is 'chaotic' in the mathematical sense may be very well ordered, and may even be completely deterministic, and therefore not really 'chaotic' in the mundane sense: nevertheless it may be inherently unpredictable.

The notion of 'chaos' will become clearer with some examples. First, consider firing a missile and predicting where it will land. If we know its mass, its initial speed, and its initial direction, then we can easily calculate its trajectory. There will, of course, be a certain element of error: the prediction will give the missile's landing plus or minus a few kilometres, say. To get a more accurate prediction, we can measure the missile's initial conditions more accurately; and we may have to measure the wind speed, and other atmospheric conditions, and so on. Here, however, is the essential point: for any given accuracy of the predicted landing site, we can ascertain how accurately we need to measure the influences that are acting on the missile, in order to be able make

a prediction to the desired degree of accuracy. This defines what we mean by a ‘predictable’ system: we can, in principle, predict its behaviour to any arbitrary degree of accuracy.

Chaotic systems, in contrast, do not have this property. In a chaotic system, the smallest variation in the initial conditions, or in other influences acting on the system, can produce massive changes in behaviour. This is because small influences are, in effect, amplified and give rise to big effects. So, no matter how precisely we measure the initial conditions and all the influences, there may well be fluctuations smaller than our most precise measurements, which will nonetheless have a major effect on the system’s subsequently behaviour. The archetypal allusion in chaos theory is that a butterfly flapping its wings at one point on the globe can cause a hurricane somewhere else.

It is believed that the Earth’s atmosphere is a chaotic system in this sense: there is ultimately a deep limit to the predictability of the weather.

It is important to observe that the unpredictability of chaotic systems is a mathematical principle, not a physical one. Even if we were to augment or supplant the laws of physics with laws governing psychic phenomena, it would remain true that a chaotic system is unpredictable. This imposes an irremovable limitation on precognition.

The other irremovable limitation is, as I mentioned earlier, free will. Nobody can predict what you are voluntarily going to choose to say or do. There is, of course, the question of how free will meshes with the determinism of the physical brain, but it is not appropriate to go into that here — except to mention that the most plausible account of how free will is manifested in the physical world is that it is through non-deterministic quantum mechanical events in the brain cells, which are amplified into behaviour through the ‘chaotic’ behaviour of the brain. In any case, even if one did not wish to accept the reality of free will, the brain’s property of being chaotic will suffice to make it unpredictable.

Proponents of precognition often suggest that the future has, in some sense, already happened: that the whole of time is laid out in a fourth dimension, and we are travelling along it from what we call the ‘past’ to what we call the ‘future’. This is nonsense. In fact, it is intrinsic to our very notion of time that the

future is open. Hence the future cannot be cognised, and the term ‘precognition’ is at best a misnomer. The best that can be done is to observe the state of things now, and predict from them what will happen in the future, subject to the two fundamental limits discussed above, namely mathematical chaos and free will.

Therefore, one way of understanding the psi phenomenon of so-called precognition is that it is really a process of acquiring information by remote sensing about present circumstances, including people’s intentions, and working forward to envisage the future ramifications. For example, if by remote sensing you picked up on someone else’s intention to assassinate a political figure, then you could make the ‘precognition’ that that figure will be assassinated.

There is, though, another aspect that needs to be factored in to this account. There may be disembodied entities at large with their own intentions, and their own means of putting those intentions into effect. If one were, by remote sensing, to pick up on those intentions, then one could predict future events that are themselves entailed neither by present physical circumstances nor by any human intentions. Again, this might be presented as an apparent precognition.

Schnabel discusses apparent cases of precognition by the SRI remote viewers:

The data suggested that the remote viewers tended to see the probable future rather than the actual future; perhaps this explains why lottery numbers and other low-probability targets were so hard to recognise.²⁵²

A problem with the SRI reports on precognition is that they do not exclude the possibility that the remote viewer is picking up human intentions about the future, rather than the future itself.

Conversely, experiments that are supposed to precognise random events, such as the roll of a die or an electronically generated random number, fail to exclude the possibility that the subject may be using micro-telekinesis to affect the outcome. If the subject says, “I predict that the dice will show such-and-such”, and if it is found that the dice do indeed come up with the stated value significantly more often than would be expected by chance, then that could be either because the subject is foretelling what the value will be, or because the subject is using her intention

(perhaps unconsciously) to force the dice to fall a certain way.

I prefer the latter of those two possibilities, for the following reason. Given that the concept of precognition, in the sense of genuinely cognising the future, seems intrinsically dubious because the future is open, and given that experiments to detect precognition seem intrinsically flawed, I propose to adopt the working hypothesis that the future is not cognisable. On this view, apparent precognition results are best explained as forms of synchronic telecognition, or telekinesis.

3.7.2 Retrokinesis

'Retrokinesis' is the process of changing things in the physical past. (This is notionally a more general than the term 'retro-psychokinesis' that Schmidt introduced in the 1970s, but in practice refers to the same thing. It is not, really, necessary to include the prefix 'tele-' or 'psycho-', for any 'retro-' or backward causality will be non-physical — notwithstanding Henry Stapp's claims that quantum mechanical process can involve causation backwards in time.)

In a series of brilliant experiments starting in the 1970s, Helmut Schmidt demonstrated that psychokinesis works just as well when operating on events that have already occurred before the experiment even began (but which have not yet been observed), as it does when it is applied to events happening in real time.^{237, 240}

These experiments involved an electronic device attached to a Geiger counter, which produced a series of random signals. These signals were then presented to the subject in one of a number of different ways: as discrete clicking sounds heard through stereophonic headphones, randomly played through the left or right headphone speaker; or as loud and quiet clicks played to both ears; or as red and green lights. (These signals were referred to as 'heads' and 'tails' for historical reasons: there was no actual coin-flipping involved. Also for historical reasons, the device is normally referred to as a 'random-number generator' (RNG), as it is thought of as generating random binary numbers 0s and 1s, which are interpreted as 'head' and 'tail' signals. Somewhat quaintly and misleadingly, Schmidt sometimes called it an 'electronic coinflipper'.) For each kind of experiment, the subject is required to will an increase of instances of one signal, say 'heads'.

In line with experiments in psychokinesis that have been carried out elsewhere, before and since Schmidt's work, it was found that the psychokinetic effort produced a few percentage points increase in the frequency of the desired signal.

What is especially interesting about Schmidt's work, however, is that different mechanisms were employed in producing the random signals. Of course, the key component is the Geiger counter, which detects the emission of an electrically charged particle from a piece of radioactive matter. According to well-established physical laws, the timing of these emissions is intrinsically non-deterministic: although nuclear physics can successfully predict the probability of emission, it is silent on when exactly the emission will happen. Thus the output from the Geiger is random in real time — random in the true sense of the word, as opposed to, say, a pre-prepared table of random numbers. Nevertheless, the Geiger output must be processed in order to generate the controlled signal that is presented to the human subject. Schmidt introduced various permutations into that processing: for example, seemlessly mixing the outputs from a high-frequency Geiger counter (giving seven heads for every tail, on average) and a low-frequency Geiger counter (seven tails for every head); or inserting a delay loop into the circuit, so that the signal was presented to the observer some time after the original Geiger counter's output. The surprising result that Schmidt obtained was that these permutations of the electronic processing made no difference to the results. Furthermore, the results that Schmidt got with his electronic random-number generator were strikingly similar to results that J.B. Rhine had got from experiments in applying psychokinesis to dice throwing. Schmidt was therefore led to this observation:

Experiments with different types of 'electronic coinflippers' as well as experiments with dice report psychokinetic effects of the same order of magnitude. In particular, nobody has been able to produce a random generator that is noticeably more sensitive to mental efforts than other generators.²³⁸

This led Schmidt to formulate his Equivalence Hypothesis, albeit in somewhat technical jargon:

If we have two truly random binary generators, operating such that the generators are from the outside physically in-

distinguishable, then a psychokinetic effort affects the systems to the same degree, i.e. the systems are also indistinguishable in their response to a psychokinetic effort.

This is, I believe, of profound importance in understanding the nature of psi phenomena. It indicates that the site of action of the psi effect is in our phenomenology, not in the physical world. Schmidt did not go so far as to interpret his results in this way, but he did say:

It appears as if the subject, by concentrating on the final outcome, could induce nature to let the previous random events fall properly into place such as to lead to the desired outcome.

Schmidt has speculated that his results can be explained by supposing that the recording instrument, and subsequently the recording media, remain in a state of quantum superposition. As Edwin May (of the remote viewing programme) stated in an interview, "This is simply bad physics".¹⁷⁷ This hypothesis is not tenable from what we know of the quantum wave function collapsing when it interacts with the larger world. Nor can it explain the comparable cases in which the random events are classical rather than quantum.

Retrokinesis is very hard to explain within the framework of physics as we know it, or anything resembling it. In the Berkeleyan system, however, a new opportunity for explanation arises. If we suppose that Berkeley's God leaves undetermined any physical facts that have not been observed yet — be they quantum or classical — then at any time after the nominal occurrence of the facts, up to the time at which they are observed, it is conceivable that someone could exercise telekinesis to affect what God will set those facts to be. This might be clearer if it is compared to an artificial virtual reality system. Imagine that, in a virtual reality, you have a sealed box, which you can open at any time by breaking the seal. Corresponding to the interior of that virtual box will be a section of the computer's database, containing a digital representation of the box's contents. Now, for the sake of efficiency, the computer may not actually populate that part of the database with any data until you actually break the seal. At that point in time, it decides what is to be in the box and populates that section of the database with a representation of the contents

— such as jewels, or a book, or whatever. In precisely the same way, we may put forward the hypothesis that God also does not determine physical facts until someone makes an observation of them.

We will discuss this in more detail under ‘just-in-time object generation’ in the Berkeleian model of psi phenomena.

3.8 Differences in psi-visibility

Information about which targets are easy to reach by telecognition, and which are hard, may give us clues to how telecognition works. That, after all, is the most basic level at which we can begin to characterise the performance. The next level would involve describing the particular ways in which remote viewers fail to reach their targets, that is, the characteristic failure modes.

3.8.1 Heightened psi-visibility

Schnabel reports that some targets are much easier to telecognise than others. In particular, sites of religious veneration are normally easy to reach and, curiously, ufos are also easy targets. Indeed, ufos are reported sometimes as ‘hi-jacking’ remote-viewing sessions, in the sense that they will suddenly appear and draw the viewer’s attention away from the intended target. Perhaps prompted by that frequent observation, or by curiosity (which, in Ed Dames, became an enthusiasm), the remote viewers took to targeting ufos deliberately. Schnabel reports this finding as follows:

... when they targeted ufos in their remote viewings, strange things could happen. One of the strangest things was that they almost never failed to detect the ufo. ... This area of remote-viewing phenomenology would always remain confusing, but in at least some cases, the characteristics of a target that made it ‘RV-friendly’ were obvious: If a target had some religious or supernatural or paranormal significance, or was otherwise tinged with strangeness, remote viewers seemed to home in on it relatively rapidly. ... On several other occasions, remote viewers suddenly interrupted their sessions against a particular target to describe a flying saucer that they perceived to be in the vicinity.²⁶¹

It is, however, very difficult to draw any inferences about the occurrence of ufos in remote-viewing sessions, given that we do not confidently know what ufos are anyway. (The claim that they are extraterrestrial spacecraft is highly speculative, to say the least. We will consider some alternative hypotheses in a later chapter.) Religious sites are better understood: at least we know what they are, even though we may not fully understand what goes on there.

One question that arises is whether the ease of targetting religious sites (and, indeed, of ufos) comes from the ‘target side’ or the ‘viewer side’. By this, I mean that we have the following two possibilities. (a) Target-side differences: when the viewer is sending out her viewing signals, they are more likely to hit targets of this type; or it could be that targets of this type, once they have been hit by a signal, are more likely to return data. (b) Viewer-side differences: when data are returned from a target, imagery of certain kinds are more likely than others to pass through the liminal barrier into conscious awareness: in other words, maybe the viewers just find religious sites and ufos more eye-catching than the things they are supposed to be looking at.

On the one hand, the fact that there are at least some viewer-side differences is known from reports (Schnabel, Moorehouse, et al) that some viewers are good at picking up the mental state of target persons, others are good at picking up technical details, such as radioactivity, or alphanumeric data, and so. CIA officer Kress also noted that the remote viewers he worked with were highly inconsistent between each other, and even within their own work on different days.¹⁶⁸ On the other hand, the fact that all the viewers consistently found a high ‘psi-visibility’ in religious sites and ufos suggest rather that there are also some target-side differences.

3.8.2 Hypothesis: link strengthening

What could it be that makes these targets highly psi-visible? The psychic literature abounds with references to places and objects being ‘highly charged’ with psychic energy, as if there were some quantitative psychic property that could be accumulated like static energy. That, however, is just a metaphorical description, which does not help to explain the mechanism by which these targets become psi-visible. What is distinctive about a religious site?

One feature that comes to mind is that repeated, strongly emotional intentions are directed at it. This suggests the following hypothesis: suppose that each act of veneration or prayer at the site establishes a reverse link from the site to the intense mental state of the person doing the praying or venerating. Then, whenever the remote viewer connects with the site itself, she can automatically follow those links and pick up on those intense emotional states, which help the data break through the liminal barrier.

There is other evidence for these posited links from the object to past observers. For example, there are widespread (non-technical) reports of the phenomenon of ‘psychometry’, in which a viewer holds an object such as a wristwatch in her hands and picks up the mental states of the person who wore that watch. Likewise, there are reports of remote viewers being able to perform the same ‘linking’ operation remotely.

These considerations are leading up a general picture in which every act of conscious perception establishes a two-way link between the perceiver’s mind and the object. This, of course, is diametrically at variance with the classical model of observation: if I look at, say, a church altar, then light is reflected in all directions indiscriminately, and some happens to pass into my eyeballs, which then trigger electrochemical signals into my brain — the information flow is exclusively from the object to me, and the object has no means of registering the fact that I looked at it: my eyeballs simply capture a few rays of the light that the object is reflecting all around it. In the scheme that is emerging here, however, there is a flow of information from me to the object, which establishes a permanent link such that another observer of the object can trace a path through the link back to me, and make contact with my mind. We shall see in the next chapter how we can model this complete scheme within the Berkeleian metaphysic.

It is, however, by no means clear whether the above hypothesis for psi-visibility is correct. In any case, it does not seem to help us explain why ufos have a heightened psi-visibility.

3.8.3 Hypothesis: symbol potency

Another hypothesis is that it is the archetypal potency of the target, when considered as a subconscious symbol, that gives the target a heightened psi-visibility. Religious buildings and arte-

facts will normally possess symbols that have been given powerful significance through traditional use (or which were selected for traditional use because of their intrinsically resonating with archetypal symbolism). On the other hand, as Carl Jung has argued in his book *FLYING SAUCERS*, ufos also possess a potent resonance with archetypal symbols, and may in fact be projections from the collective unconscious.

Why should emotive symbols be highly psi-visible? Again, there are two explanatory approaches. First, it may be that they are conveyed more easily from the target to the remote viewer; second, they may be easier for the remote viewer to pick up on after they have arrived in her mind.

Certainly, the second hypothesis, that these symbolically charged forms can punch through the liminal barrier more easily, is very credible. After all, this is how dreams deliver suppressed subconscious material into the conscious mind.

With regard to the first hypothesis, we might suppose that a comparable facility to pass through barriers at earlier stages of the process might come into play. There might be one or more stages through which either the initial request or the returning data must pass. We might therefore speculate on some kind of ‘psychic superhighway’ in which certain kinds of imagery are exchanged with utmost fluency.

3.8.4 Hypothesis: change of entropy

An hypothesis put forward by Edwin May and his co-workers in the US remote viewing programme is that, just as in other sensory modalities, images that are changing and therefore contain more information are more likely to make the passage into conscious awareness. This is referred to as the target’s having a change of entropy. In her review, Jessica Utts notes:

It was indeed found that there was a correlation between the change in [visual] entropy in the target and the remote viewing quality.³¹¹

Whilst this appears to be true, it is not at all clear how it could help to account for the psi-visibility of churches and ufos.

3.8.5 Proposed experiments

We can consider a number of experiments for discriminating between the above hypotheses.

- Target secular buildings that have had a lot of attention and high emotions directed toward them, such as sports stadia. Also target disused and little-used stadia, and compare the ease of accessing them with the ease of accessing stadia that have had large, emotional crowds recently. This will test the hypothesis that it is multiple observer linkage that raises psi-visibility.
- Target religious iconography that has not been exposed to public view. For example, computer-generated symbols from different world religions could be placed in sealed envelopes as targets. Secular symbols of similar geometrical simplicity or complexity should also be produced and targeted. This will test the hypothesis that it is the potent symbolism that raises psi-visibility.
- Monitor skin conductivity and other autonomous physiological parameters during the above two experiments, to see whether there is a differentially earlier subconscious detection of the target before it passes the liminal barrier. This will test the hypothesis that heightened psi-visibility comes from ease of reception, or ease of perception after reception.

3.9 Disembodied entities

Within Berkeley's metaphysics, each mind is strictly speaking without a material body. What we take to be our bodies are really mental constructs. It is therefore theoretically conceivable that a mind could exist *without* the system of sense-impressions that normally give rise to the construct of the body. Such a mind would count as what we would conventionally call 'disembodied'. This theoretical possibility therefore suggests that we should examine reports of what are ostensibly encounters with such disembodied minds.

3.9.1 Remote-viewing disembodied entities

Morehouse reports encounters and apparent meetings with what he describes as other entities 'in the ether':

[Viewer No. 66:] ‘... wait a minute! I see — No, there’s something dark next to me, moving toward me ... Jesus!’
[Monitor:] ‘Sixty-six, move away from the darkness. Dis-regard it! ...’¹⁸⁴

and occasionally had visions of an ‘angel’:

... the angel said: ‘You can’t see them because you are in another dimension, parallel to theirs. They can’t see or hear you.’¹⁹⁸

There have also been many reported incidents where remote viewers have seen ‘aliens’ in flying saucers or on other planets. Ed Dames, especially, used to direct remote viewing staff in Stargate toward ufos or the surfaces of other planets. We should regard such reports with great caution, for three reasons. First, we do not yet have any means of corroborating this reports independently. We cannot climb aboard a flying saucer and compare its contents with the remote viewers’ reports. Second, it is known that the expectations of the remote-viewer can introduce ‘overlay’ or false impressions; and it is believed that the monitor can also do so by telepathically projecting expectations to the remote viewer. Since Dames is enthusiastic in his belief in the physical reality of interplanetary visitors, this possible source of overlay cannot be discounted. Third, even if remote-viewing contact were to be established with the ufo phenomenon, we might reasonably expect the perceived contents of such encounters would be as deceptive as ordinary, spontaneous encounters with ufos. As Jacques Vallée and John Keel have shown from their extensive fieldwork, the appearances of space vehicles in ufo encounters are highly hallucinomorphic, they exhibit little consistency, the communications of their occupants are often absurd, and their behaviour exhibits no rational purpose. Why should remote viewing ufos produce more reliable data?

3.9.2 Exorcism and spirit release

In this section I will look at the understanding of disincarnate spirits that is held by those who consider themselves to be working actively with such spirits.

Disincarnate spirits

Ellen Rogers summarises a view that seems to be current amongst those who are active in the practical work of ‘spirit release’.

The spirit is the part of us that survives after death of the physical body. Sometimes spirits just don't know what to do when their physical body dies, so they stay in the earth plane and can attach to living people, or haunt a specific place (thus a haunting spirit or ghost). The dark energy forces can be termed demons. They have never been alive in their own bodies, and are usually on a mission to destroy. We don't really know where the dark ones come from. Some say that negative thought forms give dark forces — or Satan or Lucifer — the tools needed to create these beings. Another theory is that they may be fallen angels. Part of our current research involves asking these dark ones where they came from, or how they came to be.²³⁴

William Baldwin adds a further gloss to the catalogue of spirits:

Most of the attached entities fall into one of three categories: spirits of deceased humans, terminated pregnancies, and mind fragments of living people; the dark force entities, historically called demons, and aliens or ETs, that is, beings from other worlds, dimensions or densities. There are others which defy classification²

We have also discovered what appear to be non-physical conscious beings of many different types, attached to or connected with the client, somehow infiltrating the mind and interfering with the thinking and behaviour of the individual. ... human entities, which include the earthbound spirit of a deceased person (EB), the dark force entity (DFE), the classic demon; and the extraterrestrial (ET), or alien being, usually non-physical in its normal state.³

Besides disembodied spirits, Cole claims there is also the *negative vortex which manifests in contrary results to positive actions.⁸⁰*

(As an aside, it is interesting to note that the so-called extraterrestrials are admitted to be potentially from “other worlds, dimensions or densities”, which aligns Baldwin with Jacques Vallée’s theory that ufos and aliens are not extraterrestrial at all but are

from a parallel, different kind of universe.)

This world-view takes for granted that disembodied minds can exist, that they can interact with people, and moreover that there is nothing conceptually problematic about the idea of a disembodied mind. Alan Sanderson, a spirit-release therapist, has defended this world-view thus: on the one hand, that the nature of ordinary embodied minds is still a profound mystery that has resisted philosophical and scientific analyses, and it would be unreasonable to expect our understanding of disembodied minds to be any more sound than our understanding of embodied minds; and, on the other hand, that in his own work, he has such direct and close interaction with disembodied spirits that to doubt their existence would be as sterile an exercise as to doubt whether the minds of his fellow human beings exist. That is to say, scepticism with regard to disembodied spirits is as untenable as solipsism.²³⁵

Whilst respecting this as an appropriate practical attitude, I would argue that it is an unsatisfactory philosophical position for the following reasons:

- Although it is true that science is as far away now as it ever was from understanding the central mystery of the mind — namely, the nature of consciousness and its relation to the human brain — we do nonetheless have a wealth of information about peripheral aspects of the mind. For example, we have a good understanding of how light rays are focused by the lens of the eye onto the retina, which generates electrochemical signals that are conveyed to the optical cortex of the brain. Likewise for the other senses. Although we do not know about the final link between the brain and the conscious mind, we do have comprehensive data about how the brain acquires and initially handles impressions of its environment.

The corresponding understanding of disembodied spirits is entirely lacking. As far as I am aware, there is simply no model at all for how a disembodied spirit acquires information about the physical surroundings of the people that it interacts with, nor how it exchanges messages with the subject and the therapist. What are the sensory channels of a disembodied spirit? What can a spirit sense? There is not even a rudimentary theoretical framework on which we could even begin to formulate an answer.

- Although the relationship between the conscious mind and the tangible brain is deeply problematic, there is a lot of *prima facie* evidence to suggest that the mind makes use of the brain's information processing. It is known that the brain can and does carry out computations: it stores, retrieves, and manipulates images, thoughts, and so on. There is, therefore, some explanation of how the mind's information processing is supported. This is undoubtedly an incomplete picture and may turn out to be seriously flawed. Nonetheless, it gives some basis. For the disembodied mind, on the other hand, we are completely in the dark. It would appear that disembodied minds can think. If so, what do they think with? What is the medium in which spirit information is processed? What is the architecture of its processor?
- As I have said, the nature of the mind-brain relationship is still the subject of intense speculation and research in philosophy and science. Now, if disembodied minds exist and can perceive and think, then they may well provide novel clues and data which could provide a fresh perspective on the nature of mind.
- Mainstream science and medical practice will not accept spirit release as a valid mode of therapy until there is a theoretical basis that integrates it with the vast corpus of scientific knowledge of the world.

All these are reasons for addressing the theoretical questions of the precise nature of disembodied minds and their relationship with the manifest world — as opposed to just carrying on with somewhat vague, albeit practical, notions.

Workers in this field often seem completely innocent of how far removed their world-view is from that of science. In consequence, they are often shocked and puzzled by the ferocity of scientific opposition to any system of thought or practice that is premised upon disembodied minds. As a result of that puzzlement, there sometimes circulate completely fallacious conspiracy theories about why the scientific and medical establishments try to crush work in this field.

I believe that the opposition of scientific and medical opinion is in good faith but is based on a mistaken and unquestioning acceptance of the ontology of physicalism. The scientific world-view has

been built up painstakingly over the past three centuries by means of careful experimentation and clear and rigorous theorising. The scientific endeavour has distinguished itself by a disciplined and humble submission to evidential facts. Within the scientific enterprise itself, there is a continual process of severe cross-checking that far surpasses anything in the New Age movement. At one level, therefore, there is a resentment that people who have not passed through arduous scientific training, and who do not submit their claims to the intensive testing that is *de rigour* in everyday scientific practice, should be given any attention at all. At a further level, there is a genuine belief that the only way to be sure that theories are correct is to submit them to the network of cross-checking, testing, and duplication that science employs. If those methods are not adhered to, then claims and theories cannot be trusted and may well be completely erroneous. There is, in consequence, a heartfelt concern that the general public will be deceived and misled by theorists and practitioners who have taken it upon themselves to present claims about the nature of the world that have not passed through rigorous scientific scrutiny. It is therefore in defence of the public's right to the truth that the scientific community vigorously attacks those who present claims outside the normal scientific channels.

Unfortunately, the scientific world-view itself suffers from a large omission. It treats only of the physical world, not of the world of consciousness. Hence it systematically excludes the exploration of any phenomena that are rooted in the mental, rather than physical world. If such phenomena really exist and people really encounter them in their lives, then they are ill-served by science, which deliberately ignores and denies the existence of such phenomena. An inevitable knock-on effect is that people who do study such phenomena, or who practice therapeutic methods relating to such phenomena, are forced to operate outside mainstream science. This sets in motion a self-perpetuating vicious circle: parapsychologists are excluded from working within the scientific establishment because there is no accepted evidence for the phenomena, and their observational evidence is excluded because it was produced by people working outside the scientific establishment.

I believe that one way to break out of this vicious circle is to develop the theoretical underpinnings that are necessary to understand these non-physical phenomena. That, I hope, will make possible the integration of physical and psychical sciences.

Manifestation of spirits

An attached spirit may manifest its presence in any of several ways. Mostly, they are detected by diseases or dysfunctions that they induce in the body or mind of the subject. The subject may experience pain or other, physical symptoms in a particular part of the body, or she may experience adverse emotions such as fear or anger. She may also find out-of-character actions, reactions, or thoughts suddenly manifesting. As Baldwin says:

A disembodied consciousness seems to attach itself and merge fully or partially with the subconscious mind of a living person, exerting some degree of control on the behaviour, the mental functioning and emotions, as well as producing sensations and symptoms in the physical body.³

In extreme cases, the term ‘possession’ is used when a highly adverse spirit takes over a person completely. The corresponding form of release is traditionally termed ‘exorcism’. (The other difference that I gather exists between exorcism and spirit release therapy is that the former aims only to remove the spirit from the immediate victim, whereas the latter also redirects the spirit toward ‘the light’.)

Cases of exorcism rely upon verbal communication with the spirit to establish a firm diagnosis. So the ability of the spirit to take control of the subject’s speech organs is presumed. More commonly, this is reported to occur in mediumship, where a channeler voluntarily allows a spirit to talk through her. It is therefore curious that Baldwin reports only rudimentary powers of speech through this means.

In several cases we discovered that the ET could take control of the consciousness to the point that the client’s voice produced unintelligible sounds. Obviously this was some kind of language, with inflections, repeated sound patterns and recognizable pauses and shifts for sentence structure or questions, but it sounded like total gibberish to the human ear.³

Swedenborg also has interesting reports of his experience of having angels enter into him and speak through him.

Energies, densities, and vibrations

There is much talk in New Age circles of ‘energies’, ‘densities’, and ‘vibrations’, especially followed by the word ‘level’ or ‘plane’. Sometimes these words are qualified by the word ‘subtle’. These terms are, I believe, highly misleading. The physical concepts that these terms refer to are irrelevant to mental world. There simply are no energies, densities, or vibrations in the mental or spiritual worlds. At best, these terms could be metaphors, or suggestive figures of speech. The manner in which they are used, however, often gives a false impression of technical information that is wholly bogus.

The aura is composed of seven fields within and outside the body. Each field called a density represents a specific energy range, corresponding to color, light, and sound. When densities are clear, energy moves freely through the body, unifying the physical body, the subtle body, and the causal body with a person's higher consciousness.⁸⁰

Usually, the term ‘vibration’ is used without any notion of its being quantified or having any connection with actual vibrations. Dorothy Cole is unusual in asserting precise quantification of the ‘vibratory level’, which I believe must nonetheless be purely imaginary because a spirit is not the kind of thing that can vibrate.

Spirits are attracted into an aura when the vibrations, measured in cycle per second (cps), drop to 800 cps. ... Her soul identity was at 40% and her frequency was at 1.⁸⁰

Sometimes writers drag in fragments of scientific theories, which appear to be completely undigested:

Quantum physicists identified worm holes to other universes. These entities may travel through or be pulled through the worm holes.⁸⁰

This is not to say that statements expressed in terms of energies, densities, and vibrations are meaningless. On the contrary, my impression is that they are genuine attempts to articulate the *bona fide* observations and practical experience of people working with these phenomena. It is nonetheless unfortunate that in their attempts at articulation, they have chosen to clothe their

thoughts with inappropriate and misleading terms borrowed from science. The correct expression of what is going on in the spirit world requires a new vocabulary and an appropriate framework of concepts.

Jacques Vallée has gone some way toward addressing this issue in his theory that the entities who present themselves variously as angels, fairies, or aliens are actually from a parallel ‘infoverse’, which is informatically different from our physical universe. Vallée’s theory is unworkably vague, but I believe it points in the right direction.

The correct solution comes, I believe, from George Berkeley. He claimed that our reality is primarily mental, not physical. The world that we seem to inhabit is a virtual reality, and the physical world is a convenient fiction. On this view, we are all in a sense disembodied minds, but we have the illusion of being embodied in corporeal forms that are really virtual bodies. In such a theory, it is perfectly plausible to suppose that some minds are not restricted to the matrix of the virtual world that we construe around us, but float free, and such minds we would regard as fully disembodied.

Meanwhile, however, we need to engage with the literature in this field, which still talks of energies, densities, and vibrations. We must seek to extract the meaningful information that is hidden by the unsystematic and misleading terminology.

The first and second densities are internal to the body. ...

Earthbound spirits attach on the 3rd density just outside the body while other entities invade the other energy fields. ...

The other six layers of the aura attract entities from other places. The fourth density entities are the reptilian races, the mischievous, and parasites. The fifth density represent alien races. The sixth density attracts beings in a parallel universe, and the seventh is the alternate universe which are the half human, half machine beings.⁸⁰

How are we to interpret this? First of all, we cannot accept it literally. The mind is not a physical thing and does not have any location in physical space. So, if the ‘aura’ is supposed to be where disembodied spirits get attached, then it cannot be a spatially extended thing and cannot have layers in the normal spatial sense of ‘layers’ as in layers of an onion. Conversely, if the ‘aura’ refers to some sort of spatially extended thing around the body (as it

traditionally does), then it cannot be where disembodied spirits lodge. The description by Cole falls into a category-mistake of just the same sort as that of naïve neuropsychologists who seek to identify conscious experience with electrical activity in pieces of brain tissue.

So what is Cole talking about? My guess would be that the term ‘layers of the aura’, if it refers to anything, refers to modes of access. There is a lot of systematic evidence in what has been reported of the ‘remote viewing’ work carried out by SRI, that when a subject is engaged in telecognition, they lock in to the target in some way. There is initially some delay and difficulty in establishing contact with a target (which might be a person or a place, for instance), after which contact remains intact for some time and information about the target can be acquired. It is *like* tuning in to a radio station, but again we must beware of being misled by physical metaphors when the phenomenon with which we are dealing is radically non-physical. My guess is that a similar process occurs in spirit release. The therapist (a) establishes initial contact with the target spirit and then (b) maintains contact without having to repeat the work of establishing contact.

My interpretation of what Cole is saying is that connection with the spirits can occur in one or more ‘modes’ (seven, according to Cole), and in each mode there is a characteristic set of spirits who can be contacted. Seen in this light, Cole’s claim about ‘layers of the aura’ form a convenient pictorial story that helps her to conceptualise what is happening. As I said above, this story may be adequate for practical, therapeutic purposes, but it is not true to what is really going on and therefore must be dropped from our philosophical analysis.

Throughout the New Age literature, one finds what de Quincey calls ‘emanationism’, in which psychic ‘energy’ lowers its rate of ‘vibration’ and thereby becomes manifest as matter. Taken literally, this is incoherent, for the simple reason that any physical substance remains a physical substance no matter how slowly or how quickly it vibrates. It does not make any sense to suppose that a physical thing can become spiritual just by vibrating at a higher rate. For instance, electromagnetic radiative energy is still just physical energy even if the frequency is increased from infrared through visible light to ultra-violent and on to X-rays.

So, how should we interpret the following passage, for instance?

*That is why only part of your spirit is physically embodied.
This embodied spirit is your soul. ... Your Higher Self
is vast and it remains "in the heavens" (spiritual realms)
generating energies that spiral in decreasing vibratory rates
into the more narrow, but powerful, focus of the soul. The
Soul does the physical work of the spirit. The Higher Self
and the Soul remain connected through the Mind.*⁷⁹

I do not know.

Prevalence

According to some writers, spirit attachment is very widespread.

*the condition of spirit interference is almost universal.*⁴

*Some investigators in this field estimate that between 70%
and 100% of the population are affected or influenced by
one or more discarnate or non-physical entities at some
time in their lives.*³

I am very dubious of these statistics and very much doubt that they have any basis in fact. One cannot help but be reminded of other claims of near universality. In the eighteenth century, witchfinders saw witchcraft everywhere: thousands of people were murdered on the deluded belief that they were witches. Near Trier, for instance, entire villages were annihilated in the fanatical drive to extirpate witchcraft. More recently, the social services in England went through a phase of seeing ritual abuse of children everywhere. And now in America the most celebrated hypnotherapists are finding ufo abductees everywhere. What all these examples have in common is a complete abandonment of the rational assessment of evidence. On theoretical grounds (which in turn have no firm foundation), practitioners identify certain signs of the condition they are seeking, but completely fail to grasp the fact that that sign will also frequently occur for other reasons.

This must be a matter for especial concern in respect of spirit attachment, where the supposed signs of attachment are actually quite ordinary physical and psychological ailments.

The Roman Catholic Church has been carrying out what it claims is the exorcism of attached spirits for two millennia, and it has taken on board what modern scientific knowledge exists about psychological illness. It is now very cautious in deeming

any particular cases to be genuine possessions, rather than, say, instances of split personality. I do not know whether the spirit release movement has similarly rigorous standards.

Numbers of attachments

According to Baldwin, there is normally more than one spirit attached. Why this should be he does not say.

The first step is to discover and identify any and all (there is never just one) attached discarnate spirit or entities.²

Cole reports that individual clients may have enormous numbers of attachments.

This woman was what I called “maxed”, that is, she had 4,999 earthbound spirits and entities on all seven layers of her aura.⁸⁰

I find this rather dubious. If we look at this from a practical point of view, how does a therapist actually count that many attachments?

It seems to me that all minds have a capacity for the presentation of multiple characters. An obvious example of this is when actors play different rôles upon the stage. Each actor's mind constructs and presents a particular character as if it were a distinct entity embodied in the actor. Even in everyday life, we may adopt different personae in different social rôles. Furthermore, in normal hypnotherapy, different 'parts' of the mind may be called forward as different characters, each having a seemingly autonomous mind with its own agenda, its own hopes and fears, and its own understanding. Those characters seem to be quite polymorphous, like vortices forming in a single body of water. Even if there really is an attached spirit present, it seems to be very difficult to establish the indexicality. Spirits are notorious liars and tricksters, and much given to rôle-playing in response to the subject's own fears, hopes, and expectations. I see great difficulty in ascertaining how many spirits are attached, as opposed to how many characters the attached spirit can conjure up. In a therapeutic context, this is not of crucial importance. Since the object of the exercise is to release the spirit, it does not matter if the therapist has to play along with a spirit pretending to be several different spirits. If, however, we are seeking a clearer theoretical understanding of the phenomenon, then it does matter.

Spirit vectors

There is a very interesting discussion by Cole of spirits invading human lives through electrical equipment such as computer terminals. At first, it seems as if Cole is making another category-mistake of supposing that disembodied spirits travel along the physical cables and popping out of the computer screens. Then she says this:

Anyone can shield a machine. It is a simple process of visualising a sky blue field in front of the computer that is 12" thick. Then see it spread all around the computer, the printer, and another peripherals.⁸⁰

Obviously, putting a blue field of light around the computer in one's imagination does not involve putting anything at all around the physical computer. So, if the disembodied spirits are supposed to be really emerging out of the computer terminals, then the imaginary blue field could not have any effect. So, how are we to interpret Cole's claim that they invade via electronic equipment? The only way to make sense of this is to assume that the invasion vector is not the tangible computer equipment itself, but the *idea* of the computer in the person's mind. Imagining the field of blue light around the mental image of the computer then modifies that mental idea in such a way as to neutralise it.

Why the idea of electronic hardware should provide a conduit for disembodied spirits is not clear. Maybe it is because, at an abstract level, there is a congruence between the concept of an autonomous but inorganic object (the computer) and the concept of a disembodied entity. Perhaps that conceptual resonance gives the spirit something to latch onto. (As we shall see elsewhere in this book, the mental universe under the Berkeleian ontology operates as a content-addressable information domain, in which pattern-matching experientia will connect.)

This could also be a clue to the astonishing prevalence of the ufo as a form in which disembodied entities manifest (according to Vallée's theory). The *idea* of an extra-terrestrial spacecraft is just the right kind of image for the entity to latch onto and project itself into the mind of the ufo percipient. It is an autonomous, hermetically sealed object, originating from an inaccessible and unknowable source.

Remote targetting

One of the interesting facts to emerge from the SRI work in remote viewing was the ease with which telecognition could be achieved with minimal information to locate the target. The same seems to apply in spirit release therapy.

I also treat people over the phone since Spirit knows where you live.⁸⁰

To request a releasement ... If the releasement request is for another person:

- *Name and location (city and state is sufficient) of person to be checked*
- *Your “link” to that person — for instance: brother, spouse, friend, co-worker, in order for us to identify and establish contact with the higher self.²³⁴*

Soul loss and retrieval

In all serious metaphysical theories, the mind (and the soul, if it is recognised as different from the mind) is considered to be an indivisible unity. It is therefore very odd to find the notion of fragmented souls being employed in the spirit release discourses.

Physical and emotional traumas can cause fragmentation and formation of sub-personalities, some of which literally leave the premises.²

Then I checked to see if the remaining soul was intact, and it was not. This required a soul retrieval process which I did. I measure this in percentages and found that his soul level was at 35 after treatment.⁸⁰

The very notion of ‘mind’ or ‘soul’ logically entails a unity. One cannot, for instance, coherently imagine a 35% share of one’s consciousness: there is either one conscious mind, or two, or more than two. Although the ‘soul’ is a much less well defined concept than mind, it is nonetheless evident that anything that could plausibly serve as such a concept would necessarily be an indivisible unit.

Therefore, we must again insist that the spirit therapists’ discourse cannot be taken literally. Instead, if it means anything at all, then it must be subject to a metaphoric interpretation.

Methods

Standard hypnotherapeutic methods are used to establish contact with disembodied spirits. One method is regression, under hypnosis, to a past life. In the case where an attached spirit is that of a deceased person, the regression can take the subject into the past life of the attached spirit. It is not clear how the therapist steers the regression into one past life rather than another. The Baldwins refer to three kinds of bridges for reaching the past life:

The somatic bridge, affect bridge and linguistic bridge used together are extremely effective for past life induction.⁴

The somatic bridge works on the basis that a disease or dysfunction in a particular part of the body is attributable to an attached spirit. By focusing the subject's attention intensely on that body part, contact can be established. They give an example of a dialogue, which begins thus:

"If that irritation in your throat could speak, what would it say? If the feelings could talk, what would they say?"⁴

This, of course, is a standard procedure that is described by e.g. Deborah Marshall-Warren in her MIND DETOX. I presume that in spirit release therapy, the therapist somehow ascertains which bodily ailments can be blamed on attached spirits.

The affect bridge is used in a similar way: instead of a bodily ailment being used as a gateway, an emotional problem is used. For instance, if the subject has a phobia of water, the therapist may direct her to talk to that fear. If the fear is caused by an attached spirit (say, that of someone who died by drowning) then this will open up a channel with that spirit.

Aliens and extraterrestrials

One characteristic that John A. Keel and Jacques F. Vallée found consistently in reports of communications with aliens is that the aliens persistently lie about what they are about. They concoct stories that are often utterly absurd, and often engage in quite silly behaviour. As Keel noted:

The contactees from 1897 on have been telling us what they were told by the ufonauts. The ufonauts are the liars, not the contactees. And they are lying deliberately as part of the bewildering smokescreen which they have established to

*cover their real origin, purpose, and motivation.*¹⁶⁰

It appears that the spirit therapists likewise are given ludicrous fantasies by the attached spirits:

We discovered an ET attachment which had been in place for a long time. This is not unusual. Its purpose was to gather data on the human animal in normal earth life circumstances. Again, a very common situation. ... Prior to the present lifetime, the being that is now manifesting as Ted was an associate of the attached ET! They knew each other! They were fellow citizens on another planet, in another density; Ted was an ET! His past lives were on another planet.

... In most cases of ET attachment, the "research" is a cover for the activity of the dark force entities. The experiments are ostensibly designed to study human emotions and behaviour.³

What Baldwin does not realise that the story of the 'dark force entities' is as much a piece of fantasy as the story of the extraterrestrials. For some reason, these entities are very unwilling to engage in an honest exchange of information.

It is true that an alleged battle of light and dark forces also recurs in a lot of reports of ufo contacts. Yet it is also a theme than runs through vast tracts of mankind's creative work in mythology and literature. It would therefore be wholly congruent with Carl Jung's theory that ufos are exteriorised projections from the collective unconscious.

3.10 Modelling psi

The biggest barrier to progress in psi research must surely be the lack of a theoretical framework or paradigm into which the experimental data can be integrated, and from which new empirical predictions can be derived. This has, in fact, been the case for some time. Kenneth Kress, a CIA staff member, whilst surveying the government-sponsored psi research over the previous quarter of a century, cites an initial report that the CIA invited from Stephen Abrams, Director of the Parapsychology Laboratory in Oxford University, in 1965:

*ESP was demonstrated but not understood or controllable.*¹⁶⁷

The CIA eventually started its own research programme in 1972, with Kress as Project Officer. After the CIA programme had been going for some time, Kress requested an independent review from a CIA physicist, J.A. Ball, in 1975, which came to a very similar conclusion:

*"A large body of reliable experimental evidence points to the inescapable conclusion that extrasensory perception does exist as a real phenomenon, albeit characterised by rarity and lack of reliability."*¹⁷¹

After two more years of research, when the CIA gave up on the programme, Kress himself reported the same position:

*"There is no fundamental understanding of the mechanism of paranormal functioning, and the reproducibility remains poor. The research and experiments have successfully demonstrated abilities but have not explained them nor made them reproducible."*¹⁷²

The government-sponsored research in psi then passed to the Defense Intelligence Agency (DIA), where it continued for two decades. Jessica Utts, in her review of that work, concluded in 1996:

*"It is recommended that future experiments focus on understanding how this phenomenon works, and on how to make it as useful as possible. There is little benefit to continuing experiments designed to offer proof, since there is little more to be offered to anyone who does not accept the current collection of data."*³⁰⁹

These quotes may give you the impression that psi research has been stagnant over the past four decades, as Ray Hyman has suggested in his review of the same research.¹¹⁸ But that is not so. Methodological improvements in psi experiments have continually brought more rigorous and more precisely delineated proofs of the existence of psi. Nevertheless, there has been a complete lack of progress in formulating an explanatory theory. This is an astonishing position, given the dizzyingly rapid progress in scientific understanding in all other fields where scientific methods have been applied.

To a large extent, the experimental study of psi phenomena continues to be carried out outside any theoretical framework. Psi research might be compared to natural history in the years before biology grew into a systematic science: a massive accumulation of

facts, and the noting of some regularities, but no formulation of an over-arching explanatory and predictive model.

One of the points made forcefully by Hyman in his critique of the remote viewing programme was that, without a well-defined theory, it is difficult to see what exactly is, or is not, demonstrated by statistically significant results. Whilst admitting that statistical anomalies have been found, he is reluctant to admit anything further, especially when the claims have to do with something as vaguely defined as psi phenomena. Moreover, the comparatively small scale of parapsychological research, especially in relation to the potential profundity of the questions, makes it harder to get clear answers. As Hyman wrote:

Although the research program that started in 1973 continued for over twenty years, the secrecy and other constraints have produced only ten adequate experiments for consideration. Unfortunately, ten experiments — especially from one laboratory ... — are far too few to establish relationships in almost any area of enquiry. In the traditionally elusive quest for psi, ten experiments from one laboratory promise very little in the way of useful conclusions.¹¹⁹

Hyman does have a valid point. Nevertheless, it is clear from the rest of his paper that he has very little specific criticism to make of the remote viewing work, and has no alternative hypotheses to explain the results.

I believe that science can grapple with psi, but the correct solution will involve so radical a shift in our understanding of the nature of the world, that it cannot be achieved within the existing paradigm of scientific theorising. The assumption that reality is fundamentally physical is embedded so deeply in the fabric of modern scientific thought, that to suppose otherwise is not a legitimate move in any theory-building that would be acceptable in the scientific community. In the next chapter, I will outline the required shift of paradigm from physical monism to mental monism. In the present section, I will discuss some of the limited theorising about psi that has been published.

3.10.1 The energy model

To the extent that any kind of model of psi is appealed to, it is usually energetic. Psi phenomena are supposed to involve a novel

kind of energy, or (in a subtle semantic twist) energy in its psychic form rather than its physical form, or (in an ontological twist) another aspect of energy. Quite often, especially among practitioners of psychic techniques, the energy model is aligned with ancient traditions, such as that of *chi* energy in the East. Others feel more comfortable with the assumption that psi phenomena involve electromagnetic radiation, or such pseudo-scientific nonsense as ‘tachyon energy’.

There is also much talk of ‘vibrations’ and ‘vibratory levels’, sometimes with only the haziest notion of any difference of meaning between the words ‘vibration’ and ‘energy’.

We must be wary of prematurely concluding that psi has anything to do with energy. The term is now bandied around so much that it may require a mental effort to step back and reflect that the energy model is just an hypothesis about psi works, which has to be justified and has to compete with alternative models.

For instance, why should we say that psi is fundamentally energetic rather than informatic? A characteristic feature of any energy (and therefore part of our reason for calling something an ‘energy’) is that it is subject to a law of conservation. Information, on the other hand, is not. Let me give you an example of this contrast. There is certain amount of energy stored in the battery of my laptop computer, and a certain amount of information stored in its hard disk. As I use the computer, the energy is consumed: it is converted into light, noise, and heat, and dissipated. Correspondingly, the air around the computer becomes a little bit lighter, noisier, and warmer. After a certain number of hours, the battery has no energy left, and the computer stops working. In contrast, I do not run out of information. Even when I send e-mails, and even when I attach large files to those e-mails, I do not lose any information: the information is copied when it is distributed. I can send an e-mail to a thousand people and be none the poorer for it. Which of those two features best matches psi phenomena? It is probably too early to tell, but so far there appears to be no strong evidence in favour of the energy model. For example, in telekinesis experiments, it appears that the telekinesis works by slightly modifying the probability distribution of random events such as the fall of a die or the switching of an electronic random-event generator. In telepathy experiments, information

— sometimes in the form of emotions — in a sender will appear in a receiver. In neither case is there a measured transfer of energy. On the contrary, the only thing *known* to have been transferred is information. There is, therefore, a *prima facie* case for thinking that an informatic model might be more useful than an energetic one.

When questioned, one of the most frequent reasons people give for thinking in terms of energy is that some people report seeing visual psi effects. For instance, healers report seeing auras. But what has this to do with energy? If you log in to a web page on the internet, you can see pictures, but the internet is not sending you energy, it is sending you information. If a psi phenomena produces visual or other sensory impressions, such as that of the aura, then that fact by itself is equally consistent with an informatic model or an energetic model. The informatic model does not mean that the percipient is ‘imagining’ the aura, or ‘just hallucinating’ it, but rather that the psi process may generate the sensory impression of the aura in the subject without there being any transmission of energy at the physical level.

The point I would make at this stage is that we have to keep an open mind about whether psi processes are mediated by energy or by information, or indeed by something else. As we proceed with the discussion, however, we will find the energy model less attractive and the informatic model more plausible. (In fact, I will be proposing a particular form of the informatic model, in which psi processes are mediated by the sharing of conscious experientia.)

Energy talk

In talking with practitioners — who are often very successful in what they do — about their use of ‘energy talk’, I find a vertiginous sense of detachment of language from experienced reality. In the absence of a grounded terminology, the words they use seem to spin freely through usages that change from moment to moment, and the meaning of a sentence frequently relies largely on the context in which it is uttered. Energy terms seem variously to mean nothing at all, or to refer to sensory imagery (for instance, white light), or to an unspecified influence. In cases where the meaning is vacuous, the energy term can be deleted from the sentence without changing the intended meaning of the sentence as a

whole: “The energy of the Tarot card *King of Cups* has to do with wealth and plenitude” means the same as “The Tarot card *King of Cups* has to do with wealth and plenitude”. In cases where the energy term refers to unspecified influences, it can be replaced by a more explicitly vague word. For instance, “As you lie on the couch and I pass my hands over you, the rays of healing energy will enter your body and help your body recover” has the same meaning as “As you lie on the couch and I pass my hands over you, some unknown process will be activated and you will get better”. Of course, the dramatic impact of the form of words used by a therapist will matter for the psychological state of the patient, and may well be instrumental in effecting the therapy. After all, telling a client that she will be healed by ‘rays of energy’ is more comforting, and may be more therapeutic, than telling her that you have no idea how she is going to be healed. Nonetheless, these terms convey no literal meaning.

On being pressed to define what they mean by their energy words, practitioners sometimes admit that they have no idea how their practice works and are not really referring to anything with those words. More often, they regard this line of inquiry as a personal attack and adopt a defensive stance. For example, when I pressed an osteopath (to whom I am grateful for several successful treatments) about what she was actually doing when ‘aligning the vibrations of chakras’, she replied “I know what I mean, and I don’t have to explain myself to anyone!” To be sure, using terms meaningfully is not a necessary pre-requisite for teaching, learning, and applying techniques in complementary medicine, telecognition, and other areas. Nevertheless, the precise definition and use of terms is obviously essential if we are to derive a scientific theory.

Practitioners of therapeutic methods such as ‘therapeutic touch’ work on a day-to-day basis with terms such as ‘energy patterns’, ‘energy flow’, ‘energy fields’, and ‘blocked energy’.¹⁰¹ They use these terms, not in the conscious understanding that they are figures of speech, but in the confused belief that they are meant literally. I say the belief is confused, rather than just mistaken, because the practitioners are not referring to any operational definition of the detection or measurement of the energy. The vague hope that a sympathetic scientist could come along to a healing

session, set up some novel piece of chromium-plated apparatus with a dial denominated in units of healing energy, and just *measure* the flow of energy emitted by the healer, is as utterly bogus as the hope that an instrument could measure the flow of cleaning energy transmitted when a cleaner goes into a dirty and untidy room and cleans and tidies it up.

The healing effect is not amenable to measurement because it has not been defined as an energy. The effective, operational definition of the healing effect is in terms of the consequent improvement in the health of the healee. That is not a quantity. It is not something of the sort that you can measure.

I have on occasions had Kirlian photographs (of a healer's hand) thrust in my face and been told, "There! Do you see that pink blob of light? *That's* the healing. You see, you *can* measure the healing energy." Let us leave aside the question of whether or not there really is a correlation between successful psychic healing and the presence of particular patterns, shapes, or colours in a Kirlian photograph. As far as I am aware, there is no scientific evidence for that hypothesis, but let us suppose for the sake of argument that there is. So what? There are also reports that when people carry out telekinesis they perspire more. So what? Does that mean that the psychic force is conveyed by sweat? Of course not — the perspiration is just a physiological side-effect of exertion. Well, a Kirlian photograph is just a product of passing an electric current over the skin of a subject: what it detects are physiological changes, probably in the skin conductivity. Let us suppose that the human physiology is so constituted that when someone engages in some paranormal activity such as healing, the skin conductivity changes. That is a mere physical side-effect. It tells us nothing directly about the psi process itself.

3.10.2 Woodhouse's 'energy monism'

The energy model is not universally accepted, and there is in some quarters a recognition that a more radical approach is needed. For instance, Larry Dossey has urged a search for a deeper explanation of psi phenomena in the nature of consciousness in his book HEALING WORDS. This has prompted Mark Woodhouse, author of the book PARADIGM WARS, to attempt to articulate a defence of the energy model.

First, Woodhouse gives the following summary of Dossey's views in rather more colourful terms that Dossey himself uses:

*A recent critique by Larry Dossey in HEALING WORDS urges that the non-local effects of consciousness in such contexts [for example, healing and psychokinesis] put it outside the domain of 'energy exchanges' and that attempts to frame consciousness as (just some form of) energy represent the last gasp of a dying Newtonian world-view.*³⁶⁷

In considering the nature of consciousness, Woodhouse briskly runs through four “standard historical options” — which he labels dualism, idealism, materialism, and epiphenomenalism. (In fact, there are only three options, as epiphenomenalism is a form of dualism.) He rejects these options for the standard reasons. (His rejection of idealism is almost a paraphrase of Johnson’s famous and fallacious refutation by kicking a rock. Woodhouse writes:

*But how could rocks be mere thoughts? Consciousness may well play some rôle in ‘rockness’ but there must be an energetic / material aspect, too.*³⁶⁷

The answer is, of course, that the experienced solidity of a rock is as much in the mind as that of a dream rock that you run up against when dreaming during sleep.) He then advocates his own dual-aspect theory in which “energy and consciousness are aspects of each other”. The fact that this is a form of dualism, which he has already rejected, does not bother him. This may be because he is using a non-standard terminology, in which, for Woodhouse, ‘dualism’ means ‘substance dualism’ and not ‘property dualism’; whereas his property dualism he counts as a ‘monism’. The confusion grows when we find that Woodhouse calls his monism an ‘energy monism’, which if taken literally is just physical monism, since energy is physical. In another paper, Woodhouse calls his theory “Double-Aspected Transcendental Monism of Energy-Consciousness”,³⁶⁸ which represents another shift, toward the notion that the core substance is both energy and consciousness, or neither energy nor consciousness. He sometimes seems to have at the back of his mind some notion of ‘neutral monism’ (which, I would argue, is ultimately just physical monism anyway), but where he is specific Woodhouse is clearly advocating property dualism. Thus:

Energy is the ‘outside’ of consciousness and consciousness

is the ‘inside’ of energy throughout the universe. ... Insides and outsides are determined by perspective. For example, a clairvoyant healer may externally ‘see’ a client’s emotional pain around the heart chakra as coloured energy. The client, of course, experiences this inwardly as, say, despair.³⁶⁷

This theory is untenable, for reasons that I have examined in detail in my accompanying book, CONSCIOUSNESS AND BERKELEY’S METAPHYSICS. Put briefly, the problem is that the phenomenal form of any conscious experience is of the essence of that experience. If a client has an experience of despair, then that is an experience of despair, and not an experience of colour. If, at the same time, the healer sees a colour around the client’s heart, then that is quite obviously a different experience. The client has an experience of despair, the healer has an experience of colour: two different experiences, two different objects of conscious awareness. They are not different aspects of the same thing, they are different things altogether. There may be a common mechanism that gives rise to both experiences, but that does not alter the transparently obvious fact that there are two experiences. Nor can we suppose that either experience is another aspect of physical energy: again, the abstractly defined physical energy has no phenomenal form, and therefore cannot be the same thing as an experience.

Woodhouse muddies the waters somewhat by switching to a quite different model in which (in the above example) the despair and coloured lights are no longer different aspects of a single thing, but are the phenomenal products of different ‘perspectives’.

This is a dualism of perspective, not of fundamental stuff; each is the other, but as experienced from a different perspective.³⁶⁷

It is very unclear what Woodhouse is trying to express here. He seems to be putting forward two substantially different theories under the mistaken belief that they are the same theory. On the hand, he says that the despair and the colours *result from* observing a single underlying thing under different perspectives, and on the other hand he says that they *are* the same thing. His sentence is self-contradictory.

For the above reasons, Woodhouse’s theory of so-called ‘energy monism’, which is really a property dualism, must be rejected. In his paper, Woodhouse also offers a defence of the more general

claim that psi phenomena are energetic, against criticisms made by Dossey. Unfortunately, the rest of his paper plays fast and loose with language in the manner that we have already seen, and this makes it impossible to extract a single, clear interpretation of his writing.

As far as I can see, Woodhouse is making the following points.

- Dossey objects that nobody has measured the transmission of energy between healer and healee. Woodhouse replies that what is transmitted is not energy (and therefore, according to his dual-aspect theory, not consciousness either) but some enigmatic thing called a ‘fifth force’, about which we are told nothing except that it is ‘transduced’ into or out of the form of energy. In the absence of any definition whatsoever of what the term ‘fifth force’ is supposed to denote, we can only respond that Woodhouse’s comments are meaningless. Reading between the lines, we might guess that Woodhouse is trying to say that there is a novel kind of energy transmitted between healer and healee, and that nobody has yet devised a means of measuring it. The term ‘energy’, however, has meaning only in relation to an operational method of measuring it. Until Woodhouse gives an operational definition of the ‘fifth force’, which must involve a specification of how, in principle, it is to be measured, it is literally meaningless to assert that any such ‘energy’ is transmitted to the healee. In this connection, we may note that Woodhouse’s claim that the healing exchange between healer and healee occurs via ‘fifth force’ contradicts his other claim that a clairvoyant healer can perceive the emotional state of a healee. He is trying to have his cake and eat it.
- Dossey objects that if the healing effect were conveyed by energy, then the non-local character of healing would be unexplained. Woodhouse seems to make no cogent reply to this.
- Dossey objects that Woodhouse’s theory is a dualism, not a monism as Woodhouse claims. Woodhouse denies Dossey’s point, and yet his reply seems to agree with dualism, as he asserts that “both consciousness and (physical) energy exist”.
- Dossey objects that energy talk makes sense only in connection

with physical energy. Woodhouse replies that:

*Thus, whether from sages, psychics, or near-death experiences, we hear of the ‘power of consciousness’, ‘higher frequencies of consciousness’, ‘waves of consciousness’, or the ‘movement of consciousness’. These phrases are more than just metaphorical transplants of energy-talk into consciousness talk.*³⁶⁷

which just re-states Woodhouse's faith in the energy model without offering any reason for us to accept it.

- Dossey objects that if psi energy exists, then it does not exhibit the properties normally associated with ‘energy’, and it is therefore questionable whether it should be called ‘energy’ at all. Woodhouse replies:

*... it's not directly measurable. But it does satisfy other basic criteria of energy. It moves. It condenses and becomes rarefied. It is blocked by other energetic (material) forms. And it satisfies the most basic definition of energy: it does work. Indeed, the only way we know anything about energy is through its effects.*³⁶⁸

3.10.3 Dossey's critique

Dossey notes that the terminology of ‘energy’ is widely used by practitioners and researchers of psi phenomena, and points out that the confusion surrounding it can also lead to an inappropriate attachment to this terminology:

*Dedication to a concrete image of energy in distant healing creates other types of problems within the healing community. I have seen researchers explode in formal conferences when their cherished, classical image of energy is called into question, in spite of the lack of any empirical proof of its existence. They often interpret a challenge to ‘energy’ as an assault on their data or as actual personal attack.*¹⁰¹

He rejects the energy model for the reasons that have been discussed above.

Dossey admits that we do not yet have a satisfactory account of psychic or spiritual healing, but that is not a reason for adopting a model, such as ‘energy monism’ that we can see to be false.

In 1989, Dossey proposed the term ‘nonlocal mind’ to refer to phenomena, such as spiritual healing, that exhibit the following characteristics which were enumerated by Nick Herbert,¹¹⁷ and which originated in particle physics:

non-local phenomena ... are unmediated (by any known form of energy), unmitigated (their strength or robustness does not diminish with increasing spatial separation), and immediate (the distant events occur simultaneously).¹⁰¹

Dossey himself correctly emphasises that there is no reason to believe that non-locality in psi phenomena has any connection with non-locality in quantum physics, which was established in the celebrated theorem of the late physicist John S. Bell and confirmed in the experimental results of Alain Aspect. It may be, as he puts it, an “accidental correlation of language”. The plethora of books on “quantum consciousness”, “quantum healing”, and so on, presuppose a connection between consciousness and quantum mechanics that is still purely conjectural and may turn out to be wholly bogus.

Dossey acknowledges that he does not know how the nonlocal mind is to be explained, but he echoes a remark of researchers Jahn, Dunne, and Nelson, at Princeton Engineering Anomalies Research (PEAR):

In order to encompass the observed effects, a substantially more fundamental level of theoretic model will need to be deployed, one which more explicitly acknowledges the rôle of consciousness in the definition of physical reality.²²⁴

3.10.4 DeQuincey’s critique

Christian de Quincey published a paper entitled “Language, Energy & Consciousness? Can ‘Energy Talk’ Enlighten Us About the Mind?”,¹⁰⁰ continuing the debate between Mark Woodhouse and Larry Dossey. I agree with de Quincey’s analysis of what he calls ‘energy talk’, but not with his subsequent remarks about on the value of moving from substance ontology to process ontology, nor with his critique of subjective idealism, or the ‘māyā hypothesis’ as he calls it.

Energy monism v neutral monism

De Quincey, I believe, quite correctly and lucidly diagnosed the nature and aetiology of a significant problem in the study of consciousness. Namely, the tendency to apply to consciousness inappropriate concepts that are derived from our physical model of the world. The world in which we take ourselves to be dwelling provides us with sensory concepts that we project into the mechanisms that govern the world. De Quincey writes:

... we are tempted to think that the experience of force is identical to the energy exchanges between bodies described by physics. But this is to confuse the feeler's feeling (the subject) with what is felt (the object).

Whereas the world of everyday objects is obviously inadequate for an explanation of consciousness, people are tempted to turn to exotic new forms of physics, such as quantum mechanics:

Quantum events were so tiny, so undetermined, so unmechanical in the classical sense, they seemed just the sort of thing that could respond to the influence of the mind.

... Quantum theory, many believe, has finally opened the way for science to explore and talk about the mind. But the excitement was — and is — premature. It involves a linguistic and conceptual sleight-of-hand. Whereas the clunky mechanical language of matter was obviously at best metaphorical when applied to consciousness, it now seemed more reasonable to use the language of energy literally — particularly if cloaked in the "spooky" garb of quantum physics. But this shift from "metaphorical matter" to "literal energy" was unwarranted, unfounded, and deceptive.

There is a popular misconception that energy is somehow less physical than matter. This idea is completely unfounded. Consequently the corollary idea that energy can explain consciousness where matter could not, is equally unfounded. As de Quincey says:

Dissolving matter into energy makes neither of them any less physical. And the mark of the physical, as Descartes had pointed out, is that it is extended in space.

Energy, just like matter, is inherently embedded in physical space and time. This was a fundamental insight that Descartes correctly saw, and it has provided an over-arching understanding of the

world throughout the subsequent centuries. Again, de Quincey is on track:

Despite the insuperable problems with his dualism, Descartes' key insight remains valid: What distinguishes mind from matter is precisely that it does not occupy space.

So, bringing energy into the picture gets us nowhere: we still have the wrong kind of picture. It is a picture that simply cannot hold consciousness in it. De Quincey is again right in pinpointing the crucial failure of the physicalist picture:

Ontologically, subjectivity just cannot emerge from wholly objective reality.

There is, as de Quincey emphasises, just no way out of this, as it leaves only two limbs, neither of which can be right. Consciousness, in this model, could fall into one of two categories:

1. It is a physical form of energy (even if it is very, very subtle energy), or

2. It is not physical energy.

... If we cannot explain what we mean by "psychic energy" and how it differs from physical energy, then we should ask ourselves why use the term "energy" at all?

He briefly gives a nod toward the general idea of neutral monism in its panproto-psychist guise, but emphasises that naked physicalism — whether it talks about energy or matter — can never account for consciousness:

Unless energy, at its ontologically most fundamental level, already came with some form of proto-experience, or proto-subjectivity, consciousness, experience, or subjectivity would never emerge or evolve in the universe.

I think he is being over-generous in his mention of proto-experience. Either proto-experience is really conscious, in which case: why call it *proto*-experience? Or proto-experience is not really conscious, in which case it is ontologically in the same ball-park as physical substance. In my view, neutral monism is the same ontological doctrine as physical monism.

Of the two disputants, Woodhouse seems to advocate some sort of property dualism that he calls 'energy monism'. De Quincey believes that this is the only way to proceed with any project to identify mind with physical energy:

... the only ontology that can account for a universe where both matter-energy and consciousness are real

Yet this also runs into the buffers, as I argued above when reviewing Woodhouse's paper.

Where does 'energy talk' come from? De Quincey wants to attribute the 'energy talk' of Woodhouse (and, I would say, of many other complementary therapy theorists and New Age writers) to common-sense Newtonian mechanics:

Dossey is right, I think, to describe energy talk about consciousness as a legacy of Newtonian physics (ie of visuo-kinesthetic mechanics); and this applies equally to "classical energy talk", "quantum energy talk", "subtle energy talk", and Woodhouse's "dual-aspect energy talk".

Instead, I would blame it on the ubiquitous use of electromagnetic radiation in radio and television communication. Here we have a mode of energy transport that is utterly incomprehensible to the layperson, just as consciousness and psi phenomena such as healing are. Electromagnetic energy seems utterly immaterial: it cannot be seen or felt, and most laypeople do not have even the vaguest idea of how it is generated, transmitted, or received. Yet it mysteriously conveys power and information. This, I believe, is the (possibly unconscious) model that most people are using as a paradigm for thinking about the conscious mind especially when it engages in psi processes.

In modern years, though, the old paradigm of electromagnetic energy has been supplemented with the even more confused paradigm of quantum mechanics, which is popularly misunderstood every step of the way. De Quincey writes, for instance:

Dossey's ... caution not to assume that the "nonlocal" phenomena of quantum physics are related to the "nonlocal" phenomena of consciousness and distant healing other than a commonality of terminology is sound.

Quantum mechanics may well have something useful to contribute to modelling the physical correlates of mental processes. But it cannot take us further in Chalmers' Hard Problem than classical mechanics.

Substance ontology versus process ontology

De Quincey sees both Woodhouse and Dossey agreeing over the use of a substance ontology rather than a process ontology:

It could be that the world is made up of stuff that feels, where there is an ontological distinction between the feeling (subjectivity, experience, consciousness) and what is felt (objectivity, matter-energy).

De Quincey, however, wants to move from substances to processes:

On this view, consciousness is the process of matter-energy informing itself. Consciousness is the ability that matter-energy has to feel, to know, and to direct itself.

This, I think, is quite as mistaken as Woodhouse's energy monism. First of all, it is a red herring whether we think of consciousness in terms of substances or processes. Substances and processes are really just different modes of description: there is no genuine ontological difference between them. Second, if de Quincey proposes to identify consciousness with a process that is *in* the physical world, then he is presenting a property dualism that is wrong for precisely the same reasons that Woodhouse's energy monism is wrong. For instance, physical processes are just as much located in physical space and time as matter-energy is, yet de Quincey himself has said that consciousness cannot be embedded in the physical spatio-temporal continuum.

In defence of mental monism

In the side-bar of his paper, de Quincey gives a commendably clear, but ultimately wrong, critique of mental monism, under the rubric of the 'perennial philosophy'. He identifies two possible kinds of idealism: the māyā hypothesis, in which the physical world is held to be a delusion or fiction, and emanationism, in which the physical world is real but somehow emanates or condenses from the mental or spiritual realm. Berkeleian mental monism falls under de Quincey's 'māyā hypothesis'.

De Quincey's arguments against emanationism seem sound to me, and I will say no more of them. His criticism of the māyā hypothesis, however, is mistaken. The crux of de Quincey's argument is that he thinks that mental monism is impractical.

So the māyā hypothesis is pragmatically problematic for

idealism (even if it may be philosophically irrefutable).

First of all, I find it extraordinary that anyone can say that the hypothesis is ‘irrefutable’ and yet dismiss it as being definitely untenable. Surely, if one thinks it is irrefutable, then one should at least keep an open mind? Leaving that aside, I believe that we can address de Quincey’s specific complaint about the supposed impracticability of the *māyā* hypothesis.

*māyā hypothesis: either we all go out and stick to our guns and assert that only spirit is real, all else is *māyā* (leaving us with the problem of pragmatic realism); or [... other versions of idealism]*

... As presented, this critique amounts to a reductio ad absurdum of idealism.

... If there is a way out, it will depend more on a leap of epistemological faith than on any empirical evidence or logical reasoning.

... It may be that with a different epistemology, with a different way of knowing beyond my senses and my rational faculties, the paradoxical nature of idealism would be experienced as wholly non-mysterious.

De Quincey is emphatic that the mental monist hypothesis is untenable on practical grounds, but he seems rather wobbly about its philosophical standing. Whereas above he says it is “irrefutable”, later he says:

Philosophically, idealism is stuck.

In this paper, de Quincey is not forthcoming about precisely in what way mental monism is unworkable. In the Summer of 1997, I had the good fortune to be able spend an evening talking to Christian de Quincey, and got a clearer picture of what he dislikes about mental monism. Essentially, his perspective matches that of the early sceptics toward Berkeley, such as Dr Johnson and Dean Swift. His concern is that if mental monism asserts the non-existence of physical matter, then it must be impossible for a mental monist to lead a normal life, interacting with people and objects in the usual, sane way. For example Dean Swift is reported once to have left his friend Berkeley standing on the doorstep with the door closed, saying that if the door does not exist, then it cannot offer an obstacle to Berkeley’s entering the house. This, in fact, is an elementary misunderstanding of what

mental monism asserts. For, although the door does not really exist as an independent, extra-mental reality, nonetheless God so arranges our perceptions to create the impression of palpable resistance if we try to ‘walk through the door’. Touch is as much a mental sensation as vision, and the experience of pressing up against a door is generated in the human mind by God in much the same way as the sight of the door is.

We are, in effect, contained within a virtual reality driven by God. The door is a virtual door which offers a virtual barrier to our virtual bodies. God injects into our minds the sensory impressions that correlate with that virtual world.

Understood correctly in this way, mental monism offers no obstacle to normal life. Hence de Quincey’s critique fails.

3.10.5 The field model

A number of authors have proposed that the mind is a field, or that a psi effect such as telekinesis, operates as a field. (Some authors do not bother to distinguish between those two theories, presumably because of their unquestioned assumption that psi effects are achieved by pushing the mind out of the brain toward the site of action.)

Why do people find the idea of the mind as a ‘field’ so appealing? First, I think the ‘field’ shares with ‘energy’ a certain mystique, especially among people who are not physicists. Electromagnetic fields are held to be utterly mysterious and even non-physical by some laypeople, so to say that the mind is a new kind of field, is doubly enigmatic. In fact, fields are utterly mundane. A field is just an abstract way of describing how a particular phenomenon varies throughout space. What, for instance, is a magnetic field? It is nothing but a mathematical abstraction that describes the fact that as you move your compass around, the needle will point in different directions. That is all it is. It should not be reified and thought of as a real thing in its own right: the only physically real thing is the compass needle, which behaves in a certain systematic way. The rôle of physics is to characterise that spatial variation, and it does so with the field. Likewise, a gravitational field is a similar abstraction which describes how objects are drawn toward each other. An electric field is an abstraction that describes how a piece of wire will experience a varying voltage

as it is moved around in space. Instead of a field, you could have a table written out on a piece of paper. For each point where you could place, say, a compass, you record in the table the direction in which the a compass needle will point in. When you have filled in this table, you have essentially the same thing as a field: the only difference is that the field is a smoothly varying mathematical function whereas the table gives the direction of the needle at discrete points. A typical response I have heard to this is that the field is a real thing, whereas the table is just a representation. That, however, is to reify an abstraction. If the field is claimed to be different from the mathematical function that ‘represents’ it, then the onus is on those who make that claim to say what the difference is supposed to be. Otherwise, asserting that the field is somehow different from its representation is completely vacuous.

So, when a ‘field’ is correctly understood as no more than a mathematical function that describes a variation in space, where then is the attraction for saying the mind is a field of any kind? If the mind is to be understood as a field, then it must be explicitly related to some particular physical phenomenon whose spatial variation is described by that field. What mind-detecting instrument is specified in the definition of the field? None! Yet, without specifying the phenomenon that is supposed to vary in space, the notion that the mind is a field is completely vacuous. Nobody has even proposed, nor would wish to propose, such a crudely limiting notion. So the mind-is-a-field theory cannot get started even on its own terms. Even if it could *per impossible* be made to work, it would nonetheless quite obviously fail at David Chalmer’s Hard Problem, which does not allow the conscious mind to be identified with anything in the physical world, such as a field.

If it will help to de-mystify fields, you can easily create a probability field. Take a bag of pennies and walk over to the window. Drop the pennies one at a time onto the ground outside. Then walk outside and measure the radial position of each penny from ‘ground zero’, which is the spot perpendicularly below the point where you released each penny. Provided that there is not much wind, and that you are not too high up from the ground, you will find that the pennies are distributed in accordance with a simple spatial distribution: a probability field for pennies, in fact. You can pick all the pennies up and repeat the exercise. By doing

so a number of times, you can build up a good picture of the penny probability field. This, I hope, will make fields seem less mysterious.

Sheldrake's mind field

Rupert Sheldrake²⁶³ has proposed that when we perceive external objects, the field that is the mind stretches out of the brain by means of something like the protoplasmic limb of an amoeba, and comes into direct contact with the object of perception. Hence his explanation of experiments in remote staring is that mind of the starer actually taps the staree on the shoulder and makes her aware that she is being watched.

As a model of perception, this is absurd, and completely fails to engage with the massive amount of empirical data on optics and vision. Also, in identifying the mind with a physically extensible field, he is committing a straightforward category-mistake of the kind that Ryle famously identified. Moreover, from the Berkeleyan standpoint, the theory is a non-starter because the mind is not in space anyway.

Whilst Sheldrake's experimental work is very exciting, his theory is untenable.

Radin's field-consciousness

The term 'field effect' is also in circulation in connection with the effect of telekinesis on REGs (random event generators). As far as I am aware, however, none of the studies have even looked for, and certainly not found, a systematic variation of the telekinetic influence on REGs through space. On the contrary, one of the very few consistent findings for REG effects as for all other psi phenomena, is that the strength of the effect is independent of the distance from the subject who is doing the telekinesis — which indicates the telekinetic effect has no spatial variation and is therefore utterly unlike a field.

What *would* justify the use of the term 'field' to describe the telekinetic effect would be the following. Suppose that an experimenter arranged an array of, say, a hundred REGs, each of which was independently monitored. The telekinetic subject is asked to focus her intention on one particular REG, to increase its count of 1s as opposed to 0s. Suppose, further, that it was then dis-

covered that the targetted REG showed the greatest effect, but other REGs were also affected, with the strength of effect diminishing systematically with distance from the targetted machine. Then, in this hypothetical situation, it would be legitimate to talk of the telekinetic effect as behaving like a field, insofar as it would have a systematic variation over space. (Even so, this would not justify describing the mind itself as being a field.) Without any such evidence, it is vacuous to talk of telekinesis as a field effect.

The index of Dean Radin's celebrated book *THE CONSCIOUS UNIVERSE* has thirty-two references to "field-consciousness effects", and one of his chapters is entitled "Field Consciousness" but Radin offers no cogent justification for asserting that consciousness is a field. While I have the utmost respect for Radin's experimental work, his theorising on so-called 'field consciousness' is somewhat tangled. I shall try to pull out the tangles and suggest specific criticisms for each tangle. A persistent error that we discover when we do this is Radin's failure to realise how radical the concept of non-locality is, and consequently to confuse it with the less radical field theory. In the field theory, consciousness or whatever it is that exerts psi effects is spread out through space like some kind of ectoplasm. It is subject to the local constraints that apply to physical fields: it takes time for information or any other effect to travel from one part of the field to another. In the non-local model, on the other hand, a non-local consciousness can interact with spatially localised physical systems instantly anywhere. Furthermore, in addition to the field model and the non-local model, there is also the Berkeleyan non-spatial model, which Radin does not mention, although sometimes his phraseology suggests it. We will examine it in detail later. In the non-spatial model, events and interactions can occur amongst conscious entities entirely outside the whole continuum of space and even time. Indeed, if we dig deeply enough into the inner nature of each object (into what we shall later call the 'metamind'), we will find that the things that manifest in our world as spatially local objects actually partake in non-spatial interactions, including interactions with ordinary conscious minds. We will examine the Berkeleyan non-spatial model later. Now, we will return to Radin's theories.

First, Radin proposes to find backing for 'field consciousness'

in Hinduism:

The conceptual roots of field consciousness can be traced back to Eastern philosophy, especially the UPANISHADS, the mystical scriptures of Hinduism, which express the idea of a single underlying reality embodied in “Brahman”, the absolute Self.²³⁰

This a mis-reading of the Upanishadic literature. Far from being distributed in space as a field is, Brahman prefigures space. Brahman considered purely in itself — that is, Nirguna Brahman — is the unqualified precursor of the manifest universe. Even the Brahman considered as creator of the universe — Saguna Brahman — stands in a transcendent relationship to the world. It is neither in any particular place in the universe, nor distributed spatially through the universe.

In trying to articulate his concept of field consciousness, Radin makes the following baffling statement:

The idea of field consciousness suggests a continuum of nonlocal intelligence, permeating space and time. This is in contrast with the neuroscience inspired, Newtonian view of a perceptive tissue locked inside the skull.

This is baffling because being nonlocal and permeating space are contradictory properties. *Either* consciousness permeates space, in which case it is local at each point where the field is defined; *or* it is nonlocal, in which case it can act instantly anywhere in the universe. Reading between the lines, I get the impression that, on the one hand, Radin has realised that the conventional assumption of a brain-locked consciousness does not enable us to explain psi phenomena. On the other hand, having discarded that assumption, he is undecided which model to adopt — the field model or the non-local model. Since he is conflating the field model and the non-local model in his writing, he may be unclear as to the difference in his own mind.

Radin also proposes to derive support for field consciousness from quantum mechanics. In the course of this, he makes some very odd statements:

Quantum fields do not exist physically in spacetime like the classically inferred gravitational and electromagnetic fields.²²⁹

If quantum fields did not ‘exist physically’, then they would hardly be of interest to physicists. Clearly, they *do* exist physically. Also,

they do exist in space, otherwise they would not be fields. And they exist in time, otherwise they would be unchanging and therefore unable to describe such things as the motion of an electron. For example, in Young's famous slit experiments, an electron is made to pass through a narrow slit and impact upon a sensitive screen. The field that determines the probability distribution of the electron's position clearly exists in space, since we can see the cloud of marks left by successive electrons on the screen, and it exists in time, because it is there only when the experiment is running. Radin then continues:

Instead, quantum fields specify the probabilities for strange, ghost-like particles as they manifest in spacetime.

As we have seen, the fact that a field determines the distribution of probabilities (of, say, the position of an electron, or the position of a penny) does not entail that a field lacks the essential property of spatiality. This remains true whether the field belongs to classical physics or quantum physics. Referring to the observations made by Alain Aspect, Radin writes:

This gives the quantum field a peculiar nonlocal character meaning that the field is not located in a given region of space.

On the contrary, it is precisely because it *is* located in space and time that it can be described as a field. Radin is confusing two different things: the field as such on the one hand, and the non-locality on the other. Non-locality arises in certain odd conditions when remote particles are 'entangled'. In Alain Aspect's classic experiment, two electrons are emitted whose internal states are correlated (or 'anti-correlated'). As the two electrons fly away, their motion is described by a pair of fields, which determine the probability of finding each electron at any given point in space. Although people keep on referring to them as particles, it is more accurate to say that the electrons *are* the fields. Thus we may think of the electron as a cloud of probability passing through space: in the centre of the cloud, we are most likely to detect the electron, and the further out we go from the centre, the less likely we are to detect it. Nonetheless, that field, or cloud of probability, clearly exists in space and time, and in fact is passing through space over a period of time. It is not 'non-local', for it exists in a localised region of space.

The non-locality arises through an internal relationship between the two electrons. Each electron has a number of internal conditions that can be measured (known as ‘spins’). When a particular internal condition of one electron is measured, it is found to be correlated with that of the other electron, but — and this is the crucial point — the correlation depends on which state is measured in the first electron. The dependence of the correlation on the remote measurement is what shows us that there is non-locality going on. Thus this non-locality is quite a different phenomenon from the electron’s being a field, or cloud of probability. That Radin conflates the two features, and then tries to use this as paradigm for understanding consciousness, is not very helpful.

Sometimes, Radin seems to use the ‘field consciousness’ as a label, rather than as a description of a theoretical position.

In our laboratory we have been studying a phenomenon dubbed “field-consciousness” effects.²²⁸

At such points, it sometimes seems that Radin means by ‘field effect’ simply a ‘remote effect’. For instance, in his discussion of the effects of the Maharishi Mahesh Yogi’s transcendental meditation, it is clear that all he is referring to is the fact that the TM is supposed to have remote effects: but he refers to them as ‘field’ effects. I can only assume that his thinking is still locked into the Newtonian framework, in which remote effects must be mediated by fields. A field, after all, is just a way of describing a distributed local effect. He has not taken leap into the radical new concept of non-locality, let alone the even more radical concept of non-spatiality.

Where he does offer a sketch of a theoretical position, Radin lists the following postulated “properties of consciousness”, which have been “derived from a combination of Western and Eastern philosophies”:

1 “Consciousness extends beyond the individual and has quantum field-like properties, in that it affects the probabilities of events.”

First of all, the notion that the mind itself could extend beyond the brain is specious, just like the notion that the mind is literally inside the head. I have argued this point at length in the previous volume in this series, CONSCIOUSNESS AND BERKELEY’S METAPHYSICS. I imagine, however, that what Radin is actually trying to refer to here is the hypothesis that the mind

can have direct effects outside the brain, an hypothesis which is amply supported by the experimental data. Second, Radin is highly ambiguous when he equates having “quantum field-like properties” with “affecting the probabilities of events”, since the two concepts are unrelated. Given the nature of his experimental data, however, I would assume that all that Radin is trying to say in this property is that the mind can affect the probabilities of remote events directly by its intention, which is just a summary of the observed data.

- 2 “Consciousness injects order into systems in proportion to the ‘strength’ of consciousness present.”
- 3 “Strength of consciousness in an individual fluctuates from moment to moment, and is regulated by focus of attention.”
- 4 “A group of individuals can be said to have a group consciousness.” This is massively counter-intuitive; it is unclear what it would mean in practice (i.e. Radin needs to say what would count as evidence for a group mind, and why); and Radin offers no evidence for it.
- 5 “When individuals in a group are all attending to different things, then the group consciousness and group mental coherence is effectively zero ...”, which would have meaning only if ‘group consciousness’ were defined, which it is not.
- 6 “Physical systems of all kinds respond to a consciousness field by becoming more ordered.” (a) The suggestion that telekinetic responses will be exhibited by physical systems of *all* kinds, including large inanimate objects such as rocks, is supported neither by the empirical data that Radin presents, nor by any prior theory. It is therefore a postulate, and can be justified only by its contribution to the theoretical account of other data. No such contribution is articulated, so the postulate appears arbitrary. (b) It is surprising that Radin should choose to describe the telekinetic effect as making the target more ordered. Normally in telekinetic experiments, the subject tries to impose a specific and systematic change, such as increasing the number of 1s, rather than 0s, generated by a random-event generator. Admittedly, that happens to be a form of making the signal more ordered, but the telekinetic effect itself merely imposes the subject’s intentions. It is not specifically an agent

of ordering.

Thus Radin's six 'properties of consciousness' do not carry us very far in establishing the concept of 'field consciousness'. So let us look at his empirical data. The background data are, of course, the standard telekinetic experiments in which a subject tries to change the REG output by intention. Radin does not make clear whether these are supposed to justify the concept of field consciousness. At times, Radin seems to presume that the existence of any telekinetic effect whatsoever is *de facto* a field effect. That, as I have argued above, is fallacious. The other kind of experiment that Radin has described is one in which he places an REG in the presence of a group of people who are engaging in mental concentration together, such as a meeting for aikido martial arts enthusiasts. A variant of this experiment involves the REG in an arbitrary location when there is a global mental concentration, such as during the O.J. Simpson trial or the funeral of Princess Diana. Radin reports that the REG exhibits statistically anomalous behaviour during the periods of intense concentration, and he seems to imply that this is a field effect because it is an unintended side-effect of the collective mental concentration.

There is a serious flaw in the first variant of the experiment, for the proximity of the REG should make no difference to the outcome. It has consistently been shown by Radin and other researchers that telekinetic effects are not impeded by distance. Therefore, the REG should show the same telekinetic effect whether it is in the same room as the aikido practitioners, or a thousand miles away. Conversely, since distance has no effect, every meeting of aikido practitioners in the world should effect every REG. Indeed, every event from big football matches to military battles should have a comparable effect on this REG and every other REG, if Radin was right.

There is another unexplained feature in both variants. There are many ways in which we can impose order on an REG signal: the sequence 111111... is as ordered as 000000..., as is 10101010... and so on. Radin claims that the collective effect of the concentrating minds will be to push the REG signal toward one particular form of orderedness, presumably either 000000... or 111111..., which can be detected by statistical tests. Yet, why would the natural ordering force, which Radin posits, choose one of those

two particular forms rather than, say, 10101010..., which would not be detected by looking at simple imbalances in the numbers of 0s and 1s? Moreover, how do all those minds synchronise their telekinetic action? Why do we not get a situation in which half of the people try to produce 000000... while the other half try to produce 111111...? It may be possible to formulate a explanation of this feature, but Radin does not do so in his book. It is therefore odd when he writes, in the caption for a graph of the results:

The graph shows that order was impressed into the random-number generator ... as predicted by a field-consciousness effect.²³¹

In fact, the theory does not ‘predict’ any particular result, for the reasons that we have just examined.

Nevertheless, it does seem that a genuine telekinetic effect was observed in the REG. So, what was happening? I would conjecture that it is an experimenter effect: that Radin’s own mind was exerting a telekinetic effect on the REG to produce the result that he wanted to see. Of course, this line of explanation might be regarded as a cop-out in so far as the results of *any* successful experiment in parapsychology could be supposed to be a telekinetic effect produced by the experimenter. Nevertheless there are *prima facie* grounds favouring this hypothesis: first, the fact that the only individuals who even had a conscious awareness of the REG were Radin and any assistants working with him; second, in all standard telekinetic experiments, the effect is produced by an individual focusing on the target; third, Radin’s own explanatory hypothesis has the flaws discussed above.

Experimenter effects have been observed elsewhere in parapsychology. Marilyn Schlitz has reported a clear instance of an experimenter effect in her studies on remote staring. When her experiment was replicated side-by-side by a sceptic, she obtained positive results whereas he did not. In that case, the experimenter effect was mediated through the subjects, and may have been effected through conventional psychological cues rather than any paranormal channel. According to my conjecture, on the other hand, Radin’s mind would have had an effect directly on the experimental apparatus.

The existence of such an acute experimenter effect, if that

is what it is, need not preclude scientific investigation. We may reasonably hope that a modified experimental design would enable us to isolate and eliminate, or at least minimise and quantify, the unwanted effect. For example, the simple measure of having an identical experiment operated by a sceptic might be good enough to establish the contribution being made by the experimenter's own mind.

The robust isolation of the experimenter effect would probably require a method of shielding that would positively exclude such stray telekinesis. There were anecdotal reports in the US remote viewing programme of successfully employing the visualisation of a barrier of light as a psi shield. If such methods are genuinely effective, then they should be built into the protocols of all psi experiments.

Chapter 4

A Berkeleian model of psi

In the preceding chapters, I have outlined some of the characteristics of psi phenomena, and discussed and rejected some possible explanatory models for psi. In this chapter, I shall suggest an account of psi phenomena that takes Berkeley's ontology of mental monism as its starting point.

4.1 A Berkeleian model of mind

In the previous volume, CONSCIOUSNESS AND BERKELEY'S METAPHYSICS, I outlined a theoretical model of how minds fit into the world at large. I will summarise that model here, and then we can look at how this framework can give us an account of psi phenomena. This is not a complete theory, but a sketch of how we might work toward a complete theory.

In this model, all minds are considered as being pooled together to form the Berkeleian universe or 'metaverse'. What seem to be individual, private minds are really regions within that pool. Each such region is held together like a vortex in a fluid, dynamically structured in such a way that its contents cannot easily escape and pass into another vortex. Yet, each vortex is just a region of the same common pool. (This analogy captures the notion of all minds being in the same domain, but unfortunately it also conveys the impression that the mental universe is a space of some sort, which it emphatically is not. So, you should hold this image in your mind only for long enough to get the general idea of minds as being subsets of the mental universe. Then let go of it. Otherwise, it will mislead you as we examine the properties of the Berkeleian universe. Unfortunately, the Berkeleian universe is not the sort of thing you can visualise easily.)

The mental universe brings together the minds of all people

and animals. It will also contain any disembodied minds, which historically have gone under various names such as spirits, angels, demons, and ghosts. The basic theory does not assume that those disembodied minds exist: their existence is a hypothesis that we will consider below. My point here is only that, if they do exist, then they will lie within the mental universe along with everything else.

It is important that we think of the metaverse as pooling together all the minds, rather than just being a collection of minds. This is because it enables us to understand psi exchanges between minds as being fundamentally the same kind of process as those that take place within minds. In mathematical terms, each mind is a set of experientia, and the Berkeleian universe is the union of all minds, rather than the set of all minds.

That which drives the natural phenomena that we see around us I have called the ‘metamind’. Outside this metamind are the ‘ordinary’ minds of individual beings such as people, animals, and spirits. We shall consider later the question of whether the metamind is a single coherent entity, as we would expect a ‘mind’ to be, or whether it is a collection of independent minds. I shall argue that the metamind is probably constructed from a large number of distinct mental units, for which the term ‘angel’ or ‘dæmon’ is suggestive, but that these units are internally integrated to an extent that makes it useful to think of the metamind as a single being.

In the jargon, therefore, the metaverse is a superset of the union of ordinary minds and the metamind. Whether it contains anything else is an open question.

On this view, each object in the world is represented by an object in the metamind. When you look at an object, such as a desk, or reach out and touch it with your hand, your mind conveys a signal of some sort to the metamental object, which in turn delivers directly into your mind the visual or tactful imagery, as appropriate. Likewise, when you use telecognition to remote-view the table (i.e. get clairvoyant impressions of it), you convey just the same volitional signal, and get back just the same imagery. The main difference is that, when you look at the desk directly with your eyes, the optical point-of-view that the desk employs when rendering the image is determined by the position of your

head, whereas when you remote-view it, the optical point-of-view is decided arbitrarily by the position you want to see it from. Remote viewers find that they steer their point-of-view to any point in three-dimensional space. We may speculate, therefore, that the volitional signal is a packet of instructions, one of which specifies the position of the virtual point of view.

Both the volitional signal and the returned sensory data must consist of experientia of some sort or another. It might be tempting to think of them as being imperceptible codes, but that is impossible. For, a fundamental feature of the Berkeleian universe is that everything is experiential in nature. Therefore, for instance, the instruction that specifies the point of view must be an experientia. Judging from the comments of the remote viewers on how they engage in locomotion, it is plausible that this instruction for the point of view takes the form of imagery of the intended destination.

Although I have described this model as Berkeleian, it is also true that similar ideas have been encountered earlier in history. For example, Peter Kingsley writes in his account of Pythagorean and Neo-Platonic thinking:

[For Empedocles,] there is nothing that is not vibrantly and knowingly alive. For him everything — even the words spoken by a man of understanding — has an existence, intelligence, and consciousness of its own.¹⁶⁶

4.2 The metamind

What Berkeley called ‘God’, I have called the ‘metamind’. There are several reasons for this.

- **Scientific distaste**

There is a lot of resistance in the scientific community to even mentioning God in the context of a scientific investigation of the world, let alone considering God as part of an explanatory account of the world. There will also be resistance to mentioning the metamind, but not quite as much.

- **Religious association**

Inevitably, the word “God” carries a substantial freight of associations with religious doctrine, which imputes attributes to God, such as love and vengeance, and of associations with scriptural tales, in which God features as one of the protagonists,

causing miracles and actively engaging in human affairs. Needless to say, these associations are irrelevant to the only function that Berkeley assigned to God, which is to generate the natural phenomena of the manifest universe.

- **Religious authority**

There is also a hidden implication that we should base our suppositions about God on the pronouncements of this or that religious authority — of one of the world religions, such as Christianity or Islam, or of one of the smaller cults — whereas really the only claims we should make are those that are based on reasoning about intersubjectively verifiable evidence.

4.2.1 Metamental objects

Normally, we think of people as communicating through a physical medium of one sort or another. For instance, you talk to someone by sending sound waves through the air; or you write to someone by leaving ink marks on a sheet of paper. In the Berkeleian universe, these forms of communication are construed as using the metamind as an intermediary. When you speak, for instance, you send a volitional signal to the metamental object that represents your physical body, which conveys a signal to another such object, representing the listener's body, which then projects the auditory sensation into her mind. Those metamental objects are components within the metamind.

In telepathic communication between people, that indirect route is by-passed and experiences are conveyed directly between two minds. It must be emphasised, though, that nothing is literally transmitted through any intervening space. Rather, what happens is that an access link is established between two minds. Whereas normally each ordinary mind is closed under operations of mental access (indeed, this is part of the definition of an ordinary mind), there seem to be specific methods by which an access route is set up, and experiences can be shared.

One is constantly tempted to think of telepathy in terms of transmitting something through an intervening space between two minds. Or, even if one successfully takes on board the notion of minds existing as adjacent entities outside space, we are still tempted to think of them as having a space-like extension. One might, for instance, visualise our private minds as bubbles of conscious-

ness rubbing against one another — and to think of telepathy as breaching a barrier between two adjacent minds. These images are, however, seriously misleading. All things in the metaverse, including all our private minds, are inter-penetrating. If we are going to use a visual metaphor at all, a better one would be to think of the metaverse as a cloud of tiny coloured thought-particles hovering around at random: the red particles belong to your mind, the green ones to my mind, the blue ones to someone else. This, at least, conveys the sense of minds indiscriminately inter-penetrating one another. Telepathy, then, would involve two adjacent thought-particles merging and retaining both colours (say, red and green stripes), so that the same thought-particle would at the same time be in two minds.

Even the metaphor of a cloud of thought-particles, however, will lead us astray as we try to imagine the metamind. For the metamind is utterly and radically non-spatial, whereas our imagination is rooted in our sensory modalities, which are predominantly spatial. At least, the most information-bearing of our senses are spatial: vision, touch, hearing, and proprioception are all spatial. (Hearing is only weakly spatial, as it relies on two tiny apertures on either side of the head, but we habitually project the sources of sounds into the three-dimensional space surrounding us, as is demonstrated by stereophonic music equipment.) We do have two non-spatial external senses: smell and taste. In most of us, these senses are weakly developed, although connoisseurs of wine and spirits do train themselves to analyse the olfactory and gustatory sensations into recognisable components. As a flight of fancy, one might explore the metaphor of the metaverse as being like a perfume, in which each ordinary mind is a separate scent, distinct yet commingling with all the others. Telepathy would be represented by two scents chemically blending together, rather than just commingling. Such a metaphor would, however, reach another limitation because it conveys nothing of the minds's being active things.

In short, we must strive to think of the metaverse in a new, non-spatial way. This is why I have used set theory as means of articulating what I want to say about the metaverse, and we must keep coming back to that way of describing it. Telepathy, on this view, involves setting up a stepping-stone link, a non-empty

intersection between two minds.

4.2.2 Metamental dæmons

A metamental object is characterised by having no intelligence of its own. It is ‘dumb’ in computer jargon. We can also consider another kind of entity, which I shall call a dæmon, which possesses a rudimentary form of intelligence, but lacks the fully reflective conscious awareness and self-awareness that characterises sapient beings such as people.

The term ‘dæmon’ originates in Plato’s writing, where it denoted a powerful entity responsible for governing the manifest world.

In the computer industry, it has taken on the less grand but more useful meaning of an autonomous program that is continually scrutinising its environment and, when the circumstances are right, reactivates itself and sets about performing some task.

The evidence for the existence of metamental dæmons is highly contentious. I shall argue in the next chapter that phenomena that present themselves in such diverse forms as angels or ufos are in fact such dæmons, which have been generated by deeper mental forces in the collective unconscious in order to perform some task.

4.2.3 Metamental language

In what form do different entities in the mental universe communicate? For instance, in what manner does the metamind issue commands to the metamental dæmons and objects? And in what style does it receive their replies? In what form does an ordinary mind issue its volitional signals and interact with surrounding objects? In other words, what is the metamental language?

There must be such a language, for a basic premise is that information in the form of commands and reports are exchanged between various entities. That information requires a language in which to be articulated.

As I suggested earlier, the constituents of this language must be experientia, for the fundamental reason that everything in the mental universe is experiential, and the lexemes making up this language cannot be an exception. We cannot tell in advance to which sensory faculty they belong, but it does follow that the human imagination can form instances of these lexemes in the

mind. In principle, therefore, we can perceive, recognise, and issue commands in this language ourselves.

At first, it might seem bizarre to suppose that the metamind's inner workings should be capable of being scrutinised by a mere human mind. Yet, that conclusion is forced on us by the fundamental premises that the operation of the metamind involves an exchange of information, and that the Berkeleyan universe is comprehensively mental.

The metamental language might involve new modalities over and above the sensory faculties with which we are familiar. On the face of it, our existing modalities, such as sound and vision, are accidents of our historical evolution. Moreover, occasionally individuals are born with congenital neural defects that deprive them of one or other sensory modality: they might be born blind or deaf. Therefore, we can conceive it as logically possible that the metamind uses a visual language but that the whole human race might always have been blind and therefore would have no conception of the lexemes of the metamental language. In fact, though, humans are sighted; but we do not as yet know whether the metal-mental language uses some novel faculty. Nonetheless, we could probably acquire the use of it.

Some of the surprise that people feel about the metamind's using, say, visual imagery as its basic language can be assuaged by considering the economy that pervades the natural world, of which the metamind is part. Generally speaking, nature does not invent new mechanisms when it can re-use an existing mechanism in a new rôle. Here are some examples. Throughout the animal and plant kingdoms, the same DNA code — of thousands of copies of four amino acids strung out in a complex sequence along a double helix — is used as a universal language by which a parent instructs the blueprint for building offspring; throughout the animal and plant kingdom, certain chemical substances serve a certain purpose in one organism and serve a completely unrelated purpose in another organism; or a chemical may serve completely different purposes in different organs of the same body. Likewise, it would be plausible to suppose that the same kinds of qualia are employed throughout all conscious minds. We cannot know what it is like to look through the eyes of a dog, but it would be in keeping with the economy of nature to suppose that the dog's

visual qualia are much as ours are. What it is like to envision the world through a bat's echo-location may be different from anything a human has ever experienced: it may be that the sensory logics of vision and audition may not be rich enough to express the three-dimensional awareness that the bat presumably is conscious of. So, the bat may have utterly novel qualia. Notwithstanding bats, the rule probably stands that nature does not introduce new species of qualia except where informatically necessary.

Even if the metamind employs a hitherto unknown sensory modality in its language, we need not despair of ever getting our minds around it. It is a commonplace belief that a person cannot acquire sensations in a sensory modality that she was congenitally deprived of. But this is not so. Even a little reflection on the matter will reveal that every human must at some time experience novel qualia, of types that they have never before encountered. When a neonate first experiences the colour red, for instance, it encounters a qualia of a type that it has never before perceived. Where does that quale come from? A naïve Lockean answer would be that the red quale comes from the baby's eyes. That, however, cannot be the case. The eyes furnish the brain with colourless electrochemical signals: experientia exist only in the mind, not in the brain. It is evident that the mind creates the red qualia in itself in response to signals received from outside. In principle, after all, it could have chosen to label that same incoming signal with a different quale.

It follows that the mind has the capability of creating novel, hitherto unknown qualia. To be sure, this faculty is normally exercised only, or primarily, during infancy. After a short interval of time, the infant will have received signals from all her sense organs, and have labelled them with suitable types of qualia. There is no longer a need for the plasticity that enables the creation and allocation of new qualia. The point stands, however, that the human mind can, in principle, create new types of qualia. Therefore, even if the metamind does indeed employ an unknown mode of qualia in its language, we can still contemplate the possibility of training the human mind in such a discipline as would enable us to handle the lexemes of the metamental language.

Such an arduous approach may not be necessary, though. The suggestion that we find in a number of religious and magical tra-

ditions is that the metamental language is auditory. Here are three examples. First, originating in the inaccessible recesses of Indian prehistory, the Hindu tradition claims that the sound of aum or is identical with Brahman. Second, the Pythagorean tradition that was brought from India and Egypt to ancient Greece claims that certain tones are basic elements of the reality underlying the world. Third, the practices of ritual magic that arose in middle east and passed through their apogee in Europe in the middle ages, claimed that the names of angels and demons, when uttered, could invoke and command them. I do not, however, want to make too much of this suggestion, as I do not have any secure evidence for it.

What is secure, however, is the claim that humans can, in principle, master the metamental language. The implications of our ever achieving this, and thereby developing a psychic engineering are incalculable.

4.2.4 Just-in-time object generation

Let us now speculate on the functional organisation of the metamind. Berkeley made no attempt to do this, presumably on the grounds that he had no access to God's mind. In fact, we do know that the metamind carries out a lot of information processing in order to generate our experience of the world, and must obey the laws of informatics. In fact, it is surprising that there is so little in the literature of theology on the informatic analysis of God's mind, when this is one of the few routes by which we can infer anything about what is going on in there.

To picture Berkeley's philosophy, it is helpful to think of the world as a virtual reality system, in which the metamind is the software that (a) generates a three-dimensional model (which we approximate with what we call the physical world) and (b) renders it in mental experiences.

My basic working hypothesis for modelling the metamind is that it is constructed, and operates, economically. Economy is observed universally throughout the natural world, in both organic and inorganic systems. Since the metamind is just as much a part of the natural world as everything else, we may suppose that it too is economical. (I have no proof of this. We may eventually discover that the internal workings of the metamind exhibit

a baroque complexity.)

On the basis of the foregoing supposition (the ‘hypothesis of economy’), I will suggest the following principle: the metamind determines physical facts as and when they are observed by conscious beings. I shall refer to this as ‘just-in-time object generation’.

Most of the facts of the physical world will never be observed by anybody. For instance, the precise distribution of temperature in the middle of some planet millions of light-years away. If the metamind is running economically, it will not bother to compute the modelling for unobserved parts of the universe. Likewise, for those parts of the world that we do observe, it does not need to model them until the moment we make the observation. Even then, it does not need to model the object in any more detail than is required to deliver the observations.

I am referring to this as ‘just-in-time object generation’ by analogy with the retail and manufacturing businesses, which use ‘just-in-time manufacture’ to produce goods immediately before they are shipped to retail outlets, thereby avoiding the use of any warehouse.

At large distances, this may apply to whole planets or even whole solar systems. Closer to home, it will apply to the extensive details of the world around us that we assume are there, but we never observe them. Such as, how many cornflakes there were in your breakfast bowl this morning: the metamind needs to model only the ones at the top of the pile, which you actually saw.

The status of these unmodelled physical facts is that they simply do not exist. This is a generalisation of quantum-mechanical indeterminacy: if a particle is in a superposition of two states, then there is no fact of the matter whether it is in one state or another. Berkeleyan indeterminacy, however, applies to things of all sizes. For instance, when a spacecraft first flew around the dark side of the moon, that surface of the moon had previously not existed, and the metamind decided at that time what it would look like.

The preceding sentence contains a subtle shift between language-games. Saying the spacecraft flew around the moon is in the language-game of physics. Saying the dark side of the moon did not exist is in the phenomenological language-game. The only people who would be confused by this are philosophers who wil-

fully choose to do so for doctrinal reasons. Nonetheless, some classification may be helpful. Before any spacecraft flew around the moon, astronomers could determine the mass of the whole moon, including the dark side. That calculation would be based on the following empirical data. First, by shining a pulsed laser beam at the moon, and monitoring the returned beam with accurate time-keeping, we can measure the distance from the Earth's surface to the moon's accurately. Second, we can observe the angular radius of the moon in degrees directly through a telescope. Combining that with the linear distance, we can calculate the linear radius and hence the volume of the moon. Third, we can ascertain the Moon's orbital trajectory by watching its movements with a telescope over a period of time. From this combination of observations, we can tell the mass of the whole Moon. When the metamind gave the astronomers the perceptions on which those numerical data are based, it did not need to decide what the dark side of the Moon would look like, only how much it would weigh in total. Thus we have a clear distinction between (a) the true assertion in the language-game of physics, that the dark side of the Moon did exist before mankind observed it, and (b) the true assertion in the language-game of metamental informatics, that the dark side of the moon came into being when it was first observed.

As I mentioned earlier, in discussing Helmut Schmidt's work, just-in-time object generation provides an elegant solution to his experimental observations of retrokinesis, which are impervious to explanation from any kind of physicalist framework. Recall that retrokinesis is the phenomenon in which someone can change physical facts in the past, using only mental intention. This can be fitted into the Berkeleyan model by speculating that the act of telekinetic intention conveys a signal to the metamind, causing it to select one, rather than another, set of possible outcomes, amongst not-yet-observed physical facts.

Formally, we can express it as follows. Let $P_o(t_1)$ be the set of all physical facts observed by any conscious observer up to time t_1 . This will include all physical facts that anybody has ever witnessed in his or her life, be they human or otherwise, provided that they have conscious minds. Now, as we have noted above, those observed facts will be only a tiny fraction of the complete set of all physical facts up to that time. So, given the actually observed

facts P_o , there are infinitely many permutations of possible facts that were not actually observed but would nonetheless be consistent with the observations that have been made. P_a will denote a set of *all* physical facts, both observed and unobserved. So, let each $P_{ai}(t_1)$ for $i = 1, 2, \dots$ be a possible set of all antecedent physical facts that collectively entail the observed facts $P_o(t_1)$. Each such $P_{ai}(t_1)$ includes *all facts*, be they observed or not. Therefore, in particular, each set of all facts $P_{ai}(t_1)$ contains the observed facts $P_o(t_1)$ as a subset, that is, $P_{ai}(t_1) \supset P_o(t_1)$. We can consider the entirety of these possible histories, as follows. The collection of all these sets of possible facts, $\mathbf{P}_a(t_1) = \{P_{ai}(t_1)\}$ is the set of possible histories consistent with the observations $P_o(t_1)$. So $\mathbf{P}_a(t_1) = \{P_{ai}(t_1) : P_{ai}(t_1) \supset P_o(t_1)\}$. According to the principle of just-in-time object generation, the choice of which $P_{ai}(t_1)$ is to be realised is left open at time t_1 . (This principle is motivated purely by the logic of mentalism, but it does have a suggestive similarity to quantum physics. Nevertheless the principle applies equally to macroscopic events that are not subject to quantum indeterminacy.)

After time t_1 , some new conscious perceptions will be had, so the cumulative set of observations will expand to $P_o(t_2)$. Not every set of all facts at t_1 , that is, not every $P_{ai}(t_1)$, will be consistent with $P_o(t_2)$. So, out of the collection $\mathbf{P}_a(t_1) = \{P_{ai}(t_1)\}$ only some can be expanded to become a $P_{ai}(t_2)$ containing $P_o(t_2)$.

Let us now look at potential applications of just-in-time object generation. We can consider two phenomena that are widely held to occur as part of daily life in New Age circles, but dismissed as necessarily nonsensical by stern, unbending physicalists.

4.3 Psi phenomena

4.3.1 Telepathy and telecognition

An ordinary mind is closed under normal operations of mental access. To achieve telepathic exchange, that closure must be breached. Some experientia must, in effect, become included in the minds of both telepaths.

Telecognition operates on a different basis. I have suggested earlier that in normal perception the following events occur: a ‘request signal’ is conveyed from the percipient to the metamental

engine, which directs it to the appropriate metamental object; that in turn will produce a ‘response signal’ containing the experientia appropriate to perceiving the corresponding object; and it will convey that response signal back via the metamental engine to the percipient. This communication is managed by the metamind, in two ways. First, the metamind attaches to the request signal some details of the observer’s whereabouts, so that the metamental object can generate imagery for the correct perspective; and the metamind will synchronise request signals from different senses, so that e.g. you can see and hear someone talking at the same time. Second, it will handle the returned response signals, organising them into a coherent, synchronised pattern.

In telecognition, the person will by-pass the metamind. She will convey the request signal directly to the metamental object, and she will then handle the returned response signal herself.

Targetting is a key problem in telepathy and telecognition. If person A wants to convey a telepathic message to person B, how does person A specify the intended destination? By what navigational mechanism is the message steered to the correct mind? How does person B know which messages are intended for her? Likewise, if a subject wishes to telecognise a remote site, how does she specify that site? By what mechanism is the request signal navigated to the target site? How is the response signal steered back to the originator?

Two hypotheses may be entertained to explain navigation in acts of telepathy and telecognition. I shall call them the ‘soup model’ and the ‘spaghetti model’. In the soup model, the metaverse is thought of as an unstructured, directly content-addressable soup of mental stuff: to pick out a telepathic target or a telecognitive target, you just focus your mind on some distinctive detail of the required target, and it will be selected by a universal pattern-matching power, and the target will automatically respond. On the other hand, in the spaghetti model, to locate a target, you must trace a path through the intentions of other minds to the target.

Although it seems to be popular, I do not see how the soup model could ever work. In order to pick out an individual telepathic recipient, you would have to have a very clear mental picture of her, in order to differentiate her from possibly hundreds

of other people on the Earth who have a similar appearance. Moreover, there are many experiments in which the telepath or telecognant is given only the barest of information. For instance, in the remote viewing programme initiated by SRI, the target for telecognition can be given geographic coordinates, or encrypted coordinates, or a random number looking like coordinates, or the word "Target", with equal degrees of success.

Therefore, I propose the spaghetti model. To see how this works, consider the remote viewing experiments as an example. The monitor has a mental intention of the target, and it is evident that the remote viewer picks up on this. That, however, is clearly not enough, for the viewer must then navigate from the monitor's intention to the target itself. In the monitor's prior experience there must have been some direct or indirect contact with site. For example, she might have seen a photograph of the site, which might now be in a folder beside her. The viewer must therefore pick up on that picture, and from that picture link to the target itself. The existence of those spaghetti-like connections requires that every act of perception or volition leaves a permanent and navigable psychic link.

Those links are implied by the basic Berkeleian model of perception. Recall that, according to the Berkeleian ontology, things exist only when perceived. So, you must tell objects when you are observing them, so they will know to render themselves in perceptual form, which you can then perceive. Consider, for instance, the desk in front of you. Your visual perception of it exists only when you are looking at the desk. The perception is not just sitting there waiting for you to experience it. Therefore, when you open your eyes and look at the desk, you must send a signal of some sort to the metamind (which will be directed to metamental object of the desk), to trigger its generation of the requisite perceptual experientia. So, whenever you perceive something, you must convey a 'request signal' to its metamental object, which then conveys back a 'response signal' containing the experientia that make up your perceptual sensations. In order to deliver that response signal, the metamental object must have a return route: so the request signal must have created a link, by means of which the metamental object can direct its response back to you. (Otherwise, how would you ever receive the experientia that the

metamind has generated for you?)

In the extratemporal domain of the metaverse, those links are always accessible. Hence a subject can at any time connect into any such links that have been established, and follow them to their targets.

So, the model of telecognition is that the subject makes a direct connection to some pre-existing link; and, rather than sending a request signal to the metamental engine in normal manner, she sends the request signal along that link, directly to the metamental object. The metamental object neither knows nor cares whether it has received this signal from an ordinary observation or a remote observation. That object then uses the same link to convey the response signal back to the subject, again bypassing the metamental engine, and thereby delivering perceptual experientia.

This model has clear implications for testable experiments. I will outline two experiments here, to illustrate a research avenue that I think would be worth while pursuing.

Remote staring experiment

To begin with, let us consider the remote staring experiments that Rupert Sheldrake has made famous, and on which Marilyn Schlitz has carried out a lot of rigorous work. In this experimental set-up, a staree sits in a room, being monitored by a closed-circuit television camera, while a starer stares at the image on a screen. It has been found that the staree reacts when stared at through this indirect means. The Sheldrakean explanation, which I believe Schlitz finds plausible, is that a psychic ‘energy’ of some sort travels along the television cable from the starer to the staree. I find this theory untenable — partly because I reject the energetic model of psi for reasons discussed earlier, and partly because it seems counter-intuitive that a basic, energy-like thing would possess enough intelligence to jump into the television screen and know which piece of wire to travel down. Why, for instance, does this psychic energy not go down the mains power cable and spook somebody in the power station instead? Or, for that matter, why does it not just go down the foot of the table that the television set is sitting on?

According to the Berkeleian model that I have proposed here,

all that is required is that the ‘mental spaghetti’ should have been connected from what the starer is staring at to the staree. Instead of a real-time television picture, it could be a video recording, or a still photograph, or a drawing, or an autograph, or hair or nail clippings. The theory proposed here predicts that the same success rate will be achieved.

Some interesting permutations of this experiment could be conducted with identical twins. In the following, I have imputed to the Sheldrakean model what I expect it to predict. (I asked Sheldrake personally about running staring experiments on twins, but he was non-committal on what he would expect the outcome to be.)

To do this, we must assume that the television pictures are digitised and pass through a computer, which can manipulate them. The twins, whom we shall call Mary and Jennifer, should be made to look as similar as possible, with the same hair style and the same clothes, sitting in identical rooms, in the same position in relation to the camera. There are three phases to the experiment.

- The camera circuit will randomly switch between showing Mary and showing Jennifer. Both the Sheldrakean and Berkeleian models will predict that the correct staree will react to the staring. (The soup model, on the other hand, would predict that the wrong twin will respond half of the time.)
- Now, we use some real-time software to interpolate the two pictures. For example, the computer will first realign the images so that they are in exactly the same position on the screen, then it will interchange groups of pixels between the two pictures. It might be necessary to carry out some morphing operations to get a good match. The end result will be a composite picture that will contain equal amounts of Mary’s picture and Jennifer’s picture, and which the starer will find indistinguishable from either Mary’s or Jennifer’s picture. The starer is not told that it is a composite picture. According to both the Sheldrakean and the Berkeleian models, both twins will now react equally.
- Finally, the computer displays the name of one of the twins, either “Mary” or “Jennifer”, above the composite image. The

starer is still not told anything about the picture being a composite. According to the Sheldrakean model, both twins will still respond equally, since the image on the screen will still be directing the psychic ‘energy’ to both twins. According to the Berkeleian model, however, the starer now has a basis for a link to one particular twin, and that twin will therefore react more. Whether the *other* twin will still react is not clear. My expectation would be that the starer’s mind would then interpret the display on the monitor as depicting the named twin and only that twin would react.

Randomised tags

In this experiment, we have a pool of N starees (say, ten of them). Before the experiment, the integers $1, 2, 3, \dots, N$ are randomly generated and stored in N randomly selected elements of a $N+1$ array of memory cells in a computer program. The single unused element of that array is chosen randomly. The computer then, in a separate action, randomly generates the integers $1, 2, 3, \dots, N$ again, and prints them out in random order onto sheets of paper, one number per sheet. Each staree is given one sheet to look at and memorise the number.

The experimenter chooses one staree at random, and types her six-digit number into a data-entry screen on the computer. We will refer to this as the target number. The computer stores it in the one unused slot of its array, which we will refer to as the target’s element of the array.

Then a series of, say, a hundred trials begins. In each trial, the computer selects one memory cell out of its array of $N+1$, it copies out the number held in that cell, and displays it on the screen. The starer then stares at that number, with the intention of influencing the person whose number it is. (The starer has not been told which number has been assigned to which person.)

The Berkeleian ‘spaghetti’ model predicts that (i) the only staree who will react will be the targetted person, and that (ii) that staree will react only when the starer gets the target number from the target’s element of the array. It is important to note that, amongst the the other N numbers that will randomly turn up, there will be one that is numerically identical to the target number — but it will not enable the starer to induce a reaction

in the staree. For instance, suppose that N is ten, and the target number is six. Suppose that when the N elements of the array are initially populated, the number six happens to end up in element no. 9; and when the experimenter selects number six as the target number, it happens to end up in element no. 2. The prediction is that only staree number six will react, and she will react only when the number from element no. 2 is displayed. The reason for this prediction is that only element no. 2 contains a number that is psychically linked to a staree. Although element no. 9 contains a numerically identical value, it does not possess that psychic connection. Of course, the ‘soup’ model would predict that the staree will react with both elements no. 2 and no. 9. (What would be predicted by an energy model, Sheldrakean or otherwise, I have no idea.)

As far as I am aware, nobody has done this experiment. Even if the prediction that has been derived here from Berkeleian model turns out to be wrong, I think it will be an illuminating experiment to do.

Magic

I will make the following remarks in a spirit of pure speculation. There is not, as far as I am aware, any scientific evidence to support them.

- Throughout folklore and religious tradition, one keeps coming across the belief that direct or indirect contact with another person can serve as a vehicle for magical power. Magical efficacy can be achieved through the use of items of clothing, or clippings of hair, that formerly belonged to a target person. This is a belief found in both Western and African traditions. If the Berkeleian model of psi, as discussed above, is true, then we might speculate that these forms of magic utilise the same links that telecognition employs.
- Especially in the Indian tradition of ‘darshan’, but also in Western folklore, we find the belief that direct perceptual contact with a magically powerful healer can be effective.
- In the occult arts, there is a belief that the procedures of ritual magic must be passed directly from adept to apprentice. It is usually supposed that this is merely to maintain secrecy. If the above speculations are right, it may be that the magical

procedures would simply not work without the direct transmission.

4.3.2 Synchronicity

'Synchronicity' is a phenomenon reported by Carl Jung, as meaningful coincidences that are causally unrelated, but which are psychically related to a mental state that you have at that time.¹⁵⁸ 'Manifesting' is a phenomenon in which visualisation is used to produce some outcome in the external world. In both cases, it is held to be possible to influence future events, even though those events are themselves the product of chains of cause and effect, which may even stretch back into the past, before the act of visualisation, or before the mental events that are supposed to trigger the synchronicity.

Can the Berkeleyan model account for them? I suggest that it can do so, using just-in-time object generation as a mechanism, as follows. Suppose that time moves on from t_1 to t_2 . Let $P_{o1}(t_2)$ and $P_{o2}(t_2)$ be two possibilities for the physical facts observed by time t_2 , both of which are of course consistent with the facts $P_o(t_1)$ that were observed earlier, at time t_1 . Of these two possible futures, suppose that P_{o2} is the desired outcome — the one that is being visualised, or the one whose occurrence is synchronistically relevant. Now, out of all the possible histories $\mathbf{P}_a(t_1) = \{P_{ai}(t_1)\}$ that support $P_o(t_1)$ at the initial time t_1 , there will be one particular subset $\mathbf{P}_{a1}(t_1) \subset \mathbf{P}_a(t_1)$ each of whose members are consistent with $P_{o1}(t_2)$ at the next time point, t_2 , and another particular subset $\mathbf{P}_{a2}(t_1) \subset \mathbf{P}_a(t_1)$ each of whose members is consistent with the other outcome, $P_{o2}(t_2)$ at time t_2 . Under mentalism, we can speculate that a mind could, at time t_1 , somehow cause an element of $\mathbf{P}_{a2}(t_1)$ rather than $\mathbf{P}_{a1}(t_1)$ to be realised. Note that each $P_{ai}(t_1)$ will include physical facts that refer to times earlier than time t_1 . From a physicalist perspective it looks as if the mind at t_1 is changing the past. From the mentalist perspective, though, that unpalatable conclusion does not arise: from that perspective, the physical events are all virtual, so they can be selected at time t_1 with impunity.

Indeed, I think is quite helpful to think of this in relation to man-made virtual reality systems, as I mentioned earlier. Those parts of the virtual world that have not yet been rendered and

presented on the screen need not have become fixed and determined by the computer. If you are exploring a virtual building, opening doors and going from the room to room, there may be some rooms that you have not yet visited. So, the computer may simply not have decided what it is going to put in those virtual rooms. The relevant part of its computer memory may just be blank. There may be no fact of the matter as to what is in the unopened rooms. Now, in this situation, the computer may decide to play tricks on you. If you decide to carry (in your virtual hand) some particular device such as a big key, then when you open a previously closed room, you may find inside a treasure chest whose lock is fitted by the key. In this encounter, you might think, "What a coincidence!", or even "What synchronicity!", but in fact the computer itself engineered the situation. When it detected what you were carrying, it secretly decided that it would put something relevant in the unopened room. It had complete freedom to do so, precisely because you had not yet observed the contents of that room.

My claim here is that the metamind may be playing precisely the same 'trick' in when we encounter real-life synchronicity and visualised manifesting. The metamind detects what we are thinking, and modifies those parts of the physical world that nobody has observed, but which will turn out to have significant implications.

Let us take a look at some fairly specific examples of what may be just-in-time object generation in action.

Weather

The first example, in fact, ties in with statistical observations reported by Dean Radin.²³² The precise state of the air in the troposphere is never comprehensively measured by anybody. How the temperature, density, humidity, and wind velocity vary three-dimensionally throughout the bottom eleven miles of the atmosphere determines what weather we have at the ground, but we never have a completely detailed picture of it. Meteorologists have only spot readings, at weather stations and weather balloons. From meteorological satellites, a lot more information can be obtained, but it is obviously limited to the radiation leaving the top of the atmosphere, and does not directly indicate the ver-

tical distribution of physical characteristics throughout the depth of the troposphere, and moreover the information is still limited to a certain finite resolution in the two dimensions that it can scan. So, there are extensive ranges of physical facts in the atmosphere that cannot be observed. Nor can they be predicted. The atmosphere is a notoriously ‘chaotic’ physical system in the mathematical sense of the word. (‘Chaotic’ just means that the system is so sensitive that it may respond with a large reaction to arbitrarily small changes in initial conditions.) So, we just cannot tell what exactly is going on in the atmosphere. Therefore, the metamind could ‘modify’ those unobserved conditions, and nobody could ever detect any violation of physics, precisely because nobody will know what the exact distributions of density, temperature, water vapour, and wind were before the metamind makes its intervention. Therefore, if people visualise good weather with the intention of manifesting it, and if the metamind detects those intentional visualisations, then it could respond by setting those unobserved facts in such a way as to produce the desired good weather.

This is just what Radin found in his investigations: that people can collectively induce good weather with their minds.

There are a few points I need to clarify. First, there is the nature of the metamind’s ‘intervention’ in the atmosphere. This may sound as if I am asserting that the metamind shifts parcels of air around, or moistens the air in one place whilst drying it in another. This is not what I am saying. Rather, what I am suggesting is that the physical characteristics such as temperature and humidity just do not have specific values in large parts of the atmosphere. They have only a probability distribution, which itself is determined by the conscious observations of the atmosphere at limited points. The metamind’s intervention is to restrict those probability distributions so as to make the desired outcome much more likely, or even certain, whilst remaining consistent with existing observations.

For people who are still locked into the picture of the physical world as being laid out, fully formed for an omnipresent viewer to see, this theory is unintelligible. For them, it is obvious that each part of the atmosphere has a definite temperature and humidity, and if the metamind is intervening in the weather, it must do so

by miraculously redistributing the temperature and humidity and thereby breaking the laws of nature. That, however, is the wrong picture. In fact, the physical world does not exist like that. It is a virtual world defined by a database in the metamind that is only partly populated, and the populating of that database can be affected by mental intention without breaking any laws of nature.

Healing

Russell Targ and Jane Katra, in their book MIRACLES OF MIND discuss the possibility that a person's internal state of health may remain modifiable until it is fixed with definitive observations and diagnosis. They are, however, still using the incoherent notion of transmitting influence back into physical time. But, if we translate their suggestion into the Berkeleian model of just-in-time object generation, then it is credible. Thus:

Can we send healing thoughts into someone's past, to help them to be less sick than they presently are? ... Surprisingly there are data that suggest we can facilitate this healing, so long as no one knows how sick the patient really is. According to the Observational Theory of psi, an early and definitive diagnosis of an illness might serve to "lock-in" the illness, thereby making it impossible to affect or cure it retro-causally.³⁰⁷

Because of their assumptions, they have presented this idea as a self-contradictory claim. They say they want change "how sick the patient really is", which is nonsensical. What I believe they are trying to articulate, and what the Berkeleian model says, is that how sick the person may be is not yet determined: there is no fact of the matter. The metamind has not yet populated the section of its database that constitutes the facts of the person's internal condition. Consequently a bio-telekinetic action could sway the metamind one way or the other, prior to an accurate observation being made of the internal state.

Targ and Katra cite some intriguing recent research by Schmidt, in which he reports retrokinetic experiments in which the pre-recorded but unobserved breathing rate of a person 'in the past' can be affected by telekinetic intention at a later time.²³⁹

Divination

Divinatory methods have been popular throughout recorded history and are burgeoning today. Besides traditional formats such as Tarot cards, there are hosts of other card patterns, such as INNER CHILD cards and ANGEL cards. There is also the traditional I Ching method that involves casting sticks, and miscellaneous other divinatory techniques. What they all have in common is the injection of apparent randomness into the apparatus, by shuffling the cards or casting the sticks, or whatever method is being used; followed by a more or less formal interpretation of this non-deterministic outcome.

Although associated in the popular imagination with fortunetelling, these techniques are more often employed in what might be called spiritual counselling, providing diagnosis and insight into the present situation.

From the Berkeleyan perspective, the initial physical conditions that will determine the resting positions of the divinata are unobserved, and so the selection of cards, or the fall of the I Ching sticks, is not determined until it is observed and can therefore serve as a vehicle for the manifestation of a subject's own subconscious or of a disembodied mind.

Indeed, when the cards from the Tarot pack (or whichever cards are used) have been chosen and spread out, they may still be undetermined. Until each card is turned over, it is still possible to use psi processes to change what will be on the face of the card. This really brings home how pervasive and radical the hypothesis of just-in-time object generation is. To think that you could have a number of tangible Tarot cards lying face-down on the table in front of you, and still affect which cards they will turn out by means of your (possibly subconscious) intention is astonishing. Yet, it entails no observable violation of the laws of nature.

Model complementarity

Using the principal of just-in-time object generation, we could suppose that different causal laws could co-exist in the world. For instance, one could postulate a causal scheme based on, say, the flow of chi energy, as is employed in acupuncture and feng shui. By selecting appropriate unobserved histories P_{ai} , an agent could

implement this alternative system of causal laws without violating the ordinary laws of physics.

We could described this as a new principle of complementarity: when we carry out experiments that test physical laws, we find that they hold; but when we carry out experiments to test the laws of chi energy, we find that they hold. In other words, performing an experiment that is designed to find a physical explanation for something like acupuncture may simply destroy the effect.

This does not, by the way, go against any of my earlier comments criticising the energy model of psi. Here, I am just referring to practical, therapeutic practices of Chinese medicine that happen to be express in terms of chi energy.

I do not know of any evidence to support the actual occurrence of model complementarity, but I thought it was interesting potential ramification of just-in-time object generation.

Chapter 5

Strange manifestors

5.1 Strange manifestors as rogue entities

What I mean by a ‘strange manifestor’ is an entity that generates experiences in an observer’s mind directly rather than through the usual channels. The ‘usual channels’ are those channels that are presented to the observer as if they were physical media, and are used in regular, day-to-day conscious communication between people. For example, if you talk to me then your mind conveys volitional signals to the metamental engine, which then delivers corresponding signals to me that are presented as an auditory experience of a human voice. Of course, in the Berkeleian universe, the physical sound waves themselves do not serve to convey your words, as they have no real existence. Rather, the mechanisms of the metamind convey your words and generate the sensory impression of hearing them, creating the illusion that your words had been carried through a physical medium. In contrast, a strange manifestor delivers its message directly to the observer’s mind, by-passing the central engine of the metamind.

Whether or not any strange manifestors actually exist is not entirely clear yet, but there are at least large numbers of anecdotal reports of phenomena that would appear to involve strange manifestation. It is therefore worth while to look at these reports.

5.2 Ufos

5.2.1 Background

The subject of ufos as a distinct area of investigation and reporting came into being after 1947, with Kenneth Arnold’s celebrated sighting of what the newspaper reports called ‘flying saucers’, although the phenomenon had been reported before then. As Carl

Jung wrote in his study of flying saucers in 1958:

The signal for the ufo stories was given by the mysterious projectiles seen over Sweden during the last two years of the war — attributed of course to the Russians — and by the reports about ‘foo fighters’, i.e. lights that accompanied the Allied bombers over Germany.¹⁴⁴

Although they were observed as rare curiosities in earlier centuries, they merely gave rise to the usual local rumours. The universal mass rumour was reserved for our enlightened, rationalistic age.¹⁴⁷

A combination of the elusiveness and sexiness of the phenomenon quickly led to accretions of both hoaxes and literary and filmic fiction, a spiralling process that continues to this day. This was exacerbated by the lack of any critical apparatus for testing and filtering out bogus reports from genuine ones. A lot of the information about the weirdest cases, those involving contact with ufo occupants, has been obtained by regressive hypnosis. That method is notoriously vulnerable to the hypnotist’s accidentally or deliberately inserting false memories, as well as the unconscious mind’s native propensity to fantasise. Most of the ufological literature seems to consist of unthoughtful and uncritical catalogues of reported sightings, strung together by the prevailing hypothesis that the ufos are physical spacecraft from one or more other planets.

Jacques Vallée was probably the first ufologist, in the 1960s, to apply some degree of scientific rigour to studying the ufos, and published statistical analyses in two books in the mid-1960s. He also invested a lot of effort in tracking reports of ufo-like events in folklore and historical records over past centuries. Belief in the existence of a paranormal realm where other orders of beings dwelt has considerable antiquity, as Peter Kingsley notes:

We can hardly draw any dividing line between Plato’s notion ... of another, aitherial earth ... and the various Pythagorean ideas of ‘another’ or ‘aitherial’ earth, a ‘celestial’ or ‘Olympian’ earth, inhabited as well. We know that in antiquity there were a number of different ways of identifying this other earth: an invisible planet, or the moon, or the stars, or heaven itself.¹⁶⁴

Pythagoras lived in the sixth century BCE, and his school of initiation, magic, and philosophy persisted for centuries. Although Plato and Aristotle misunderstood much of it, the so-called Neo-Platonists such as Plotinus restored the ancient Pythagorean thinking and preserved it. There seemed to be an understanding that this other world was not just another, independent world, but one that was linked by opposition to our own. Thus Kingsley writes:

The Pythagorean Philolaus is held to have originated the idea of a celestial ‘counter-earth’ in the form of an invisible although inhabited planet.¹⁶⁵

Oppositional stance of the other world is evident in much of the Celtic fairy lore, and Keel has found the same repeatedly in modern ufo contactee cases.

5.2.2 Ufos as paranormal phenomena

There has been an intelligent undercurrent of thinking that recognises ufo sightings as a facet of a rather broader phenomenon that has been with us at least since the beginning of recorded history, that manifests itself in a range of forms far removed from the clean-cut but infantile image of the alien spaceships. Carl Jung was the first to call the bluff of the extraterrestrial theorists, in his book published in 1958, FLYING SAUCERS, A MODERN MYTH OF THINGS SEEN IN THE SKY: ufos, he suggested, might be a projected manifestation of the collective subconscious, although even he was hesitant about supposing that psychic projections could manifest themselves with such apparent physicality as to appear on radar screens. A few years later, in PASSPORT TO MAGONIA (1969), Jacques Vallée brought out the similarity that the ufo phenomenon bore to the traditional accounts of supernatural beings: fairies, angels, demons, goblins, and such-like. John Keel in OPERATION TROJAN HORSE (1970) drove a horse and carriage through the whole extraterrestrial framework by revealing the extent of contactee cases and the absurdity of the behaviour of the supposed aliens.

The only way to hold on to the ET hypothesis is by ignoring a large swathe of the empirical data. There is, in fact, an ironic similarity between the defences of the ufo debunkers, who ridicule all ufo reports, and the ET theorists, who ridicule all the weird ufo reports. Those who deny the existence of the ufo phenomenon do

so mainly by disregarding the data on the grounds that the data do not fit in with established scientific knowledge, and they presume the data must therefore be erroneous. Likewise, supporters of the ET hypothesis disregard the weird contactee data because they do not fit in with what we would expect of alien astronauts. Neither of those two approaches, however, is the way to do science.

There is nothing in the data themselves that entitles us to reject reports of people who say they were abducted and taken on a sight-seeing tour of distant solar systems, while at the same time we accept sightings of silvery discs speeding through the sky. Without a robust, positive theory that explains how these reports come into being in the first place, we are not in a position to say that certain categories of these reports may be presumed to be fallacious. What I mean by a ‘positive’ theory is an account that correctly predicts the empirical characteristics of the reports, as opposed to a ‘negative’ theory, which merely shows how each individual report could in principle be explained. I do not mean by this that a positive theory must provide a proof that each past report can be explained by the theory, but only that the statistical features of the reports, such as those established by Vallée, can successfully be modelled. So, if, and only if, we were to establish firmly and beyond any reasonable doubt that there are alien spacecraft entering the Earth’s atmosphere, then we could plausibly disregard the weird contactee data whilst studying the phenomenon of alien visitations; and, conversely, if we then wanted to study the weird contactee reports as a phenomenon in its own right (perhaps only as a psychological phenomenon), we would filter out the observations of alien spacecraft. Ufology would bifurcate into two distinct fields. Since that has not yet happened, however, the proper course is to consider the body of empirical data as a whole. In short, we have neither empirical nor theoretical grounds for splitting the corpus of ufo reports into the valid and the invalid.

Reading the ufological literature, one gets the impression of an underlying assumption that if a reported ufo sighting is an observational error, then that is all there is to say about it. This is not so. Observational errors are themselves natural phenomena that are subject to natural laws, that can be studied scientifically with conventional techniques, and can be modelled so as to predict

their statistical properties. Likewise, if an abduction report has a psychopathological cause, then that report itself is a symptom of a natural phenomenon, part of a recognised pattern with known properties that can be modelled.

On the face of it, the core of the ufo phenomenon is not explainable as observational error, nor as psychopathology, nor as hoax. My main reason for saying this is that there is a significant number of incidents in which several, but not all, of a group of normal, reliable people report having observed a ufo at close quarters. Ufos are often too clear and distinct, and seen at such proximity, that they cannot be regarded as due to observational error. And they are often seen by several independent competent witnesses, and so cannot be regarded as a product of some individual's mental dysfunction. We may presume that they are real phenomena coming from some external source.

It is highly implausible that the core of the ufo phenomenon can be attributed to visits by interplanetary vehicles. A basic datum is that, in some cases, the ufo is seen by some but not all of the people who are present, which shows that it is hallucinatory in nature. The term 'hallucination' is somewhat loaded, because of its associations with psychopathology. I should emphasise that, for the reasons mentioned above, the cause of that hallucination must be presumed to be something external to the observer, and not a psychological dysfunction in the observer. The characteristics of the ufos in these cases of selective visibility are shared by large numbers of other reported ufos. It is not that we have one kind of phenomenon in cases of selective visibility, and another kind in regular sightings. In respect of the ufos' shapes and colours, the form of their trajectories, their peculiar tendency to vanish and re-emerge, and the observed features of the associated aliens, are all the same in both kinds of sighting. So, whatever it is that is observed in these cases of selective invisibility, it is a reasonable working hypothesis that the same cause is responsible for a large number of the other reports: that a large proportion of ufo reports are hallucinations produced by a real, external process. Furthermore, there are several pieces of circumstantial evidence which, together, strongly militate against the 'extraterrestrial hypothesis' (ETH):

- The ufos themselves do not behave like solid objects. They

appear and disappear, sometimes at distant locations, and can merge together as one or split into two. They can sometimes be visible but not appear on a radar screen, and sometimes vice versa. They accelerate and decelerate at rates that would crush any living tissue inside them. Moreover, they achieve enormous accelerations from rest without generating a sonic boom, which strongly indicates that they displace no air, which is to say, they are not solid objects.

- A large proportion of contactee incidents are ‘hallucinomorphic’, that is, they exhibit the characteristic appearance and behaviour of hallucinations. The occupants themselves, like the ufos, can appear and disappear; they can also pass through walls and other solid obstacles. They appear in a great variety of forms (seventy according to some counts) including a “bewildering array of insect types, intelligent lizards, grey neonates, and beautiful people, [and] luminous sorts”¹⁷⁵ and can change shape before the observer’s eyes.
- The ufo phenomenon exhibits some degree of intelligent behaviour: it can track witnesses, whether at home or when travelling by foot or car; and the occupants can engage in conversation with contactees, often possessing extensive access to private information about the contactees.
- The ufo occupants often exhibit a complete deficit of higher intelligence or purposefulness. Despite endless activity, they never actually seem to achieve any apparent objective, either in individual cases of contact, or in the waves of activity that have occurred since the 1950s. Furthermore, although they carry on conversations with contactees, the content of what they say is generally inane.
- The ufos and their occupants seem to seek out witnesses, and to respond to human thoughts. At a broad level, the appearance of the ufos and their occupants reflects the personal and societal expectations of the observers.
- Ufo contacts are often followed by recognised paranormal phenomena, such as poltergeists, including especially the disruption of electrical appliances. Significant numbers of contactees report the acquisition of apparent psychic abilities after the contact.

- The phenomenon shares the above characteristics, as well as many details of appearance, with a varied range of non-*ufo* phenomena throughout many cultures and many periods of time.

All of which together leads me to the conclusion that *ufos* are hallucinations that are induced by non-physical external entities that possess a rudimentary form of intelligence.

It is not appropriate for me here to report at length the empirical data on which this conclusion rests. You should refer to the publications of the investigators who have done the hard work of collecting and collating the data, such as Jacques Vallée and John Keel. As a starting point, Colin Wilson's book *ALIEN DAWN* is an easy-to-read introduction. My limited aim in this book is to take their empirical results and explore some explanatory hypotheses derived from Berkeley's metaphysical theory.

I am not suggesting that anyone should take my word for it. There is a wealth of reported data readily available in the openly published literature. Moreover, in order for the scientific study of *ufos* to progress soundly, the pioneering studies of Vallée and Keel should be duplicated and extended by independent researchers. Of course, that is not easily going to happen, because it takes time and money, and it is not the sort of thing that governments, universities, or private industry feels incline to spend resources on.

In opposition to the extraterrestrial hypothesis (ETH), there are several alternative descriptions of the underlying phenomena, as follows.

Ultraterrestrial

John Keel, in his book *UFOs: OPERATION TROJAN HORSE*, called the entities responsible for the *ufos* 'ultraterrestrials' and claimed that they were denizens of some hitherto unknown part of the electromagnetic spectrum. The term is etymologically nonsensical, as the prefix "ultra-" is an intensifier. For instance, 'ultrahigh' frequencies are extremely high frequencies. So the 'ultraterrestrials' ought to be creatures who are even more terrestrial than we are, a description that surely applies more to earthworms and moles than *ufos*. We must credit Keel for his ground-breaking research and for recognising the need for a term to counteract

“extraterrestrial”, but we cannot accept his terminology of “ultraterrestrial”.

Hyper-dimensional or multi-dimensional or hyperspatial

This term has been poached from other areas of science, such as Michio Kaku’s book, HYPERSPACE, which has nothing to do with ufos. This is a poor term for the anti-extraterrestrial view of ufos, because it presupposes a particular model of the underlying nature of ufos, and not a particularly coherent model. Even if there were other spatial dimensions through which physical objects could travel, almost all of the mysteries of the ufo phenomenon would remain. At most, the theory could explain only the ufos’ appearing and disappearing. But even that is purely notional, as it supposes that the other dimensions can be used in the same way as the ones we are familiar with.

Multiverse

Jacques Vallée used this term in his book DIMENSIONS: A CASE-BOOK OF ALIEN CONTACT, to describe the informatic domain in which the process underlying the ufo phenomenon occurs. This term has some merit, but is somewhat ambiguous as it is equally suggestive of multiple physical universes as well as of Vallée’s non-physical world beside or underlying this universe.

Paranormal

This seems the best term, as it signifies only that the ufo phenomenon is produced by something operating outside the framework of normal physical processes.

5.2.3 Modelling the ufo phenomenon

The orthodox position in ufology has been that the ufos are material spacecraft of extra-terrestrial origin, but there is a minority view that they originate from what might be termed a parallel world. As with paranormal phenomena in general, this minority view is usually expressed in the ‘energetic’ paradigm: the ufos are supposed to consist of a novel kind of energy, or of energy at a novel frequency, or energy that resides in other dimensions. John Keel, in his COSMIC QUESTION offers a typical account of the energetic hypothesis:

[The superspectrum] is a hypothetical spectrum of energies that are known to exist but that can not be accurately measured with present-day instruments. It is a shadowy world of energies that produce well-observed effects, particularly on biological organisms (namely humans). This superspectrum is the source of all paranormal manifestations from extrasensory perception (ESP) to flying saucers, little green men and tall, hairy monsters. It is hard to pin down scientifically because it is extradimensional, meaning that it exists outside our own space-time continuum yet influences everything within our reality.¹⁶¹

However much one respects Keel as an empirical investigator of the ufo phenomenon, his theorising is hopelessly incoherent.

None of the energy formulations stand up to even a cursory attempt at rigorous formulation and, at best, can serve only as suggestive metaphors. Opposed to the energetic paradigm is the ‘informatic’ paradigm. As far as I am aware, Jacques Vallée is the only proponent of this paradigm, and his theories lead in the direction of a Berkeleian account of ufos. Whereas the energetic paradigm tries to explain ufos as just another phenomenon in the physical world, the informatic paradigm requires a fundamental revision of the notion of reality. Vallée’s thesis is that, underlying the manifest physical world as we experience it, is another domain, which may be likened to an associative database. Seen from our everyday world, ufos are incursions by processes that are going on in that informatic realm.

I propose to define consciousness as the process by which informational associations are retrieved and traversed. The illusion of time and space would be merely a side effect of consciousness as it traverses associations.³¹⁴

Vallée does not, however, offer an account of the nature of that informatic realm, or how it relates to the manifest physical realm. That gap is, I believe, filled by the Berkeleian model that I have proposed in this book. Vallée only indicates a key property that this informatic realm should possess, namely that it should have a content-addressable interconnectiveness:

The synchronicity and coincidences that abound in our lives suggest that the world may be organised like a randomised data base (multiverse) rather than a sequential library (the

*four-dimensional universe of conventional physics). ... If there is no time dimension as we usually assume there is, the human brain may be traversing events by association.*³¹⁵

To be sure, certain criticisms can immediately be made of Vallée's theory. As a comprehensive philosophy of mind, Vallée's notion is a non-starter, since it would imply that all our waking experiences would be as chaotic as our dreams. Also, there is an inconsistency in his proposing that it is the brain, rather than the mind, that traverses the multiverse: for, the brain would be a construct just like everything else that we observe. Nevertheless, as an articulation of the kind of theory that is required to accommodate the ufo phenomenon, Vallée's theory is important.

As an aside, I would take issue with Vallée's emphasis that ufos are physical. Even by Vallée's own theories, that description is stretching the term 'physical' beyond its useful and customary scope. That the ufos have an objective reality external to the observer is not in doubt; and it also seems evident that ufos can wreak physical effects. But the ufos themselves are, in Vallée's theory, things that lie outside the physical realm; and, in the Berkeleyan model, they are metamental dæmons.

In the following section, I shall offer a more detailed critical review of Vallée's account of ufos.

5.3 Vallée's account of ufos

Jacques F. Vallée cannot be said to have a definite theory of what ufos are. He is a cautious enough scientist to hold back from premature certainty, to recognise that although the empirical data may invalidate some hypotheses, and may point in the general direction of some new hypotheses, nevertheless they are not yet extensive and solid enough to give us a bridgehead into a secure theory.

Vallée launched himself into ufological community in the 1960s with his CHALLENGE TO SCIENCE and ANATOMY OF A PHENOMENON, which for the first time brought statistical methods to bear on the accumulating masses of ufological reports. It was with his book PASSPORT TO MAGONIA (1969), however, that he changed the face of ufology. Since then only a naïve and selective view of the subject could support the idea that ufos are material spacecraft from other planets.

Later, Vallée published further investigations in his books DIMENSIONS: A CASEBOOK OF ALIEN CONTACT (1988), CONFRONTATIONS: A SCIENTIST'S SEARCH FOR ALIEN CONTACT (1990), and REVELATIONS: ALIEN CONTACT AND HUMAN DECEPTION (1991). In this trilogy, Vallée paints a picture of bizarre dream-like events stretching back through centuries or millennia, spread throughout the globe, bearing recurrent features and displaying seeming intelligence but never making sense as a whole. In my view, his picture ties in well with Jung's theory of ufos as projections from the collective unconscious. Vallée, however, has never been able to accept such a position because of his insistence that ufos must ultimately be physical, even if they can induce strange psychological or paranormal effects in ufo percipients. In this connection, however, I think that Vallée is blinkered by a limited ontology: if we were to take as our starting point the conventional assumption that reality is primarily physical, then we would indeed be forced to accept that ufos are a novel physical phenomenon, albeit with strange effects on the mind. If, on the other hand, we take a step back and adopt the larger ontology that we can find in George Berkeley's metaphysics, in which the physical world is held to be a small and derivative part of a bigger picture, then we will find new ways of conceiving of ufos. In this ontology, ufos can be construed as entities that are real but non-physical, that exist in the metamental world but can affect the mental and physical worlds.

Three levels

In DIMENSIONS, Vallée wrote that he had "come to think of the ufo phenomenon in terms of three distinct levels". His first is physical, and here his views reflect the mass of hard technical data that show that ufos have physical effects. Those data are presented in Part 1 of his CONFRONTATIONS. One of the key pieces of empirical evidence to arise from Vallée's meticulous field work is to establish that in at least some cases, witnesses seem to be looking at the same thing. In one well-documented case with multiple witnesses, Vallée concludes:

The series of measurements made in the field established (within the expected errors of human recall) that all the witnesses had observed the same object. There was agree-

ment on time, duration, distance, trajectory, sound, and luminosity parameters.³⁴⁵

From studies of this kind, he proceeds to draw the following inference:

We now know that the ufo behaves like a region of space, of small dimensions (about ten metres), within which a very large amount of energy is stored. This energy is manifested by pulsed light phenomena of intense colours and by other forms of electromagnetic radiation.³³⁴

In fact, this statement goes beyond the empirical data. We do not, in fact, know that any energy is “stored” inside the ufo. What we know is that, in the vicinity of a ufo, physical effects may be observed *as if* a large quantity of energy had been emitted from the ufo. For example, in cases quoted in CONFRONTATIONS, widely separated witnesses observed a very bright source of light seeming to come from a considerable distance. Vallée assumes (a) that the energy actually originates from its apparent source (the region of space apparently occupied by the ufo) and (b) that the energy is being more or less uniformly radiated in all directions, even in directions where there are no witnesses. If we were dealing with a normal physical process, these would be valid assumptions. What Vallée is forgetting, however, is the astonishing observer-sensitivity and even observer-dependence of ufo events. Ufo events do not just happen by themselves, like meteor showers or the proverbial tree falling in the forest. They are shows presented specifically to the witnesses. If we bear that in mind, then we have to question Vallée’s assumption that the radiation is being emitted uniformly in all directions. In fact, the ufo might emit the radiation exclusively in pencil-thin beams in the direction of each observer, and each measuring instrument (such as the photocells governing a town’s street lamps³⁴⁶). There would, by definition, be no observable difference. Furthermore, the energy need not originate in the apparent volume of space of the ufo, but could be generated in the immediate vicinity of each observer. In fact, the ufo phenomenon could create the relevant pattern of light immediately in front of each witness’s eyes, in front of each camera, and in front of each photocell. The amount of energy required is then tiny, and quite negligible in comparison with the megawatts that Vallée claims are involved.³⁴⁷ The source of such energy is not

then problematic: the atmosphere is awash with vast amounts of electromagnetic that is scattered randomly between the molecules of air. For example, on a typical sunny day, we may find that 40% of the light reaching ground level has been scattered out of the Sun's beam by air, water vapour, and dust, and arrives as the blue light of the sky. If some intelligence, rather like Maxwell's demon, could steer a tiny proportion of that scattered light into an optical image entering the observer's eyes or the camera's shutters, then it would seem to the observer precisely as if she were seeing a bright object some distance away. I will refer to this as the 'local energy' hypothesis, as opposed to Vallée's 'remote energy' hypothesis.

Against this hypothesis, it will be objected that I have replaced one mystery — the ufo as a physical source of vast amounts of energy — with a harder mystery — the coordinated control of the scattering of tiny amounts of light at each witness. An energetic problem has been replaced with an informatic problem. This is, however, a soluble problem, as we see when we discuss just-in-time object generation, and the informatic power that is implicit in laboratory studies of retrokinesis.

If we were dealing with regular objects and processes, then we would never countenance such an outrageous hypothesis. Ufos, however, are highly irregular. One of the irregularities that would be accounted for by the model that I am putting forward here is that curious and often reported feature that sometimes the ufo is not visible to everyone present. Some people just cannot see the ufo even though they are looking at the volume of space where Vallée would say the ufo is. Likewise, there have been reports where a ufo has been visible to the naked eye but invisible to radar, or visible on radar but not to the eye. And cases (which Vallée records) where a camera has recorded a ufo that was not seen by the person taking the picture. These irregularities are inconsistent with Vallée's assumption that a ufo is actually radiating a large amount of energy in all directions. Instead, it points to clearly to the alternative hypothesis that the ufo produces its physical effects in the immediate vicinity of the individual witness or observing instrument.

So, the ufo could direct seemingly reflected radar waves back to the radar detector without sending visible light to the witnesses. Likewise it could direct a beam of light into the camera's lens, but

not into the observer's eyes. It could even do this with single-lens reflex (SLR) cameras if we suppose that the light rays are generated inside the camera immediately above the film surface.

Not only could optical images, as well as other radiative effects, be accounted for by a 'paranormal Maxwell's demon', but more mechanical effects are equally amenable to this form of modelling. At the end of one ufo encounter that Vallée reports, we read:

*Then the object rose about twenty feet from the ground before taking off straight south, causing a blast of air that bent some nearby pine trees.*³³³

Just as the scattered radiation passing through the atmosphere could be channelled into individual witness and observing instruments, so the normally random eddies of the air, and even the thermal energy itself (which is just the motion of the air's molecules) could be redirected into blasts of air. The initial apparent absurdity of this hypothesis may seem less outrageous when we have to account for invisible ufos that leave swirling vortices and air currents.³⁴⁸

Apart from the apparent energetic effects of ufos, Vallée also reports objects being produced and deposited by ufos. Usually these objects are lumps of metal, but there have also been reports of a fibrous substance called 'angel hair', and in one case a sand-like material. These may seem to be harder to account for within the Jungian theory that regards ufos as projections from the collective unconscious, but I believe that they are also amenable to a similar approach.

Let us now, though, proceed to Vallée's second level in his DIMENSIONS, which is biological:

*Reports of ufos show all kinds of psychophysiological effects on the witnesses. Exposure to the phenomenon causes visions, hallucinations, space and time disorientation, physiological reactions (including temporary blindness, paralysis, sleep cycle changes), and long-term personality changes.*³³⁴

Vallée, one feels, regards these biological effects as adding further weight to his hypothesis of the physical reality of ufos. In fact, however, it is accepted even in conventional biosciences that psychological process can have physiological effects. Furthermore, in parapsychological studies it has been established that the mind can have a direct effect on physiological parameters. See, for

instance, Schlitz's research on remote staring affecting the skin conductance of a subject. In clinical trials of spiritual healing, substantive disease conditions have been remedied. Indeed, in Vallée's own data, we find repeated cases both of people being healed without medication after their encounters with ufos, and of people acquiring powers of psychic healing. It is therefore by no means clear that these biological effects should be seen as evidence of a physical agency.

Finally, Vallée's third level is social.

The experience of a close encounter with a ufo is a shattering physical and mental ordeal. The trauma has effects that go far beyond what the witnesses recall consciously. New types of behaviour are conditioned, and new types of beliefs are promoted.³³⁴

This may be crucial in unravelling the deeper causes of the ufo phenomenon. If ufos are symptoms of crises in the collective unconscious, tracking the broader psychological and societal pattern may take us to the engine that is driving the whole show. As Vallée's reports repeatedly reveal, ufo sightings are often not isolated incidents but components of both synchronic patterns — not just the well-known ufo flaps but also local concentrations of poltergeist activity — but also diachronic patterns — the tendency of many ufo percipients to develop enthusiastic interests in spiritual and paranormal matters, or psychic powers. These broader patterns have received scant attention in the ufological literature but may be of at least as much importance as the immediate details of the sighting.

Vallée and other writers have reported cases in which the ufo encounter has a transformative effect on the percipient. For instance, a woman who had observed a flying disk spoke afterwards of insights that came to her in the aftermath of the encounter:

I won't try to explain what those insights were since almost all the religions of the world have tried to do this and have failed. (In that afternoon I changed from an agnostic to a gnostic, if that means anything at all.)³¹³

Reading between the lines, one feels that Vallée and Keel are hinting that the ufo encounter *causes* such transformations. Well, that is one possibility. Another possibility is that the early stages of the transformation caused the ufo experience. Maybe the trans-

formation was going to happen of its own accord, but there may have been a psychological build-up to it going on unconsciously, which predisposed the witness to experience the ufo encounter — or even caused the ufo experience.

In this connection, there is an interesting detail in a report that Vallée quotes of a ufo sighting in Australia. When the ufo percipient tells a farmer what he has seen on his land, the farmer — far from being surprised — replied that he has been dreaming for a week that a ufo would land on his property.³³⁵

The latter case is, obviously, anecdotal. To reach any firm conclusions, we need statistical analysis of substantial amounts of empirical data. Because of its extraterrestrial bias, however, the ufological community avoids asking ufo percipients such questions as whether they have been dreaming of ufos recently.

Associated paranormal phenomena

Reading through much of the ufological literature, you would never guess that close encounters with ufos are normally embedded in a matrix of other, paranormal happenings. The reigning orthodoxy is that, if ufos exist, then they can only be interplanetary spacecraft, has lead to self-censorship of the bizarre components of the ufo phenomenon. Vallée writes:

*During the 1970s, the reports of paranormal events in connection with close encounters with ufos seems to have become the rule rather than the exception, and investigators have found it very difficult to deal with this aspect of the cases because it does not match their expectation of what an extraterrestrial visit would be.*³³⁶

*... phenomena of precognition, telepathy, and even healing are not unusual among the reports, especially when they involve close-range observation of an object, or direct exposure to its light.*³³⁷

There is an impression that, at the time of a ufo wave, or even an individual encounter, there is actually a lot of psychic activity going on, which may be said to peak in the ufo experience, which is like the tip of an iceberg. Other psychic manifestations are usually of a lower grade, such as poltergeists:

It is the rule, rather than the exception, to find significant ufo sightings preceded or followed by other anomalies,

*notably of the poltergeist variety.*³⁴⁹

One way of looking at this feature is to suppose that the ufo somehow induces the paranormal events as a side effect. Another way of looking at it, which fits better with the overall assembly of facts, is to suppose that a unitary unconscious process generates both the vision of the ufo and the paranormal events: that both are side effects of an eruption from the collective unconscious.

Observer dependence

A basic empirical feature of ufo encounters, which Vallée established early in his research, and which continues to be confirmed by new data, is that ufo encounters are drawn to isolated witnesses. They avoid crowds. Thus Vallée writes:

*In 1964 I had established that more landings tended to occur in isolated places, a fact that was first apparent in the computer analysis of French cases. Eventually, using Air Force data, I convinced Dr Hynek that the same pattern existed in the United States.*³³⁸

Time and again, it seems as if the ufo landing is set up for the witness to observe. The ufo activity, especially the landings, are not going on all the time, of their own accord. It seems rather that the phenomenon manifests itself in just the right times and places so that it will be observed by particular individuals.

*Either the ufos select their witnesses for psychological or sociological reasons, or they are something entirely different from space vehicles. In either case, their appearances are staged!*³³⁹

Similarity to dreams

Many reported close encounters with ufos have dream-like properties and may resemble out-of-body experiences. For example, Vallée quotes one witness as follows in DIMENSIONS, from a case in California in 1968:

*'I remember leaving my body on the seat of the car and being three or four feet out of the car. ... [T]he next thing I remember I was coming back into the car. ... [W]e were slowly dissipated back into our bodies.'*³⁴⁰

and another case, from New York in 1964:

He observed no door or hatch of any kind. And yet two human-like creatures suddenly appeared.³⁴¹

and from a French case in 1954:

'suddenly, the strange man vanished, and I couldn't explain how he did, since he did not disappear from my field of vision by walking away, but vanished like an image one erases suddenly.'³⁴²

Appearing and disappearing, passing through walls, and gliding along the ground without walking are all commonly reported features of aliens seen in ufo encounters. Paradoxically, the ufos themselves often have doors for the aliens to get in and out of, and a retractable ladder for them to climb down from the ufo. This surrealism is the hallmark of dreams, not of interplanetary visitors.

Besides their locomotion, the communication of aliens is also often dream-like. Vallée quotes from the famous case of Betty and Barney Hill:

'I did not hear an actual voice. But in my mind, I knew what he was saying. It wasn't as if he were talking to me with my eyes open, and he was sitting across the room from me. It was more as if the words were there, a part of me, and I was outside the actual creation of the words themselves.'³⁴³

Whilst it is true that ordinary dreams often incorporate hearing people speak, it cannot be denied that Mr Hill's experience of communication was not an instance of straightforwardly hearing physical sounds.

A further feature that makes ufo encounters suggestive of dreams is the paralysis of the observer. Vallée quotes this from the above-mentioned case in France, 1954:

Gatay tried to run, but he found himself helplessly nailed to the spot. He was thus "paralysed" during the whole observation.³⁴²

Of course, during sleep, the body is naturally and automatically paralysed to immobilise the body against moving around during dreams. It is not uncommon for a person to wake up only partially, becoming conscious of the immediate environment whilst keeping the state of somnambulism, and sometimes also perceiving a dream that continues as an hallucination superimposed on the

real world. I have had two such experiences myself, after sleeping the night on a hard floor. It is conceivable that an analogous state could be induced during the ufo encounter. Interestingly, the paralysis is often accounted for within the narrative of the ufo encounter by the alien's seeming to fire a weapon of some sort, such as a ray gun, or a cloud of gas. This is suggestive of the well-known process in dreams, in which the dreaming mind concocts a narrative and associated imagery to explain external stimuli. The classic case is that of falling out of bed, with an associated dream of falling off, say, a cliff. This, as one simple instance, demonstrates the general principle of the symbolic construction of dream imagery.

Susan Blackmore has pointed out that not only is 'sleep paralysis' quite common, but it is also frequently associated with other experiences that recur in ufo encounters:

surveys show that about 20 per cent of people have experienced sleep paralysis at some time or another. Trying to move — and failing — makes it worse and often provokes the sense that there is someone or something trying to squash, strangle, or suffocate you. Sexual arousal during dreams is common and may add a particularly powerful edge to the experience.⁷⁸

She claims with some confidence that these experiences have given rise to myths in different cultures such as that of the incubus and succubus in rural cultures, and alien abductions in modern urban cultures. Yet, throughout her article, and indeed in other of her writings, Blackmore displays a curious logic that might be paraphrased thus: '(i) A seemingly paranormal event X could, conceivably, be a misreporting of some natural event Y. But (ii) we know that, really, there are no paranormal events. Therefore (iii) X must be Y.' This is not science. Whilst it is possible that incubi and succubi are the products of imagination during sleep paralysis, it is also possible that they are real entities who induce, or take advantage of, sleep paralysis. When we try to apply Blackmore's thinking to the ufo phenomenon, which is her main claim in the article, we run up against the problem of explaining the other aspects of ufos: why ufo encounters are associated with physical effects and simultaneous observation by multiple, independent observers. It has often been noted that the ufo phe-

nomenon is comparatively easy to give a plausible explanation to if one disregards large segments of the empirical data.

Some ufo encounters do occur just as the witness wakes from sleep. E.g. this case from California in 1975:

*She was sleeping in the front room after watching television when she suddenly woke up to find two beings standing near her. They were wearing silvery suits; they had slits for eyes, nose, mouth. The suit covered the entire body as if it were made of form-fitting latex. The surface was very smooth, free from wrinkles. ... They communicated with her "telepathically," asking her to "go up with them". They were "seeking information".*³⁵⁰

According to Vallée, the early hours of the morning (1 a.m. to 3 a.m.) are the most common times for witness ufo landings. But they are also the most common time for going to sleep. That may be pure coincidence, but it is suggestive of a connection between ufo experiences and the instigation of normal dream processes.

Similarity to myths

A lot of writers have commented on the striking similarities between modern encounters with ufos and mythological tales of encounters with supernatural beings. Most famously there are the plague of books purporting to show that the gods were astronauts (see Erich von Däniken's asinine CHARIOTS OF THE GODS?) Notwithstanding the poor quality of much of the research on this question, and notwithstanding the intrinsic difficulty of interpreting records from ancient cultures, and the unreliability of tales that may have been passed through generations, it is nonetheless interesting to see what seems to be long-term continuity in the ufo phenomenon.

Vallée wrote:

*I am ... tempted to accept as a working hypothesis that in times remote contact occurred between human consciousness and another consciousness, variously described as demonic, angelic, or simply alien.*³²²

The details are, however, rather tenuous. He writes somewhat fancifully in DIMENSIONS of carvings of winged disks:

*scenes in which animals are carried to the hovering disk.
In one case, a god is seen holding a horned animal under each arm — a scene certainly reminiscent of many a claim*

*of animal kidnapping by ufo occupants.*³²³

And Vallée seems quite gullible in the following passage, quoting supposedly from an ancient document of the Greek Orthodox Church:

*'How does the Lord guide His Angel, if the Angel cannot see the face of His Lord? An Angel has a projection on the upper part of his eyes, where a sacred cloud rests. He has also a thing to receive sounds on his head. This thing makes noises as an Angel receives an order where to go from his Lord. Then he quickly looks at the mirror in his hand, and he gets in the mirror something on which an instruction from God is given.' I have not been able to verify directly the existence of this document and the accuracy of the translations ...*³²²

Accounts from the folklore of more recent centuries is more promising. There is a large culture of encounters with fairies before the twentieth century, especially in Celtic countries such as Ireland, Scotland, and Brittany. It is a recurring theme that the fairies have largely become extinct in this era. One feature that fairies, like aliens, share is the dream-like property of shape-shifting. Vallée quotes the following fairy report:

*'They take young and intelligent people who are interesting. They take the whole body and soul, transmuting the body to a body like their own. ... He said, "I am bigger than I appear to you now. We can make the old young, the big small, the small big."*³²⁴

He also quotes Reverend Kirk of Aberfoyle (d. 1692), from his book THE SECRET COMMONWEALTH OF ELVES, FAUNS, AND FAIRIES:

*'[The fairies have bodies so] pliable through the Subtlety of the Spirits that agitate them, that they can make them appear or disappear at Pleasure. Some have Bodies or Vehicles so spungious, thin, and delecate, that they are fed by only sucking some fine spiritous liquors, that pierce lyke pure Air and Oyl.'*³²⁵

and from Walter Evans-Wentz's book THE FAIRY-FAITH IN CELTIC COUNTRIES (c. 1909):

'The old people said they didn't know if fairies were flesh and blood or spirits. ... The general belief was that the

*fairies were spirits who could make themselves seen or not at will.*³²⁵

Also, the fairies are known to “steal our products, our animals, and even ... human beings”.³²⁶ Abduction is as much a part of fairy lore as it is of ufo lore. The main difference is the excuse given by the abductors: the fairies say they steal because they are mischievous or because humans have wronged them; aliens say they steal because they are conducting a scientific study of the Earth. It would be reasonable to assume that both sets of excuses are bogus, even if there is some tenuous symbolic connection with the truth, as there often is in dreams.

The abductions form part of a broader structural theme, found in traditions around the globe as well as in ufo lore. It is not just ufo occupants who abduct: it is a recurring action by supernatural beings in widely distributed myths and folklore. Vallée, using the name ‘Magonia’ as a generic designation of the other world, wrote:

*Magonia constitutes a sort of parallel universe, which co-exists with our own. It is made visible and tangible only to selected people and the doors that lead through it are tangential points, known only to the elves and a few of their initiates.*³²⁷

One of the odd things about modern ufo encounters is the propensity of the aliens to carry out crude surgical interventions on the witnesses. As Vallée notes, this precisely matches some of the tales about demons from earlier eras.

*A fifteenth-century French calendar, ‘Kalendrier des Bergiers’, shows the tortures inflicted by demons on the people they have taken: the demons are depicted piercing their abdomens with long needles.*³¹⁷

This is an interesting similarity, but on the other hand, medieval and later depictions of demons show a wide range of tortures. For anything meaningful to be said on this point, we really need more systematic data than odd illustrations picked out haphazardly from the great corpus of early art.

Although fairies are no longer met with, traditional religious visions are still seen — of such subjects as the Virgin Mary, and angels. These are often reported as religious encounters because of the beliefs and expectations of the percipients, but the contents of the visions often fit precisely into the patterns that other witnesses

call ufo encounters. Vallée makes the following point concerning repeated visions of the Virgin Mary at Knock:

*Many features in this report are identical to those in ufo phenomena: the strange globe of light of varying intensity, the luminous entities within or close to the light, the absence of rain at the site of the apparition, and, finally, the alleged miraculous cures. All these features are present in the current ufo lore in America.*³²⁸

Besides the vision itself, a common reported feature of such religious visitations is the palpable and often painful experience of beatings. With reference to ufo percipients who afterwards have sensations of being beaten by invisible assailants, Vallée writes:

*such incidents are generally withheld from publication by ufo enthusiasts. Yet they are consistent with another paranormal domain. The literature of religious miracles and the lives of mystics abounds with well-documented accounts of physical manifestations, including beatings, that are usually classified as possession phenomena or manifestations of so-called evil powers.*³⁶¹

A curious connection, which Vallée does not mention specifically, is that of stigmata: spontaneous wounds or marks that occur on the body in the places where Jesus is traditionally supposed to have had nails driven in. (Although modern physiological studies indicate that the nails were probably driven through the wrists rather than through the palms of the hands as traditionally depicted.) A lot of his Brazilian cases report large red spots suddenly occurring after ufo encounters, but *never* on the arms and legs, where the Christian stigmata would occur.

Similarity to other ufo reports

A psychosocial feature that Vallée touches upon is the incestuousness of ufo reports. Ufo reports seem to breed ufo reports. Here is one example that Vallée gives inadvertently in a report from the airship flap of 1897:

*'We could plainly distinguish the outlines of the vessel, which was cigar-shaped and about sixty feet long, and looking just like the cuts [i.e. woodcuts] that have appeared in the papers recently.'*³²⁹

Ufo sceptics always jump on such copying as evidence that ufo reports are products of rumour or mass hysteria. There is, however, ample independent evidence that ufos are real. Therefore the challenge is for the ufologist to explain why ufos seem to imitate the imagery of earlier ufo reports. If they were extraterrestrial spacecraft, this copy-cat behaviour would be surprising. If they are projections from the collective unconscious, then it is not surprising.

Name correlations

For a scientist trying to get a handle on distinctive, quantifiable, and replicable features of the ufo phenomenon, the occurrence of name correlations is possibly the most promising source of data. It seems that the names of ufo percipients, and of the geographical sites of their encounters, often form clusters in which the same names or phonemes recur within a short time or within a small area.

If ufo encounters were really just mistaken observations of natural phenomena, or independent hoaxes, or psychopathological hallucinations, then the names involved should be uncorrelated. For example, suppose that during the course of one week, there is a flap in which a hundred ufo reports are made in southern England. By the sheer play of chance there are bound to be some similarities in the names cropping up. For instance, on one day a Mr Hetherton reports a ufo in Torquay, on the next a Ms Smith reports a ufo in Hetherton village. But the degree of such chance correlation can be mathematically modelled, or simulated. For example, you could take the collected telephone directories for the area in question (which, by the way, are available on computer disks) and randomly select a hundred people. Then use a computer to calculate the degree of correlation amongst those names: for each pair, compute the lexical similarity, or even the phonetic similarity with standard algorithms. The results might be expressed as, say the average similarity of any two names. Repeat this analysis with the ufo reports. You can then compare the two numbers. This exercise would need to be repeated a large number of times to compute the degree of spread, expressed as the standard deviation, of these two averages. With the averages and their standard deviations a statistical test can be done. If it is

found that the names involved in ufo encounters are more similar to each other than would be expected by chance, *and* that this difference is statistically significant, then we have a strong piece of evidence for the reality of an intelligent, non-local agency underlying the ufo phenomenon.

As far as I know, nobody has carried out such a study, despite the enormous wealth of ufo reports that now exist. Nevertheless, both Keel and Vallée have noted their awareness of it. For instance, Vallée wrote in DIMENSIONS, after a ufo encounter witnessed by Everett Clark, in which aliens tried to steal his dog in Tennessee:

In another of the tantalizing coincidences with which ufo researchers are now becoming familiar, on the same day another attempt to steal a dog was made, this time in Everittstown, New Jersey.³³⁰

Colin Wilson, in his book ALIEN DAWN, also reports on the synchronistic experiences of ufo researchers themselves. This is echoed by many researchers in parapsychology, where synchronicity seems to be more prevalent than in other fields of study.

Of course, even if the name correlations are genuine, it is also possible that they may be too subtly qualified to be picked up by crude statistical analyses. Perhaps the names will be correlated only amongst ufo encounters that have other points of similarity. For instance, we might find that dog-snatching aliens have a significant correlation, which fades into statistical insignificance if the dog-snatching cases are immersed into the complete database of ufo sightings. This degree of subtlety is well known in studies of synchronicity. In fact, Carl Jung himself, in his book, SYNCHRONICITY admits that, despite the validity of the meaningful coincidences, they cannot necessarily be demonstrated by objective statistical tests.

If this is so, then the ufological database must be split into sub-groups containing similar cases, and the statistical analysis outlined above repeated for individual groups.

One danger is then that ufologists will fall into the trap of using *a posteriori* sub-groups. That is, deciding which sub-groups of ufo reports should be analysed for name correlation *after* examining the data and noticing the existence of certain subtle coincidences. For instance, a researcher might decide to define dog-

snatching cases as sub-group for analysis *after* noticing that the above-mentioned coincidence of Everett and Everittstown. That, however, is an invalid and misleading method. For the statistical test to have any validity, the choice of sub-groups for the analysis of a given database must be made *prior* to an examination of the data. The researcher must decide in advance on what criteria the database is to be split into sub-groups. The criteria might, for instance, be such abduction versus non-abduction cases, or what it is that is abducted (e.g. human, domestic animal, or livestock).

Conjuration

By ‘conjunction’, I mean commanding a disembodied entity to manifest, and then engaging in dialogue with it. Vallée touches upon this in conjunction with fairies:

Both Cardan and Paracelsus write, like Kirk, that a pact can be made with these creatures and that they can be made to appear and answer questions at will.³³¹

This is strikingly similar to the conjuration of attached spirits in the interactive therapy described by William Baldwin in his book SPIRIT RELEASEMENT THERAPY, which in turn merges into the interactive hypnotherapy attributed to Charles Tebbetts, which Deborah Marshall-Warren has turned into a form of self-therapy in her MIND DETOX.

Vallée makes a very enigmatic comment that is pertinent in this connection, concerning the task of pushing ufology out of immature stage of a ‘natural history’ of things seen in the sky, and toward an experimental science:

It must be possible to gain access to the control of the ufo phenomenon, to forget the spirits and the pranks and the claims of extraterrestrial contact, and do some real science. But it will take a very smart approach — and a very daring one.³³²

He does not, however, tell us what the approach might be. So, I shall advance my own speculation. If the Jungian theory, which I am proposing in this book, is correct, namely that ufos are exteriorised projections from the collective unconscious, then I would suggest that an experimental method of studying ufos could be based on existing methods of interrogating the unconscious mind. That is, conjuring the ufos with symbolic incantations un-

der altered states of consciousness, and interrogating them verbally. We need, in effect, to identify the symbolic programming language that the underlying process understands.

An obstacle that repeatedly arises in ufology, and indeed in other areas of psi research, is that the phenomenon itself is deliberately obstructive and misleading: in short, it plays tricks.

Any active measure directed at interaction with the ufo phenomenon will have to take into consideration its ability to take control of the witness's perceptions and to alter their psychic reality.³⁵¹

Again enigmatically, Vallée makes the following comment:

I have borrowed my own methods from the tools of technical intelligence, which are different from those of ordinary science.³⁵²

Explaining the ufos

Vallée recognises the dream-like quality of ufo encounters, but is locked into his belief system that dreams cannot have physical effects:

the entities are endowed with the same fugitiveness and behave with the same ignorance of logical and physical laws as the reflection of a dream, the monsters of our nightmares, the unpredictable witches of our childhood. Yet their craft do leave deep indentations in the ground.³¹⁶

One of the suggestions that he makes to try to reconcile these two perspectives on the ufo encounter is that what the observer actually experiences may be very different from, and perhaps quite unrelated to, the actual physical event. The physical ufo event may involve, say, an electrical signal that is transmitted to the brain of the observer, and which then induces the hallucination that the witness reports as a ufo sighting. He attributes this idea to G.N.M. Tyrrell's theory of apparitions, citing the latter's Myers Lectures to the British Society for Psychical Research in 1942. Vallée writes:

Thus, it is noteworthy that the apparent absurdity of the sequence of actions constituting the episode should be reducible to the triggering of high-level perception patterns within the witness's brain and not necessarily through any normal physical process.³¹⁷

Advocates of this theory of Vallée's might seek support in the laboratory work of Michael Persinger, a neuroscientist at Laurentian University of Sudbury, Ontario, reported in an article by Susan Blackmore.⁷⁷ Persinger places human subjects in strong magnetic fields, which happen to stimulate the brain in such a way as to induce sensations of being pulled around and extreme mood swings including fear and anger. Blackmore and Persinger's argument, when stripped of its sceptical rhetoric, is that if some of the experiences of a ufo encounter can be reproduced by applying some stimulus to the brain in a laboratory, then that "settles the issue" (Blackmore's phrase). In fact, it does nothing of the sort. Ufo encounters are complex phenomena, involving much more than the strange feelings that can be induced by such crude means as putting someone's head into a magnetic field.

If ufo events were always observed by single witnesses, then this 'induced apparition' hypothesis might be quite appealing. Its flaw is that it cannot readily account for the high degree of correlation of the reports made by independent witnesses. If the ufo experience is induced by a simple stray signal, or even a deliberate signal (if we suppose that the ufo contains some intelligence), then it would not be controlled. We should expect each witness to construct her own imagery and narrative, which would be quite unrelated to that of other witnesses. It would be like people in the same room taking a hallucinogenic drug such as LSD at the same time, but having completely different trips. Instead, ufo events generally yield the same narrative in each witness.

In another passage, Vallée recognises the uncertainty about how much of the ufo experience is internally fabricated:

*We do not know how much of the event is generated by an external phenomenon and how much is supplied by the human mind.*³⁵³

Following along a related line of thought, Vallée considers that the ufo's contribution to the witness's experience of the encounter may have a substantive semantic content, leaving only incidental details to be filled in by the witness's own mind:

At close range, the ufo phenomenon acts as a 'reality transformer' (or, in Bertrand Meheust's words, a 'reality exchanger'), triggering for the witness a series of symbolic displays that are indistinguishable from reality. These dis-

*plays, which frequently begin with a bewildering series of blinking coloured lights of extraordinary intensity, induce a state of intense confusion for the subjects who are vulnerable to the insertion of new thoughts and new visual experiences.*³⁵⁶

Vallée also likens the ufo experience to watching a film in a cinema:

*Like the technology of the cinema, the ufo technology is a meta-system. It generates whatever phenomena are appropriate at our level, at a given epoch, in a given state of the “market”. As Bertrand Meheust has brilliantly proven, the symbolic display seen by the abductees is identical to the type of initiation ritual or astral voyage that is embedded in the traditions of every culture.*³⁶² *In that sense, the ufo experience is a very real trigger that releases powerful imagery we are all carrying in our “collective unconscious” (in Jungian terms). It is useless to ask why some witnesses see giants and others see dwarfs, why some abductions are benign and some harmful, why some encounter victims are shown sophisticated technology, while others report rapes and other indignities.*³⁵⁴

At other times, however, Vallée seems to be tempted away from his doctrine of the physical reality of ufos, toward a position more mysterious, which I would interpret as a move in the direction of Berkeleyanism:

*To put it bluntly, the ufo phenomenon does not give evidence of being extraterrestrial at all. Instead it appears to be inter-dimensional and to manipulate physical realities outside of our space-time continuum.*³¹⁸

He does not define what the term “inter-dimensional” is supposed to mean.

Four-dimensional ufos?

At other points, Vallée hints at a rather naïve notion of ufos travelling in and out of other ‘dimensions’. There is, perhaps, a certain mystique about dimensions, which seems to hypnotise people in the New Age movement, and one might have hoped that Vallée would be immune to this. A dimension is just a direction in which things can move, such as up and down, left and right, and backwards and forwards. In some New Age writing, dimensions are

sometimes spoken of as if they were parallel universes, into which things inexplicably can pop in and out. If there were a fourth dimension of spatial movement, it would be precisely the same kind of thing as our familiar three dimensions, but there would just be four identical dimensions instead of three. The ‘fourth dimension’ would not have any mysterious qualities: a dimension is a dimension, as one might say. Once this is seen clearly, certain difficulties in the inter-dimensional theory of ufos immediately become apparent. One such difficulty would be that of ripples of fourth-dimensional momentum radiating out from the point of insertion of the ufo into a fluid medium such as the atmosphere. Consider for a moment the usual analogue of a two-dimensional ‘flat-land’, in the midst of a three-dimensional space. The flat creatures living in flat-land would be able to move exclusively within their flat universe. Note that these creatures must be infinitely thin, as *everything* in their world, even down to the atoms and electrons, are flat. Imagine a (flat) ufo travelling through the surrounding three-dimensional space and try to arrive in flat-land.

The difficulty it has is that of positioning itself correctly: if its vertical position is out by even an infinitesimal distance, then it will fail to be visible in flat-land. After all, the flat-landers cannot look up or down outside of flat-land: they have an infinitely flat range of vision, and the ufo will have to align itself precisely with the plane of flat-land in order to be seen. This, by any account, would seem to be a technological impossibility. Moreover, according to the Heisenberg Uncertainty Principle, there is no such thing as absolute precision, so the ufo could never get itself in just the right vertical coordinate.

This raises the question of whether we could get around this problem with the following modification of the definition of flat-land. Suppose that the contents of flat-land are not infinitely flat after all, but do in fact have a small but finite vertical extension? This would allow a certain tolerance range within which the ufo could place itself when it arrives in flat-land. Well, in order for that to be the case, we would still have to insist that all objects in flat-land have precisely the same vertical depth. Otherwise, the flat-landers would find that two objects that were absolutely identical within in flat-land might nevertheless have different physical properties, because they would possess different masses on ac-

count of differing vertical extents. Well, we could imagine this as an initial condition — but things would not stay that way. Imagine a flatlander firing a bullet into a glass pane: if the bullet and the glass were both infinitely thin, then the glass would shatter only within the plane of flat-land. Now, however, we are supposing that objects in flat-land have some vertical structure, even if it is only a few atoms thick. This will mean that the kinetic energy of the bullet will cause the glass to shatter in all three dimensions, and the flat-landers would observe shards of glass vanishing out of flat-land.

Now, let us return to our own familiar three-dimensional world, and suppose that there is indeed, as Vallée sometimes seems to suppose, a fourth spatial dimension through which ufos travel. On the one hand, if our world were infinitely thin in the fourth dimension, the ufo would face the intractable problem of trying to position itself with infinite accuracy. On the other hand, if this three-dimensional world had some finite depth and structure in the fourth dimension, then we would find that large impulses of kinetic energy, such as is released when a bullet hit a frangible object such as a window pane, would sent fragments out of our world into the fourth-dimensional void. Obviously, people would have noticed that by now, if it was happening.

With even these common-sense considerations, the inter-dimensional theory of ufos seems untenable. Deeper arguments come from considering that the equations of mechanics that correctly describe the motion of objects in this world have no allowance for a fourth spatial dimension. Hence, I think Vallée's speculation on this point must be rejected.

Other-wordly ufos

A more radical, and more plausible suggestion, is that ufos arise from a wholly different kind of universe (which is rather suggestive of the Berkeleian metaverse). The attraction of this line of thinking is that it locates the source of the ufo phenomenon outside what we normally regard as the physical domain. We thus have the possibility of constructing a substantive theory without risking violating the constraints imposed by known physical laws.

A further attraction is that it suggests a natural framework in which to account for the somewhat bizarre kind of intelligence

exhibited by the ufo phenomenon. As Vallée goes on to say:

*The phenomena function like an operational system of symbolic communication at a global level.*³¹⁴

This leaves undefined the problem of how the ‘multiverse’ interacts with physical world in such a way as to avoid violations of physical law.

For some reason, both Vallée and Keel insist that the source of the ufo phenomenon is strictly terrestrial, even if it is rooted in a parallel universe or metaverse:

*My own private conjecture, which deviates considerably from the accepted dogma among ufo believers, is that we are dealing with a yet unrecognised level of consciousness, independent of man but closely linked to the earth.*³⁵⁵

There is, to be sure, a certain ambiguity in his expression, “linked to the earth”, but the suggestion seems to be that the ufo phenomenon is terrestrial. In the following passage, he says the alien consciousness exists “on earth”: that

*As an alternative to the extraterrestrial hypothesis, I propose to regard the ufo phenomenon as a physical manifestation of a form of consciousness that is alien to humans but is able to coexist with us on earth.*³⁵⁷

If, as Vallée maintains, the phenomenon originates from another kind of universe (his ‘multiverse’) then not only is there no reason to think that its origin needs to be in any sense terrestrial, but in fact it does not even make sense to describe it as terrestrial. The planet Earth, and the associated concept of being terrestrial, pertains to physical, three-dimensional space. In the extra-physical universe, there is no Earth, and there is no terrestriality.

In the following passage, Vallée sketches some ideas for how the other universe is supposed to interact with ours.

*When the object that we call a ufo is visible to us in the reality of everyday life, I think it constitutes both a physical entity with mass, inertia, volume, and energy, and a window toward another mode of reality. In this alternative reality the witnesses describe psychic manifestations reminiscent of our own dreams. We can consider these reports as a source of important symbolic meaning, or we can ignore them. But like our dreams, they may also shape our lives in ways that we do not fully understand.*³⁵⁷

This is taking us closer to a Berkeleian model — and, indeed, to the Jungian model, although there is still the difference that Vallée sees the source of the ufo phenomenon as lying purely outside us.

One final point to make on Vallée's theorising on what ufos are is that he does not countenance that they violate laws of physics:

I have given up explaining to the ufo enthusiasts that there was such a thing as psychic reality and that it did not contradict the physical world.³⁵¹

I would agree with this but, in order to hold this position, one needs to have a coherent account of how a psychic force could intervene in the physical world without violating physical laws. Vallée does not do this. In fact, with his claim that ufos sometimes dump megawatts of power into the atmosphere, he makes it harder to do so. In the Berkeleian model, as I have tried to show, we postulate an extraphysical psi agency that manipulates small amounts of the unobserved energy that is already randomly washing around our world.

The 'control system'

Although Vallée is somewhat vague about the nature of ufos, he is more specific about the purpose of ufo encounters:

I propose that there is a spiritual control system for human consciousness and that paranormal phenomena like ufos are one of its manifestations. I cannot tell whether this control is natural and spontaneous; whether it is explainable in terms of genetics, or social psychology, or of ordinary phenomena — or if it is in artificial if in nature, under the power of some superhuman will. It may be entirely determined by laws that we have not yet discovered.³²⁰

This control system, he believes, is engaging in large-scale social engineering of the human race:

Ufos ... are the means through which man's concepts are being rearranged.³²¹

According to Vallée's speculation, the control system may have been responsible for all the major religions and probably many of the smaller ones, as well as cults centred around visions. It is certainly interesting to observe the integration of belief in ufos into various New Age movements.

Mount Shasta, which looms majestically, ... is a major centre for this kind of belief. One finds communities there that worship Jesus as an “Ascended Master”. ... Against this spiritual background, the experience of the Anderson family takes on special meaning; every event in their life seems to assume providential proportion, evidenced by Linda’s statement that it was “as if God had sent this cloud to us”. Two years before the cloudburst incident, in January 1978, Mrs Anderson saw a dark brown object, with five black pipes protruding from it, in the sky. The moon reflected off its surface. The same month, on January 26, she saw a large white bird, with a wingspan of eight feet. Connie was with her as the bird flew into a tree and disappeared. Mrs Anderson took this as a sign that she had found the right property to establish the religious community she was founding. It turns out that she is an ordained fundamentalist minister.³⁵⁸

Nor is this societal pattern limited to the USA, but is reported in cultures around the world and may be universal. Vallée found this in his investigations of

the social context of the phenomenon in Brazil, where ufo cases cannot always be separated from occult practices and beliefs.³⁵⁹

John Keel spent time travelling in India, and records that:

When I was living in India, I was puzzled by the frequent rumours and stories of direct encounters with the myriad Hindu gods. Even today lone individuals strolling through the bush reportedly come upon luminous entities who resemble the fierce deities of the ancients and receive messages designed to support and enhance their particular beliefs and frame of reference.¹⁶²

The impression of meeting Hindu gods face-to-face can also take place in the temples, before the statues. In my own visits to India, I have noticed an uncanny feeling of being stared at when looking into the eyes of the idols. Although the idols are executed in a somewhat stylised or even schematic art, their eyes are painted with great power and definition, with very dark pupils in very white sclera. There is a strong and unmistakable sensation as if the idol were looking back, or rather as if an animate entity were

looking out through the idol's painted eyes. It is an impression that has especially struck me when peering into the innermost altar of rural temples where the god or goddess has been at the receiving end of intense veneration and prayer. It is as if the idol had been charged with the spiritual equivalent of static electricity. (I speak purely figuratively, of course.) The reality and vitality that practising Hindus in India ascribe to their gods is of a different order of magnitude from the spiritual lethargy and abstraction with which, say, the Anglican Church often venerates its God. Bearing in mind this cultural difference, Keel's claim that people even nowadays see the Hindu gods in real life is plausible.

Keel also notes occurrences of the same phenomenon in Roman Catholic cultures, especially in unsophisticated rural areas:

Similarly, apparitions resembling the traditional artists' concept of Christ appear annually before thousands of people, offering them comfort and reaffirming their belief. I have interviewed several of these percipients and have been impressed by their mental stability, honesty, and sincerity.¹⁶²

And he relates it also to ancient Egypt, although here we must rely on speculation:

In order for the myth of Osiris to have survived for four thousand years, it is very probable that apparitions of Osiris also manifested themselves frequently and repeatedly, generation after generation.¹⁶²

Besides the reinforcement of religious myths through the visioning of the gods and other beings, there is also a deeper function performed by the ufo phenomenon (which is how Keel is classifying these religious encounters, and rightly I believe): namely the 'abduction' journey.

The rôle that a ufo abduction may play in an individual's religious or spiritual development is indicated by Patrick Harpur, in his book DAIMONIC REALITY:

Spontaneous, involuntary and uncontrolled journeys into the Otherworld can be highly successful. They can result, for example, in mystical revelations which enhance the lives of the recipients. But they can also be perilous, resulting in one of two undesirable conditions which used to be called "loss of soul" and "possession by spirits".¹²³

If significant numbers of people undergo this transformative virtual journey, then the process that is inducing it could have a substantive impact on the wider society. This, indeed, seems to be happening in the USA.

Vallée is very scathing of the cult of regression hypnotherapy: the swelling numbers of ufologists who use amateur hypnosis to get ufo percipients to report what purport to be forgotten memories of ufo abductions. Generally, he claims, the ufologists who are carrying out this work have a strong commitment to a particular view of the ufo phenomenon, and it is notoriously difficult to avoid the hypnotist's own opinions being transferred to, and implanted in, the subject.

This sense of commitment is especially strong in Dr Sprinkle, who stated in 1988 that he had been abducted by aliens as a child and regarded himself as having a “mission” on their behalf. ... Even when they are careful to avoid leading questions and blatant contagion, their belief system is already obvious to their subjects and it can only be strengthened by the hypnotic process — not to mention possible telepathic contamination.³⁶⁰

5.4 Metamental dæmons as strange manifestors

5.4.1 Robot-like ufos

One of the leading features of the ufo entities' behaviour, which Keel noticed, is the severely limited level of intelligence evidenced: they have a certain, low level of intelligence, but they are guided by what appears to be stupidity or madness. They are clever enough to travel about by novel means, to acquire confidential information about people, and to set up ingenious hoaxes: but they never seem to be engaged in any constructive projects, and all their solemnly delivered messages seem ultimately inane. What does all this call to mind? Surely it is the notion of a robot? Not a material robot, but a robotic entity operating in the mental realm.

The suggestion that I want to explore is that there are entities in the metamind that, although they are not fully sentient beings as we are, nonetheless possess a degree of autonomy in their actions. They can manifest themselves in our lives and make contact with us, by projecting some appearance of themselves into

our streams of consciousness. Metamental *objects*, on the other hand, are entirely passive. I referred to these autonomous entities earlier as ‘metamental *dæmons*’. This may be a constructive way of viewing the range of manifestations that Vallée and others have identified as sharing characteristic features with ufos, such as angels and fairies.

The form taken by the *dæmons* is evidently tailored to the individuals who witness them. The most striking example of this is that, when they engage in verbal communication, they normally use the observer’s own natural language. A rather broader point is that, as John Keel noticed, their visual form is consistent with the expectations of the observer’s culture: in the pre-industrial age, they presented themselves as fairies; in the late nineteenth century, they appeared as airships; in the second half of the twentieth century, as alien spaceships; to Roman Catholic folk, they sometimes appear as visions of the Virgin Mary; and so on.

If this is so, then at first it suggests that the signal that the metamental *dæmon* conveys to the individual observer’s mind must be of an abstract and general nature, which is rendered into a suitable sensory impression within the observer’s own mind. According to this view, if you were visited by one of these entities, it would not inject a specific visual form into your mind, but it would rather signal its presence and your imagination will unconsciously clothe it with particular attributes in accordance with your personal and cultural expectations. The weakness in this hypothesis, as I have pointed out earlier, is that it does not readily explain how multiple witness see the same thing. Therefore, I prefer to suppose that the underlying process takes the elements of the imagery from the observers’ unconscious reservoir of personal symbolic forms and even common archetypes. That is also consistent with the Jungian model, which we will look at more closely below.

Many people have reported sensing just the presence, without any accompanying imagery. When that happens, people are apt to think that the entity is located near them in physical space, maybe a few feet away, but happens to be invisible. This is really an acute form of our general confusion about the sense in which minds can be localised at all. For, if this entity has no spatial or directional properties such as size, shape, colour, and so on, then

it is somewhat empty to assert its literal local presence. According to the Berkeleian framework, the experience of the entity's proximity is nothing but the experience of its making contact: for, in the Berkeleian realm, there is no relation of distance between the minds, objects, and dæmons that exist within the metaverse. They are, in effect, all adjacent; but some are in contact, or engaged in some communication with each other, and some are not. Of course, from the Berkeleian perspective, even when a dæmon presents itself in visual form, its localisation in three-dimensional space is just an imaginative projection. It is not really out there in the physical world: indeed, like all the ordinary stuff of the world, its real existence is only in the metamind.

As I have said, the visual form in which a dæmon presents itself is predominantly determined by the observer's own mind, drawing on her reservoir of memories and expectations. Some features, however, are so widespread that we might suppose that they relate to a genuinely universal reference, rather like Jung's archetypes. Examples would be the use of light as a sign of benevolent dæmons, darkness as a sign of malevolent dæmons, and the circle or sphere as a sign of the soul.

5.4.2 Transportation of abductees

There are many reports of observers being invited or forced on board ufos and taken on a tour of inter-planetary space, or on day-trips to other planets. The term 'abductee' is conventionally used for such an observer, although that word suggests the observer is snatched against her will, which is by no means always the case. If the ufo is just a dæmon, then how can it do this?

There are two parts to the answer: first, there are reasons for thinking that abductees are not physically taken anywhere, but are only taken on a mental trip; second, there is no absolute obstacle to a dæmon's transporting physical bodies, such as people, but it is certainly improbable.

Although abductees report being shipped very quickly out of the Earth's atmosphere and through vast distances of space, they do not report feeling the G-forces that such accelerations would necessarily require; nor, conversely do they feel weightless when in inter-planetary space. Furthermore, people on the ground do not report hearing the intense sonic boom as the ufo passed through

the sound barrier on its departure. In addition, we can mention two pieces of circumstantial evidence: first, despite the apparently large numbers of abductions going on, the abductees never report meeting up with other, independent abductees on board, nor are there reports of anyone seeing other people being abducted; second, the abductee is always returned to the site of the original abduction — they are never deposited in other cities or countries on Earth. Of course, these last two points could be explained by supposing that this is the ufonauts' deliberate policy. Nevertheless, they do seem suspicious.

5.4.3 Physical effects of strange manifestors

Sometimes, but not often, ufos are reported to have physical effects. It is very interesting that these physical effects are almost always physiological: they are various forms of minor medical damage.

Given our hypothesis of ufos, and other strange manifestors, as being metamental dæmons, we would not expect them to have effects on their physical surroundings. The dæmon is supposed to deliver its signals directly to the observer's mind, generating sensory impressions there for the duration of the visitation. In order for the dæmon to produce lasting physical effects, it would also have to deliver signals of the right kind to the metamental objects that correspond to the physical surroundings of the ufo. For example, if it is to leave marks in the sand, as was alleged in several cases, then it would have to communicate with the metamental object controlling the sand. In principle, it should be possible to do this, but then the dæmon would need to be a lot more complex than we had been supposing. Normally, the state of physical objects is maintained under the tight, law-governed control of the metamental engine. If individual dæmons were able to execute their own modifications of the physical world, if they could make arbitrary changes, then that would raise the risk of violating physical laws. On these grounds, the theory we are developing here does not predict that ufos would produce overt physical changes, other than physiological ones. There are thus two categories of physical effects that are exceptions, and which we might expect from the theory: covert effects, such as synchronicity; and physiological changes.

It may well be that marks on the ground can be explained within the ‘local energy’ hypothesis: that the ufo is able to channel some of loose energy that is circulating around in the atmosphere, such as small eddies and air currents, and harness it to blow the sand away to form what look like the footprints of a spacecraft.

5.4.4 Physiological effects of strange manifestors

There are numerous reports of people who have encountered ufos experience certain forms of bodily harm. A perusal of the ufo-logical literature suggests that these are predominantly of a kind that can have psychosomatic causes, and resemble some sort of allergic reaction: such as redness and soreness of the loose, fluid-filled tissues around the eyes and the scrotum.

5.4.5 Synchronicity as a strange manifestation

Synchronicity, I want to suggest, is a form in which metamental dæmons can present themselves in our phenomenal world. And, moreover, they can do so with violating physical laws. It is true that synchronicity is often thought of as an impersonal, or undirected, phenomenon. In fact, this is how it was seen by Jung, who first devised the concept. The phenomenon seems, however, to have a certain degree of objectness: instances of synchronicity are usually clustered, in the sense that several synchronisms happen at about the same time, rather than as haphazard outliers, and the synchronisms in a cluster often bear a single theme. It is as if an individual dæmon is making itself known by putting together a package of coincidences.

Moreover, it is widely reported (admittedly only on an anecdotal basis) that patterns of synchronicity provide assistance and guidance to people in projects in which they are engaged. These events blend in with reported encounters with helpful beings. There is, in fact, a vast and burgeoning literature of angel stories (or ‘angel contactee reports’ if we were to use the jargon of ufology), where beings suddenly appear in a moment of despair and provide comfort or material assistance. This also shades into the many traditional ways in which people try to invoke assistance from supernatural beings.

5.4.6 Psi loci

A recurring theme in the literature of ufos and other psychic phenomena is that of loci where psi phenomena are more likely to occur. The loci are sometimes just patches of ground, and sometimes places where man-made structures, such as bronze-age megaliths, stand. John Keel, for instance, found high concentrations of ufo sightings in particular places in the USA. A famous counterpart in England is the small town of Warminster. Besides ufos, there are many anecdotal reports of ‘psychic’ experiences at megalithic constructions and other ancient or sacred edifices.

The popular interpretation of these observations is that there is an ‘energy’ of some unspecified kind that accumulates at these places, or which flows through them. Ley-lines are supposed to be (or to be marked by) deliberate alignments of ancient religious sites over large geographic areas. In some quarters, they are believed to be conduits along which the unspecified energy flows. This seems to be yet another instance where a well-defined and useful concept in physics is picked up, has its kernel blown out, and the husk of the concept is used to adorn some empirical data to create the illusion of an explanatory theory. What is an energy without an operational definition of its action? It is a nothing. To say that an ‘energy’ flows through a megalithic site, without specifying what the energy does and therefore without specifying how it can be detected, is to say no more than “A something does something at the megalithic site”. It is a confusion to think that the word ‘energy’ conveys any significant meaning on its own: an energy is always a capacity to do something, it therefore only expresses a relation. (To make this clearer, consider that words such as ‘inside’ and ‘outside’ express relations and are therefore meaningful only when the relations are known. If someone says that ‘X is inside’, then you will need to know, ‘Inside what?’ Similarly, if someone refers to an energy, then you will need to know, ‘Energy to do what?’)

This is not to cast any doubt on the experiences and observations that people have at these sites, only to point out the limited explanatory power of ‘energy’ as an abstract concept on its own.

Let us consider some of the phenomena that are associated with ancient sites. Guy Underwood seems to have been the first

to record systematically the effects of whatever agency is active at these ancient sites. Underwood was highly competent at employing a dowsing rod in detecting underground water (which is the traditional purpose of dowsing). By chance, he discovered that he also experienced a dowsing response along well-defined lines and spirals at megalithic sites. Now, it is generally acknowledged that the dowsing rod itself is not the active component in the dowsing process: it serves only to amplify the tiny, unconscious movements of the dowser's hands. This suggests that when the dowser walks over an underground stream or a well, or over whatever is active at a megalithic site, his subconscious mind picks up a signal and is thereby alerted to its presence. Thus this appears to be an informative, rather than an energetic process. The tiny amount of energy that is required to move the dowsing rod comes from the dowser's own hand muscles: it is the signal that triggers the movement that must be traced to the external source.

Likewise, when someone who is 'psychically sensitive' senses a certain ambience in the immediate vicinity of the stones, or when someone psychometrically gets sensory impressions from the stones' past, it would appear that what they are getting from the stones is informative rather than energetic in nature.

Now, referring back to the earlier discussion of metamental objects, recall our hypothesis that any observation of an object creates a reverse link to the observer. What if one were to create a link of this type, not to an earlier observer, but to a metamental dæmon instead? Then a subsequent observer of the object may find herself connecting with that dæmon and receiving the hallucinogenic signals that that dæmon is programmed to deliver. If the dæmon induces a ufological hallucination, then that is what people will see.

In the case of dowsing, we may suppose that the dowser's mind picks up the link to something odd, but does not activate the hallucination. The interesting question of why there should be these active lines and spirals is a separate issue, to which we must return later.

Anecdotal reports of ghosts are probably the most prevalent data that are in circulation concerning localised psi phenomena. Typically, a ghost relates to a person or event in the past that involved an extreme trauma in connection with a place or build-

ing. Now, that person would obviously have been perceiving her surroundings at the time of the trauma, so, according the hypothesis discussed above, the surroundings would have registered a reverse link to that person. Something else must happen, though, to create a stronger bond than normal.

To develop an account of what might be happening, I want to put forward some further speculations about the internal structure of metamental objects.

A metamental object may be considered as comprising two functionally distinct factors: an intention of essence, and an intention of accident. (These correspond to, but are conceptually quite different from, Aristotle's essence and accident.) The former is the original intention that created the object; the latter is a composite of the intentions that have been imposed on the object since. (There is a precise analogy to this in object-oriented computer programming, the field that I am taking as a paradigm for understanding how the metamind might work: each programming object is an instantiation of a class that is derived from a base class by the addition of new attributes.) The intention of essence may be thought of as a permanent core, while the intention of accident is a transient shell. More poetically, one could think of that core as the 'soul' of the object.

Ordinarily, one engages only with the intention of accident of any object. (Likewise a computer program will normally engage with an object as an instantiation of the derived class, rather than of the base class.) One can also, however, engage with the intention of essence. If someone who is experiencing an emotional trauma observes an object (say, the walls of a building) by engaging only with the intention of accident, then the reverse link will be made only with that transient shell. If, however, she engaged with the core of the object, then the link will be made at that more central and permanent point. In that case, a subsequent observer will be able more easily to access the link.

What, in practice, is involved in observing something through its intention of essence? How does one actually do it? I think the answer must be that one meditatively focuses on the object in itself, rather than on its external relations. By 'meditatively', I mean that one lets go of the normal mental concentration that one has on using objects as tools to do things with, and instead

opens up to a free awareness of whatever is in the object itself. Furthermore, one dwells on the object in its own right, as opposed to its societal meaning or the rôle it is playing in some man-made structure.

This is, I readily acknowledge, a very sketchy speculation. Nevertheless, I think it points us in a more useful direction than the ‘psychic energy’ theory.

5.5 Carl Jung’s theory of ufos

Carl G. Jung (1875-1961) was a Swiss psychologist who broke away from Freud’s psychoanalytic methods, which were locked into a materialistic model of mental function, and were preoccupied with sex. Jung was drawn to a more numinous, or even occult, appreciation of the mind, and he invested a lot of time in studying alchemy and mythology. He published two books that are relevant to the present study: *SYNCHRONICITY* (1952) and *FLYING SAUCERS* (1959).

5.5.1 Ufos projected from the collective unconscious

There is now an established sector of the ufological research community that holds ufos to be the manifestation of a large-scale psychic phenomenon. Although several authors pay lip-service to Carl Jung as the originator of this theory, the explanatory part of Jung’s theory seems to have been washed away in a tide of obscurantism. Time and again, it is claimed that ufos and their ancillary manifestations such as crop circles, cattle mutilations, and men in black, are produced by a parallel society of entities who co-exist in a psychic world that somehow interpenetrates ours. There is, however, little or no explanatory power in these claims. There is no systematic formulation of the structure of this posited parallel society, the phylogeny of its race, its history and politics, the nature of its technology, or the mechanisms by which it manifests itself to us. In consequence, there is a no predictive power in the claims, and they are therefore neither verifiable nor falsifiable by subsequent observation or experiment. The claims are, in fact, ‘magical’ in the narrow sense that they do little more than label an unexplained collection of empirical observations. They are, in the Popperian sense, unscientific.

I should add that this is a criticism only of the claims, not of

the ufologists making the claims. After all, if one feels that all that has been established about the ufos is that (a) they are real and (b) that they are not alien spacecraft, then there is little left to do but to indulge in hand-waving speculations of what the ufos might really be.

My reason for querying these claims as a whole is to contrast them with Jung's earlier suggestion about ufos, published in 1959, which actually forms a simple explanatory theory that is quite plausible, and becomes even more plausible when the implications of the Berkeleian metaphysic are introduced. Indeed, Jung himself baulked at the full-blooded version of his own theory, as he had difficulty with the notion that psychic projections could produce physical effects. With the Berkeleian perspective, that difficulty is removed.

The main platform of Jung's theory of ufos is the common-sense observation that the reported behaviour of ufos is more reminiscent of dreams and visions than of material vehicles arriving from another planet. Of the assumption that ufos were physical objects, he wrote:

It is difficult, if not impossible, to form any correct idea of these objects, because they behave not like bodies but like weightless thoughts.¹⁴²

... the apparent impossibility of the reports suggests to common sense that the most likely explanation lies in a psychic disturbance.¹⁴⁸

Accordingly, his initial premise is that ufos are projections from the minds of their observers. That makes them a product of a psychological phenomena, which is precisely the sort of thing that Jung had devoted his professional career to studying. It then becomes credible to seek to explain them within the same conceptual framework that Jung had applied to the more ordinary psychological phenomena.

But if it is a case of psychological projection, there must be a psychic cause for it.¹⁴⁵

In the psychological life of individuals, there is a well-known phenomenon, which Freud and especially Jung had studied intensively, called 'projection'. In this process, thoughts or emotions that one seeks to avoid are repressed and locked into the unconscious mind, whence they trigger the appearance of disguised

or symbolic expressions. There is, as we all know, an unconscious psychological mechanism at work that continually tries to bring important matters to the attention of the conscious mind. (Here's a mundane example. Car drivers rely on this mechanism all the time, to alert them to hazards or potential hazards on the road: while the conscious mind is focused on the road immediately ahead, or on a conversation with a passenger, the unconscious mind is monitoring the rapidly changing surroundings and will alert the driver of changing traffic lights or cars crossing her path.) When the direct channel of expression is blocked, however, this same mechanism is obliged to resort to creatively symbolic means of getting the material into the conscious mind. Or, to use less anthropomorphic terms, the transmission of information from the unconscious into the conscious mind is degraded and ends up distorted into all sorts of weird junk. Jung and the other psychoanalysts, however, like to stick to anthropomorphic terms:

*... these strange contents cannot be integrated directly but seek to express themselves indirectly, thus giving rise to unexpected and apparently inexplicable opinions, beliefs, illusions, visions, and so forth.*¹⁴⁶

It is a moot point whether the unconscious mind, or its contents, 'seeks' to express things, or whether it is just a dumb conveyor belt of thoughts and emotions that is constantly trying to deliver material to conscious mind.

There are various reasons for the communication channel from the unconscious mind to be blocked selectively. Memories may be repressed because they are too traumatic or painful. For instance, experiences of war, road accidents, domestic violence, or child abuse may be repressed in the unconscious mind because they are too painful and disturbing for the conscious mind to handle. For instance, desires for taboo sexual relations, or for violence, are filtered out to avoid the risk that the conscious mind might convert the desire into action. The existence of this repressing mechanism has an obvious evolutionary advantage: extreme experiences such as those just mentioned would be too distracting if they were allowed to surface in the conscious mind, and they would interfere with the normal smooth functioning of the mind. So they are filtered out. But the dumb conveyor belt still keeps on trying to deliver this material to consciousness, albeit in distorted form.

Another reason for repressing material would be that it violates social norms.

As far as mainstream psychology is concerned, these distorted expressions can come out as dreams, hysterical paralysis, psychosomatic illness, paranoid beliefs, hallucinations, and other psychological or physiological dysfunctions. Jung, however, in a cavalier disregard for the known laws of physics, maintained that repressed material could also be expressed in ‘exteriorisations’, otherwise known as poltergeists. A famous example that Jung gave is that of a heated discussion that he was having with Freud, in which the objects in the room spontaneously started making noises and falling off shelves.

Jung regarded ufos as an exteriorisation, not of an individual’s unconscious mind, but of what he called the ‘collective unconscious’ of humankind. This, again, requires a departure from mainstream science. For, whereas an individual person’s unconscious mind is obviously supported by her brain tissue in much the same way as her conscious mind is, there is no corresponding material substrate for the collective unconscious. It is important to bear in mind that Jung believed the collective unconscious to have a real, unitive existence: he would not have accepted the watered-down version of his theory that some of his followers have advanced, in which the term ‘collective unconscious’ merely labels the societal processes that are implemented in the unconscious minds of individuals living in that society. Obviously there are such processes, and one can see them quite vividly in mob behaviour, such as football matches. Jung, however, meant by the ‘collective unconscious’ something more concrete than an abstract description of societal processes. He thought that there was a real, suprapersonal mental entity into which the unconscious mind of each individual is plugged. He did not say how it was implemented, but implicitly it would appear to require telepathic communication amongst the unconscious minds of individuals.

I say that Jung was cavalier about his theory’s transgression of physical laws, because he just accepted psi phenomena as part of the rich tapestry of the world, with being at all bothered by the fact that there is no explicit place for them in the immense and internally consistent edifice of our scientific understanding of the world. There is an innocent naïveté about this, which is often

apparent in New Age and psychic circles. These people fail to see how astonishing psi phenomena are, apparently because they have not yet discerned the awe-inspiring power and elegance of the scientific conception of the universe that psi phenomena fly in the face of.

For instance, Jung mentions group hallucinations, such as this one at which he attended:

I was once at a spiritualistic séance where four of the five people present saw an object like a moon floating above the abdomen of the medium. They showed me, the fifth person present, exactly where it was, and it was absolutely incomprehensible to them that I could see nothing of the sort.¹⁴³

and then proceeds to attribute the same mechanism to cases where independent witnesses, unbeknown to each other, saw a ufo at the same time. He glosses over the fact that there is a missing explanation of how those observers synchronised their hallucinations. As a side-effect, he avoids having to make the specific claim that the observers must have been in unconscious telepathic contact in order to co-ordinate the mass vision.

5.5.2 What do ufos mean?

If ufos are an exteriorisation of material that has been repressed in the collective unconscious mind of mankind, then what exactly is this hidden material supposed to be? What is it that has been repressed? Jung suggested that it was a fear of a nuclear war. He was writing at a time leading up to the height of the cold war, four years before the deployment of Soviet nuclear missiles in Cuba brought human civilisation to the brink of military self-destruction. Fear that the world, including perhaps all human life and the accumulated entirety of human culture, could be obliterated in a matter of a few minutes was, at that time, a strong and realistic one. We have now been distanced somewhat from it, since the end of the cold war and the disintegration of the Soviet Union — but, when Jung wrote his thesis on flying saucers, fear of the nuclear apocalypse was pervasive. Jung therefore rationalised the ufos as a symbolic manifestation with that material by saying that they expressed the hope that an omnipotent force would come from some far-away place beyond the realm of terrestrial politics and would intervene to prevent the hostilities between So-

viet Union and the free world from escalating to the use of nuclear weapons. As corroboration of this idea, it is certainly true that the most common messages conveyed by ufo contactees have to do with warnings about mankind's use of nuclear power.

One of the odd things about ufos is that they never have wings. Unlike any vehicle successfully designed through the fundamental principles of aeronautics to use the atmosphere itself to generate lift, ufos are usually circular (hence called 'flying saucers') or sometimes spherical or cylindrical. (Although, curiously, the eighteenth-century engineer Immanuel Swedenborg designed a circular flying machine, as one of his many engineering projects, before he started seeing angels.) As for the specific symbolism of the circle, Jung identified it with a universal form that recurs in dreams and mythology:

... the symbol of totality well-known to all students of depth psychology, namely the mandala (Sanskrit for circle).¹⁴⁹

In so far as the mandala encompasses, protects, and defends the psychic totality against outside influences and seeks to unite the inner opposites, it is at the same time a distinct individuation symbol and was known as such even to medieval alchemy. ... there would be nothing against the naïve interpretation of the Ufos as 'souls'. Naturally they do not represent our modern conception of the soul but rather an involuntary archetypal or mythological conception of an unconscious content, a rotundum, as the alchemists called it, that expresses the totality of the individual.¹⁵⁰

I have no idea why this symbolic rôle should have been assigned by nature to the circle in particular — rather than, say, the square (which Jung describes as the symbol for the Earth), or the triangle or the tetrahedron, or any other form. But I shall accept Jung's claim that this is what he has found in his psychiatric patients and in his studies of traditional symbolism.

Over the past decade, the threat of nuclear war has largely evaporated from the popular imagination. (It could, though, easily return if the antagonism between the West and the Islamic countries drifts towards open hostility, especially with so much nuclear material and so many nuclear technical staff on the open market after the collapse of the Soviet Union, and with the appalling carnage in former Yugoslavia occurring daily as I write

this.) Yet ufo reports are continuing unabated and, indeed, flourishing in new manifestations such as crop circles. Surely, if Jung's theory were true, then the ufo reports should subside in direct correlation with the lessening of public fears about nuclear war? Not necessarily. Other fears and concerns may arise, which also seek expression from being repressed in the collective unconscious. After all, there is always something to worry about. In order for Jung's theory to work, however, there would need to be a widespread, common concern that touched people deeply in some way that was not articulated in the popular consciousness, and which was therefore forced to manifest itself in visions of discs in the sky.

I do not know whether there are any suitable candidates for a concern, as it is not clear how one should measure the magnitude of a popular concern. One possibility that does come to mind, however, is the feeling of alienation that is widespread in Western urban culture, which I take to be comprised of such notions as the following:

- The sense of lacking any directing purpose in life, the sense of distance from any authentic spiritual value, the sense of being an insignificant cog in the machine of multinational consumerist capitalism, the sense of separation from nature, the fear of pollution and destruction of what remains of the natural environment.

It is a condition that is probably related to the following societal factors, amongst many others, which have become especially acute the latter half of the twentieth century:

- The widespread migration from organised religion (e.g. into the 5,000 religious cults in the USA⁹⁹); the ubiquitous pervasiveness of advertising; the inescapability of chemical pollution in our food and the environment; and the universality of motor vehicles that bring death, mutilation, noise, speed, and gaseous pollution to every corner of the rich industrialised world.

Although these concerns do receive some publicity, the main pulse and thrust of public life studiously ignores them:

- People know that cigarette companies slaughter hundreds of thousands of people every year, but they continue funding them and actively participating in their own killing by inhaling the carcinogens themselves. People know that thousands are killed, crippled, and mutilated by being hit by fast-moving road

vehicles, but they keep on driving fast and actively deplored attempts to slow them down. People yearn for spiritual fulfilment but keep on spending a third of their waking hours watching violent television programmes and computer games. Everybody hates being bombarded by advertising — in hoardings in every main road, on every bus, on every taxi, in every tube train, on every TV and radio channel, on every page of every magazine and newspaper, on almost every web page on the internet, in every sporting event, on the weather reports; yet, where is the campaign to abolish or at least contain the insidious plague of advertising?

My reason for bringing these latter points up is not to harangue anybody for failing to live as a saintly eco-warrior, but to draw attention to the fact that these are universal concerns about the deterioration of our quality of life, which do not receive a commensurate degree of attention in popular consciousness but are left to fester in the collective unconscious.

Different cultures will have different concerns, and we may find there are distinct subsets of the collective unconscious corresponding to large cultural blocs. An interesting datum in this connection is the wave of 'chupas' or box-like ufos seen in Brazil, which were described as looking like flying refrigerators. Vallée gives a detailed account in his book **CONFRONTATIONS**.

It is, however, purely subjective guesswork on my part whether this sense of alienation could function in the rôle required by Jung's theory: that is, whether it could constitute suitable material that, when repressed, could exteriorise itself as visions of ufos. Nevertheless, it at least seems plausible.

What would enable us to test or refine Jung's theory, and identify the repressed material more securely, would be empirical psychological data about the people who see ufos. For instance, Jung makes the following point:

*... visionary images and interpretations in the very people
who are least prepared for such phenomena and least in-
clined to believe in them. ... Aimé Michel remarks that
Ufos are mostly seen by people who do not believe in them
or who regard the whole problem with indifference.¹⁴⁶*

This is a specific empirical prediction of Jung's theory that could be verified or falsified by actual data if anybody were to take the

trouble of recording the beliefs and attitudes of people who observe ufos. It could be done with, say, a four-page questionnaire given to each observer. As far as I am aware, nobody has done this because most ufologists are driven by the theory that ufos are space-ships and the psychology of the observers is therefore of no interest. We are left only with anecdotal reports, such as John Keel's statement that many of the ufo observers that he interviewed had no prior interest in ufos, psi phenomena, or anything spiritual; but afterwards developed an interest in such matters. It is as if the ufo sighting sets the percipient off on a spiritual journey. He also speculates that an analogous process is happening to society at a collective level: as more and more people report ufo phenomenon, and as more books and articles are written about them, so more people are led to start thinking seriously about the psychic and spiritual realms. This would be fully consistent with a Jungian model of ufos if, as I have suggested, the repressed material focused around the sense of alienation.

Inevitably, some writers, such as Colin Wilson — who have recognised the spiritualising effect of ufos on certain sectors of society — attribute this to a policy of the extra-terrestrials in educating the human race. To be sure, this would be consistent if one were committed to the extra-terrestrial hypothesis, but it does rather add to the implausibility of that very hypothesis. In contrast, the Jungian hypothesis is positively supported by such societal effects, if they are real.

5.5.3 Hildegard of Bingen

Hildegard of Bingen (1098-1179) was a prolific German abbess who wrote with great originality and depth on the full range of humanistic concerns, but with a mystical awareness that pervaded all of her work. Her ideas came as visions, and it seems that her main writings were what we would nowadays called 'channelled': they were not devised by her but flowed through her mind from an inspirational source over which she had no control. Her writings came initially as streams of consciousness, and were assembled into cogent and grammatically correct Latin scripts by her assistant.

One of her recurring topics was what we would now call spiritual or 'deep green' ecology, having to do with the respectful and caring relationship that should exist between humanity and

the natural environment. LIBER VITAE MERITORUM (LVM), her second major visionary work, written between 1158 and 1163, concerns the moral decisions made by human beings. And, in her final major work, LIBER DIVINORUM OPERUM (LDO), written from 1163 to 1173, she expands on ten visions of humankind and the world. In both works, she depicts humankind as existing in a spiritual matrix that encompasses the natural world. There are interesting passages in which she describes ecological disasters attributable to human disrespect. In Heinrich Schipperges' study of Hildegard, he writes:

The firmament's upper fire, however, brought devastating burns and wounds (stigmata et ulcera) to human and animal as well as to the fruits of the Earth (LDO IV, 1). Hildegard clearly described how air and water pollution and ecological disasters could happen when the elements were unable to complete their appointed journeys because of the interference of humanity, the 'cosmic rebel' (LVM III, 2)²³⁶

There is, I think, a suggestive similarity between Hildegard's vision and the Jungian notion of the collective unconscious symbolically reacting to humankind's industrialised farming by means of crop circles, cattle mutilations, and luminescent ufos.

5.5.4 The problems of interpretation

In his book on 'flying saucers', Jung does not develop his theory of ufos in much detail. Instead, the book is taken up with rambling digressions on his subjective interpretation of traditional symbols. At times, he descends into silliness. I shall quote the following passage at length to illustrate what I mean by this rather severe comment:

Everything in our experience is subject to the law of gravity with one great exception: the psyche, which, as we experience it, is weightlessness itself. The psychic 'object' and gravity are, to the best of our knowledge, incommensurable. They seem to be different in principle. The psyche represents the only opposite of gravity known to us. It is 'anti-gravity' in the truest sense of the word. In corroboration of this we could cite the parapsychological experience of levitation and other psychic phenomena, denied only by the ignorant, which relativize time and space.¹⁵¹

On reading that passage, I fear that some people would be inclined to dismiss Jung *tout court*. My feeling is, however, that one has to allow for Jung's childlike naïveté about science, and recognise that his contribution to the subject is limited to his specific area of expertise, which is psychology. Even here, however, one cannot help but worry about the lack of systematic basis for the interpretation of dreams and visions, which forms a major part not only of Jung's essay on 'flying saucers', but of the whole field of Jungian and Freudian analysis. In his essay, Jung offers interpretations of a number of dreams of ufos, and of paintings that happen to include ufos. Each time, however, Jung conjures up what seems to be a wholly arbitrary interpretation, without any argument as to why that interpretation in particular should be the right one, when one could imaginatively conceive of a dozen other, different meanings. In fact, Jung briefly mentions this problem himself:

*The language of the unconscious does not have the intentional clarity of conscious language; it is a condensation of numerous data, many of them subliminal, whose connection with conscious contents is unknown. ... the conscious mind ... challenges the unconscious to bring up the subliminal context, which however is written not in rational language but in an archaic one with two or more meanings. And since the metaphors it uses reach far back into the history of the human mind, its interpreters will need historical knowledge in order to understand its meaning.*¹⁵²

This is fine in psychotherapy, but not in science. In the psychotherapeutic process, any interpretation of dreams, or of other products of the unconscious mind, that succeeds in healing the subject's dysfunction is valid. In the language used by many therapists, this is often expressed by saying that the interpretation is 'true for the subject'. That is a worryingly relativistic expression, which seems to say merely that it does not matter whether the interpretation is true or not, as long as it works.

In a later chapter, however, Jung seems to imply that the interpretation is not as arbitrary as it seems:

For those unacquainted with the psychology of the unconscious I must emphasise that my conclusions are not the product of an unbridled fantasy, as is often supposed, but are based on thorough researches into the history of sym-

bols. It was merely in order to avoid overloading my text with annotations that I omitted practically all the references to source material. Anyone, therefore, who feels the need to test the correctness of my conclusions will have to go to the trouble of familiarising himself with my other writings.¹⁵³

This would be more persuasive if he had given at least some pointers to whereabouts in his vast corpus one could find the necessary evidence and sources.

The conclusion that I would draw is that Jung cannot offer us any robust method that will lead to a single, correct interpretation of what ufo sightings represent in the collective unconscious. They represent something, but it is impossible to ascertain what it is — at least, not from the sightings alone — because there is no fixed relationship between symbol and content. Indeed, this renders the use of the verb ‘represent’ very loose here, because the idea of representation strictly requires that the representation be, in principle, decipherable.

There are psychotherapeutic methods for interrogating an unconscious mind, in order to discover more about the contents that underlie its symbolic expressions. There are the slow and cumbersome methods that were invented by Freud and Jung, such as free association, but there are also faster methods that have been developed more recently by workers in the fields of hypnotherapy and so-called neurolinguistic programming. The answers obtained may themselves be articulated in symbolic terms, in which case we gain little, but they can instead often provide a factually correct account of some trauma or fear that has been repressed. Could those methods be applied to the collective unconscious? Given that there seems to be a continuing stream of ufo contactees, perhaps it would be possible to get someone to employ those standard methods in conversation with the ufo ‘occupants’ instead of blindly accepting their claims that they are from Venus or some other planet. It does seem curious that, in all the reports of contactee cases that one reads of in the works of John Keel and others, nobody actually questions the aliens, saying to them, “Look, you’re trying to pull a fast one on me by saying that you’re from Venus. Who are you really? What are you really up to?”

5.5.5 Jung's doubts

Although, at the beginning his book, Jung leads the reader to believe that ufos are just the product of the collective unconscious, by the end of it, he is backtracking and suggesting that there may really be extra-terrestrial spacecraft visiting the Earth, and the psychological process of projection has merely attached a symbolic signification to the alien hardware. The main part of his reason seems to be the undue importance he assigns to radar echoes of ufos:

It boils down to nothing less than this: that either psychic projections throw back a radar echo, or else the appearance of real objects affords an opportunity for mythological projections¹⁵⁴

Again, Jung's lack of familiarity with basic science has let him down. As far as the principles of physics are concerned, there is no difference in kind between an object's being visible in light, which is just the object's reflecting electromagnetic radiation in the visible range of the spectrum — and its being detectable by radar, which is just the object's reflecting electromagnetic radiation in the radio range of the spectrum. If a product of the collective unconscious can reflect light, then there is no principled reason why it cannot also reflect radar waves; and likewise, if an observer can hallucinate a visual sighting, then she can also hallucinate a blip on a radar screen. Jung's assumption that the radar reflection signifies a more assured tangible presence probably arises from the combination of an ignorant belief that the radar reflection has a stronger connection with tactual solidity than has the reflection of optical light, and the almost universal presumption that the sense of touch provides a direct link with reality. Yet, as a student of dreams, Jung ought to have been well aware that the sense of touch can be simulated in dreams and hallucinations just as well as any other modality of sensation. It is a mistake that Dr Johnson notoriously made in his ineffective attempt to refute Berkeley's mental monism: he kicked a stone forcefully and stated, "I refute it thus", disregarding the fact that he could equally well have had an identical experience in a dream. Touch is a sense just like any other. If we are to suppose that there is a collective unconscious that can generate visions of ufos, then

we are also committed to the possibility that that same agency can generate impressions of touch, force, heat, cold, and visions of blips on radar screens.

Furthermore, Jung's own claim that the unconscious mind of an individual can exteriorise its forces in physical action should have made it easy for him to countenance the collective unconscious's exteriorisations on a rather grander scale. It is therefore rather surprising to find Jung writing this:

*The psyche can move the body, but only inside the living organism.*¹⁵⁶

This occurs in a very muddled passage. At one point, Jung denies telekinesis altogether, and at another admits that it can occur but only in the same room as the person who is doing it — without basing the distinction on any principle that would limit the spatial scope of the phenomenon. In one breath, he says that ufos must be physical because they reflect radar waves and, in the next, he says that they cannot be physical because their extraordinary accelerations and decelerations indicate they have neither gravitational nor inertial mass. (One could add that, since nobody has ever reported the sonic boom of a ufo that has just accelerated from rest to a speed vastly in excess of 700 m.p.h., we may conclude that the ufos displace no air and therefore occupy no volume either.) It looks as if Jung saw that he was compelled by the evidence to accept that ufos are psychic projections, but desperately wanted to avoid that conclusion. The ambivalence is, I suggest, especially evident in this passage:

*The simultaneous visual and radar sightings would in themselves be a satisfactory proof of their reality. Unfortunately, well-authenticated reports show that there are also cases where the eye sees something that does not appear on the radar screen, or where an object undoubtedly picked up by radar is not seen by the eye. I will not mention other, even more remarkable reports from authoritative sources; they are so bizarre that they tax our understanding and credibility to the limit.*¹⁵⁵

5.6 A Berkeleian perspective on Jung's theory

5.6.1 Jung's theory versus physicalism

There are some crucial gaps in Jung's theory, which make it untenable from a physicalist perspective, but which can be accommodated by a Berkeleian mentalism view. These are:

- The co-ordination of visions of ufos between independent observers. This problem arises both in the short term, when distant individuals report seeing what was apparently the same ufo; and in the long term, when the same trends and patterns of ufo sightings occur in distant geographic areas that do not even share a common language. Telepathic communication between the unconscious minds of the observers seems to be required to account for this.
- The implementation of the collective unconscious. This is a cohesive, active, and possibly intelligent suprapersonal entity that organises the expression of unconscious material into popular consciousness and, where necessary, converts repressed material into a symbolic form and expresses that instead. To implement this requires more than just point-to-point telepathy between the unconscious minds of individuals. It requires the permanent existence of a suprapersonal entity, either as a central unit or as distributed but coherently controlled system. Needless to say, this is even further removed from what physical science can countenance than telepathy.
- Exteriorisation as a mode of the expression of repressed unconscious material. Although most ufo observations are just visual sightings, there is also a small but significant proportion of physical and physiological effects left behind by the ufos: landing traces, cattle mutilation, crop circles, vehicle interference, and bodily harm such as burning of exposed areas of skin. Obviously, physical science cannot explain how an hallucination can have these effects, with the possible exception of the physiological damage.

How can Berkeley's metaphysic help us to account for these aspects of Jung's theory? The answer to this has already been covered in what I have put forward in previous chapters, but I will recap it here.

5.6.2 Co-ordinating ufo visions

The basic mechanism of telepathy has been proposed as a sharing of experientia between two or more minds, which are considered as existing, not in physical space, where they would be separated by distance, but in a non-spatial mental domain, where all minds interpenetrate.

A sighting of a ufo is proposed as an hallucination that is generated by metamental dæmon, which generates the experience directly in the minds of the observer. The coordination of the hallucinations that constitute ufo sightings is thus achieved by the dæmon, standing outside physical space.

5.6.3 Implementing the collective unconscious

Whereas the conscious mind is, by definition, normally closed under operations of mental access, so that each mind appears isolated and private, we may speculate that some components of the unconscious mind are not closed but open to one another. In other words, part of the unconscious is pooled amongst all minds. This, we might suppose, is what Jung identified as a the collective unconscious.

We may further speculate that, within this collective unconscious are dæmons of the sort discussed earlier, which manifest themselves as ufos. Moreover, we may suppose that there are deeper dæmons, corresponding to Jung's archetypes,¹⁵⁷ that create and program the ufo dæmons.

5.6.4 Exteriorisation of ufo visions

Almost all ufo encounters are hallucinomorphic in so far as they are manifested only as transient experiences without any lasting physical effects. There is, however, good evidence that some do leave physical and physiological effects in their wake. The most common effect is that of minor physiological disturbance or injury, whereas serious injury is quite rare. It is plausible to suppose that these could be triggered by mental states. There have been numerous controlled scientific studies that have demonstrated the ability of the mind to heal bodily disease. Whatever mechanism this involves, it is plausible to suppose that it could also be used to harm the body, if some negative signal were sent, e.g. from a ufo dæmon. Furthermore, it is well established that, in a hypnotic

state, the subject's mind can exercise control over physiological processes far in excess of what the waking mind is even aware of.

One of the problems facing any study of the physiological effects of ufo encounters is that ufo investigators are generally not interested in them, as their main focus is on the supposed space-craft itself. Furthermore, there is an understandable reluctance on the part of medical professionals to get involved in diagnosing the ufo effects. In consequence, we often have no more to go on than non-expert descriptions of the symptoms. One interesting point in this connection is that a frequent report is of the ufo percipient's being 'burned' on skin tissue that was exposed to the ufo, such as the face and hands. In fact, a strong allergic reaction can also look very much like a burn to someone who is not a medical expert, as it can bring on bright redness, swelling, and soreness, just as if the affected skin had been exposed to excessive sunshine. But allergic reactions often have a major psychosomatic component, and it is therefore plausible to suggest that what are reported as burns are in fact mentally induced allergic reactions. Furthermore, the two areas of the body that most readily react in an allergic attack are the eyes and the scrotum, both being loose fluid-filled tissue. There are numerous reports of sore eyes after ufo sightings. Moreover, John Keel, in his interviews with ufo percipients, found that a large number of men who had seen ufos afterwards complained of scrotal redness and soreness. Keel and Colin Wilson assume that this must be to do with the aliens having sex with the percipients in presumed abductions that were subsequently deleted from memory. It seems to me that a more plausible hypothesis would be a more mundane psychosomatic allergic reaction. Without more and better empirical data, however, we can only speculate.

Reports of skin burns are often seized on by ufologists as clear proof that ufos are physical manifestations. John Keel, for instance, regards them as strong support for his theory that ufos are an electromagnetic phenomenon, which leaks high-energy radiation. Yet, in one of the ufo dreams that Jung reported in 1958, the subject dreamed that, after seeing a ufo, her face so was severely burned that she had to be hospitalised and her whole head bandaged. Of course, this single dream does not prove anything, but it does suggest that we should address the possibility that the

illusion of being burned is part of the expressed symbolism of the ufo vision.

John Schuessler has catalogued 400 reports of physiological effects in ufo percipients,²⁶² but found that

Injuries noted in at least 80 percent of the cases are Category 1 injuries as defined in the mufon Field Investigator's Manual.

where Category 1 is defined as:

Those injuries of a temporary nature, dealing with paralysis, dizziness, nausea, vomiting, headache, tingling sensations, electrical shocks, feeling of heat, temporary blindness, mild burns, perception of odors, and perception of sounds.

What is striking about this list is that, apart from apparent burns (which might be mis-reported allergic reactions), these are psychological or can be produced psychosomatically. This is fully consistent with our hypothesis that the ufos are hallucinatory in nature, albeit hallucinations induced by an external agency.

There are, nevertheless, some reports of individuals who had far more severe injuries, in some cases leading to death. These can, however, still be accommodated within our theory since, as noted above, the mind does have the power to affect physiological processes unconsciously. Nevertheless, it would be consistent with the paranormal hypothesis of ufos that most physiological reactions to ufos are psychosomatic, and only rare cases serious or even fatal.

Besides effects on humans, there are also disturbances, injuries, and deaths to animals. A common reaction is that of dogs showing great fear in the presence of the ufo. The most dramatic and puzzling form of animal effect, though, are the cattle mutilations.

A big problem with investigating cattle mutilations is that nobody sees them happen. In consequence, their connection with ufos is merely surmised from the correlation of periods of increased ufo reports and discoveries of mutilated cattle. If it is true that cattle mutilations are attributable to ufos, then it is not at all clear how to explain this phenomenon. How could the cleanly cut excisions be attributable to psychosomatic dysfunctions, or to any of the psi phenomena that we have discussed? This may seem unanswerable, but there are at least some indications (such as stigmata, and claw marks and writing on skin during demonic

possession) that psi processes can produce sharply delineated tissue damage. (On the other hand, it is not very clear how the mutilations support the extraterrestrial hypothesis, either.)

5.7 Angels in religious traditions

Although ufos are the dominant form in which strange manifestors appear to us nowadays, there are other important forms, such as the angels. They may see less prevalent, but they are still about.

Religious tradition is a source of information of an utterly different kind from the scientific acquisition of empirical data, or the rational development of theories to explain empirical observations. Tradition rests on authority, rather than evidence. It preserves the claims of some original figure of authority, without subjecting those claims to scientific testing or critical appraisal. This does not mean we should reject the doctrines of established religions out of hand. Rather, we need to be very cautious about them. For, the original impetus that gave rise to any tradition may have been a *bona fide* philosophical insight, or genuine first-hand experience of the angelic world. As such, it should be examined on its own merits. In this section, therefore, I put forward an introductory sketch of angelology, to be considered as information that is of unknown provenance but which is potentially a source of valid insight into the nature of angels. In considering these traditions, we must be very clear that we are engaging in speculative interpretations of texts that were written in languages and idioms no longer alive today, to serve purposes that we need to reconstruct and which may be alien to us, employing lost cultural references, world-views, grounds of belief, and modes of inference — all of which may diverge in many ways from our own, both in obvious ways and subtle and surprising ways. There is thus a complete contrast between this section and my earlier discussion of the hard empirical data that parapsychological laboratories provide.

Given the difficulties and pitfalls of interpreting religious traditions, why should we bother at all? We already have our hands full trying to understand modern reports of ufo contactees, even with the benefits of objective investigative methods. My reasons for pursuing this source of information are as follows: first, they provide a much longer historical perspective, enabling us to see the phenomenon we are confronted by not as a modern creation

but as a continually recurring feature of human life; second, the images and concepts furnished by religion pervade our modern culture and supply a repertoire of forms that are borrowed by the phenomenon in its modern manifestation; third, the theories and speculations of earlier philosophers and theologians can offer useful insights.

5.7.1 Traditional accounts of angels

Contact with disembodied beings is not new. Reports of such contact go back throughout history: they occur in scriptures and other venerated texts, and accounts of them are found in both the formal religious doctrines and in folklore. Throughout the Middle Eastern and European religious traditions, they have been known as ‘angels’. The theological literature of angelology is very large, and has in recent years been complemented by a massively burgeoning popular literature on angels. Most of these modern books, however, do not concern themselves with the nature of angels. A good introductory source-book is David Connolly’s wide-ranging *IN SEARCH OF ANGELS*, in which he has compiled a large number of references to traditions dealing with angels. Two other, more comprehensive, reference works are: *A DICTIONARY OF ANGELS*, the result of years of study by Gustav Davidson, published in 1967; and *ANGELS A TO Z* by Matthew Bunson. The pan-religious scope of the tradition is indicated by Connolly:

The particular western notion of benevolent spirit beings that most people today would quickly identify as angels developed from Judeo-Christian and Islamic lore, which were in turn influenced by earlier Persian, Greek, Babylonian, Chaldean, and Sumerian beliefs, among others.⁸¹

Angel lore is continually reinforced by people’s first-hand experiences of contact with angels, but the form of those experiences is almost certainly influenced by popular published accounts, and we need to be aware of the reciprocal relationship between them. The visions that people see normally incorporate elements of pictures they have seen or read about in scriptures and their commentaries, which in turn can be traced back over centuries. Therefore by turning to the original sources, we stand a better chance of engaging with authentic accounts of contact with the angelic world. Connolly pinpoints one of the primary sources:

*Two of the most dominant source texts on the subject of angels were the sixth-century writings *The Celestial Hierarchy* and *Mystical Theology*, which, for many centuries, were the definitive word in Christian scholarship on the organizational structure of heaven. The teachings found in these works first took hold in the eastern church and later in the west, after they were translated from Greek to Latin in the ninth century.⁸²*

These two texts were claimed to be the work of Dionysius the Areopagite, a bishop in first-century Athens, named after the Areopagus hill in Athens. (The original Greek name was Dionysios, but the Latinised version Dionysius is conventional.) It was eventually established, however, that they were contemporary works of the late fifth or early sixth century, whose author had attributed them to his or her illustrious predecessor in order to promote their acceptance by giving the writings an association with authority and antiquity. Dionysius himself had been converted to Christianity by St Paul, according to the Bible:

So Paul departed from among them. Howbeit certain men clave unto him, and believed: among the which was Dionysius the Areopagite, and a woman named Demaris, and others with them.⁷⁶

and it was therefore assumed that Paul had personally given Dionysius revealed knowledge about angels, which Paul (and John) had in turn been given in visions from God. This supposition was seemingly corroborated by the writings themselves asserting that the author had been taught in part by Hierotheus, a pupil of Paul's, and by Paul himself. Therefore any writings believed to be by Dionysius were revered and held in almost as high a regard as the Bible itself. Consequently the texts attributed to Dionysius in the sixth century were generally accepted as an authoritative account of the angelic realm for several centuries, especially after their endorsement by Pope Gregory the Great (590 to 604 CE). In particular, these texts were accepted by St Thomas Aquinas, and used by him in the thirteenth century as a foundation for his own account of the angelic world. Only later was it discovered that these writings attributed to Dionysius were, in effect, a sixth-century fraud, and they consequently lost some of their authority. As the true identity of the author has never been determined, he

or she is normally referred to by the somewhat cumbersome name of Pseudo-Dionysius. All that can be said of the author is that Pseudo-Dionysius was probably a Syrian monk, living in the late fifth or early sixth century (and therefore roughly a contemporary of Boethius), who wrote a series of Greek treatises and letters with the aim of uniting Neo-Platonic philosophy with Christian theology and mystical experience. The first known reference to him was in 533 CE.

Given this fraudulent origin of the texts, should we reject Pseudo-Dionysius' description of angels, and consequently that of Thomas Aquinas and all the medieval and later theories that were built up from them? For instance, the theologians of the Reformation, such as Martin Luther and John Calvin, completely rejected any extra-biblical theories such as the three choirs of angels. Karl Barth dismissed Dionysius as "one of the greatest frauds in church history". In fact, I do not think this discovery of the texts' source really has much bearing on the value we should attach to them. We should take as a *prima facie* assumption that Pseudo-Dionysius was as capable of insight into, and perhaps contact with, the angels as St Paul or the real Dionysius. Pseudo-Dionysius' writings include works of deep mysticism which show that he or she possessed a profound spiritual intelligence and we should therefore judge the texts on their own merits, just as we should if they had really come from St Paul or Dionysius. I acknowledge that some people place their faith in the superior intrinsic merit of biblical authority, but I do not.

In passing, we should note that the moral disapproval that we nowadays attach to literary 'fraud' is not altogether appropriate in such cases. First, we have to bear in mind that we have no way of telling how the works of Pseudo-Dionysius were actually presented by the author to his or her readers. Were they openly presented as works of historical fiction, or were they passed off as genuine? Consider this parallel: when Elizabethans watched Shakespeare's play THE TRAGEDY OF JULIUS CAESAR, they were quite clear that these were not purported to be Caesar's actual words, but were rather an imaginative reconstruction of what those words might have been. Likewise, if Pseudo-Dionysius had presented his text as an imaginative reconstruction of what Dionysius might have said on the subject of God and the angels, then we can hardly

criticise him for it. It was, in any case, a standard practice of the time to write anonymous philosophical and theological works with a notional attribution to famous figures of the past. In a way, this is a more vigorous engagement with earlier thinkers than timorously parroting them. It might even be beneficial to revive this form. Instead of seeing it as pastiche done for entertainment, we could see it as bringing back to life the spirit of past thinkers. Perhaps the time is ripe for someone to ‘rediscover’ Berkeley’s lost manuscript for the second volume of his PRINCIPLES, not as a literary *jeu de spirit* but as working philosophy. The writer Jorge Luis Borges refracted this idea through another imaginative lens, in his reviews of invented books, and his frequent bibliographic references to works that have never existed.

The main Pseudo-Dionysian text that has come down to us is the CORPUS AREOPAGITICUM, comprising ten letters plus the following treatises: ON THE DIVINE NAMES (where ‘names’ means ‘predicates’); THE MYSTICAL THEOLOGY; ON THE CELESTIAL HIERARCHY; and ON THE ECCLESIASTICAL HIERARCHY. He gives references to two other writings, THEOLOGICAL OUTLINES and SYMBOLIC THEOLOGY, which either have been lost or were adumbrations of Borgesian fantasies. These works were translated from the Greek into Latin by John Scotus Eriugena three centuries later, thereby introducing them to the Western, Latin branch of the Christian church. As was mentioned above, the treatise On the Celestial Hierarchy is of pivotal importance in the subsequent development of angelology.

Nevertheless, although Pseudo-Dionysius was the fountain-head of medieval angelology, he himself tapped into deeper currents of thought that had flowed for a long time in Semitic philosophy, and which we shall consider below in connection with the kab-bala. These have to do with regarding angels as the intelligent agents whose rôle was to govern the whole of the manifest world, translating the will of the godhead into human experiences, exhibiting the regularities that we are able to discern as the laws of the physical sciences.

Later works that are considered important in the Christian tradition in general, and to Christian angel lore in particular, are St Thomas Aquinas’ SUMMA CONTRA GENTILES (Book 3: Providence) and SUMMA THEOLOGIA (Volume 14); and St Augustine’s

CITY OF GOD.

Within the Islamic tradition, an important modern doctrinal text is THE ESSENCE OF ISLAM, written by Mirza Ghulam Ahmad, the nineteenth-century founder of the Ahmadiyya Movement in Islam, which places a greater emphasis on angels than mainstream Islam (although all of Islam takes the existence of angels as guaranteed by its basic creed).

The function of angels

The word “angel” itself derives from the Latin “angelus”, a borrowing from the ancient Greek term “angelos” or “aggelos”, meaning ‘a messenger’ or ‘one who is sent on a mission’. This was used in the early, Hellenistic Christian era to translate the Hebrew word “mal’akh”, which could mean ‘a messenger’ or ‘an agent’, which in turn comes from the Hebrew verb “malakha”, meaning ‘to toil or work’, from the root “lakh”, meaning ‘mission’ or ‘service’. Thus Rabbi Mordecai Finley, interviewed by Connolly, said:

a malakh, an angel, really means an agent of God, a worker for God, an emissary of God, as it were, or a messenger.⁹⁶

This interpretation of the name “angel” tells us about the functional rôle that angels play, but not about what they are. As St Augustine wrote:

The name Angel refers to their office, not their nature. You ask the name of this nature, it is spirit; you ask the its office, it is that of an Angel, which is a messenger.¹

The angels are generally engaged in more tasks than just conveying messages. The NEW CATHOLIC ENCYCLOPÆDIA, for instance, says that angels are “Celestial spirits who serve God in various capacities”. This is a very general definition but it does embrace the accounts given by different traditional sources. An interesting additional point that is often claimed is the comprehensiveness of the angels’ domain of control: everything in the natural world is controlled by angels. As St Augustine put it, “Everything visible in this world is put in charge of an angel”,⁸⁵ and Martin Luther, “God rules the world through the agency of his holy angels”.⁸⁴ Connolly has listed a number of other references supporting this view:

The great medieval Jewish Scholar Moses Maimonides wrote, ‘For every force charged by God, may he be exalted, with

some business is an angel put in charge of that thing.' Thomas Aquinas believed that 'material things are controlled by angels'. Nineteenth-century Roman Catholic John Henry Newman wrote that angels are 'what are called the laws of nature'.⁸⁶

The same understanding is found in Islam. Here, Connolly quotes the Moslem scholar Mirza Ghulam Ahmad:

*the All-Wise One has instituted two systems for the proper functioning of the universe. The invisible system is related to the angels and there is no branch of the visible system that has not behind it the invisible system ... [T]hough on the surface, stars and the Sun and the moon and the elements carry out their functions, yet in reality it is carried out by angels ... [W]hatever is happening in the physical system does not take place without the mediation of angels ... God Almighty has called angels regulators and distributors, and they are the cause of every change and development.*⁸⁷

Needless to say, the angels with whom people have had contact are at a different level from the entities that are said to run the physical world. Nevertheless, there is a clear implication that they are all entities of the same kind.

The appearance of angels

Since the Renaissance, the angel is conventionally depicted in art as a human form with wings, optionally with a halo and carrying symbolic accessories such as an orb, a scroll of writing, a pilgrim's walking staff, an olive branch for peace, or a weapon such as the sword traditionally wielded by the archangel Michael. Actual contacts with angels report either a human form or an invisible presence. For instance, the English cleric John Wesley wrote that "we have in general only a faint and indistinct perception of their [the angels'] presence".⁹² Two features that recur often in the contactee reports are that the angel may be exceedingly tall and may be luminescent, often with scintillating points of light. The frequent Biblical references to the angels' being covered in 'eyes' may be a figurative attempt to describe these points of light. There has been considerable controversy in theology about whether angels are purely intellectual entities or whether they

are embodied in corporeal forms. Most commentators now share the view advanced by the first-century Jewish philosopher, Philo of Alexandria, that an angel in itself is a formless expression of the godhead, which each person experiences differently. As the cabballistic text of the Zohar puts it, “Angels, who are God’s messengers, turn themselves into different shapes, being sometimes female and sometimes male”. This was also the position accepted by Pseudo-Dionysius and St Thomas Aquinas.

Swedenborg, in the eighteenth century, was insistent that the angels had bodies as we do, but it is likely that he was deceived. In the following century, Mary Baker Eddy (1821-1910), the founder of the Christian Science movement reiterated the view of angels as shape-shifters thus, in her book SCIENCE AND HEALTH:

Angels are not etherealized human beings, evolving animal qualities in their wings; but they are celestial visitants, flying on spiritual, not material, pinions. Angels are pure thoughts from God, winged with Truth and Love, no matter what their individualism may be. Human conjecture confers upon angels its own forms of thought, marked with superstitious outlines, making them human creatures with suggestive feathers; but this is only fancy. It has behind it no more reality than has the sculptor’s thought when he carves his ‘Statue of Liberty’, which embodies his conception of an unseen quality or condition, but which has no physical antecedent reality save in the artist’s own observation and ‘chambers of imagery’.¹⁰²

(Eddy’s choice of analogy is interesting, because the sculptor Bertholdi actually modelled the Statue of Liberty on his mother. The embodiment of the abstraction of liberty is achieved through the props and the body-language — the torch and the book, and the subtly defiant posture and distant look in the eyes. Likewise, an angel may present itself in a familiar form derived from our mundane experience and yet indicate its spiritual nature through subtle clues.) Eddy, however, does emphasise at several points the notion of angels as divine thoughts, rather than as beings, for instance:

... holy thoughts, winged with Love. These angels of His presence, which have the holiest charge, abound in the spiritual atmosphere of Mind.¹⁰³

Of course, from a Berkeleyan perspective, the debate over the corporeality of angels is seen to dissolve into a question of semantics, since all bodies — ours and the angels — are just projections into our experiential fields. Nevertheless, unlike ourselves, angels are traditionally deemed able to manifest in arbitrary forms, whereas ours is fixed — in the altered state of an out-of-body experience; and, moreover, the angels can be completely disembodied, which is an option that is available to us only in remote viewing. It is therefore understandable that there should be confusion about the nature of angels' bodies. Connolly notes the following range of conceptions of angels' bodies:

St Paul, for example, in I Corinthians in the New Testament, states, 'For not all flesh is alike ... There are celestial bodies and there are terrestrial bodies ...' The second-century Christian theologian Justin speculated that angels have ethereal bodies. The noted fourth-century writer Lactantius called angels the 'breaths of God' and also thought them made of some fine ethereal matter. John Cassian, a monk writing in the fifth century, said, 'For though we maintain that some spiritual natures exist, such as angels, archangels, and other powers ... yet we ought certainly not to consider them incorporeal. For they have in their own fashion a body in which they exist ...' St Fulgentius, a sixth-century bishop of Ecija, Spain, believed that angels have bodies of fire. This is also written in the Jewish Talmud and Cabala, and in the Islamic Koran.⁸³

Emanuel Swedenborg (1688-1772), whose work we shall consider in detail below, reported having extensive contact with angels. The angels were adamant that they had bodies and were concerned by the theological tradition that angels were incorporeal — which we have just been discussing. Swedenborg wrote in his book HEAVEN AND HELL:

That angels are human forms, or men, has been seen by me a thousand times. I have talked with them as man with man, sometimes with one, sometimes with many together; and I have seen nothing whatever in their form different from the human form; and have occasionally been surprised to find them such. And that this might not be said to be a delusion or a vision of fancy, I have been permitted to see

*angels when fully awake or in possession of all my bodily senses, and in a state of clear perception. And I have often told them that men in the Christian world are in such blind ignorance in regard to angels and spirits as to believe them to be minds without form, even pure thoughts, of which they have no idea except a thinking faculty, they believe that having no eyes they do not see, having no ears they do not hear, and having no mouth or tongue they do not speak. To this the angels replied that they are aware that such a belief is held by many in the world, and is prevalent among the learned, and to their surprise, even among the clergy....The angels said, furthermore, that the simple in faith and heart have no such idea about angels, but think of them as the men of heaven, and for the reason that they have not extinguished by learning what is implanted in them from heaven, and have no conception of anything apart from form.*²⁹⁶

As we shall see later, however, Swedenborg's angels were indeed visions, not materialisations as he seems to imply here, since they could be seen and heard only by Swedenborg, and they did not move and communicate through space in the normal human manner. Where he says that the angels were fully human in their form, we must take this as referring to their form within the vision. It even seems as if the angels themselves were confused on this point, and mistakenly believed that they had bodies of their own, perhaps resulting in part from close engagement with the embodied minds of humans. Precisely the same confusion is said to afflicted people after death, when the mind disengages with the brain. The TIBETAN BOOK OF THE DEAD, for instance, warns its students not to be deceived by the apparent continuance of their bodies after death: these phantom bodies are illusory, just as amputees often have the illusion of phantom limbs.

The minds of angels

How much intelligence angels possess is unclear, as is their mode of understanding. Thomas Aquinas contended that, whereas human knowledge is empirical and derived from our observing the external world through our senses, angelic knowledge is of interior origin and is of an intuitive nature: they "see directly the pure truth about things by a simple intuition ...". The modern scholar

Mortimer Adler expanded on this view:

Unlike the human intellect, whose powers include that of judging and of reasoning, the angelic intellect does not think. It neither joins nor disjoins concepts to form judgments, as the human mind does; nor does it put judgments together in a process of reasoning that leads to a conclusion. In short, its action is neither cognitive nor discursive. It is purely intuitive.⁸⁹

There is, in various texts, an emphasis on the angels' doing no more than executing instructions from God, which might be read as suggesting a picture of angels as automata. There are, however, specific indications that they must use volition and, moreover, a moral faculty in discharging their duties. It is not too hard to imagine this in the case of individual angels that manifest themselves locally, and present themselves in, say, visions of a bodily form. But how could free will be attributed to the angels that enforce the laws of the physics? This must be thought of as a 'finessed' form of free will, which is atemporal: the angelic act of volition occurs in a domain that is not only outside of, but is uncorrelated with, the events of time and space. Furthermore, it would be implausible to suppose that the angels that control the physical operation of the universe have a wide repertoire of possible actions: they must be constrained by deeper angels, otherwise the fabric of the manifest world would unravel.

The identity of angels

Tradition is ambivalent about the identity of angels. For example, although the word "angel" is used 292 times in the Bible, few angels are named (the archangels Michael, Gabriel, and Raphael, and there is one mention of the obscure angel Abaddon). It is true that the Dead Sea Scrolls lists a directory of angels for different hours and days, but the text gives no sense of such angels having continued existence as individuals. In both ancient and modern lore, guardian angels look after individuals, but there is little sense of a developing relationship over time with any given angel. I suggest that we can interpret this as implying that angels of a given power are interchangeable. In this connection, Connolly wrote:

Some angelologists have proposed that every new wish or desire of God automatically creates new angels to fulfil its accomplishment. One text says angels are formed ‘with every breath of God’. Other scholars have suggested that there are two kinds of angels: some which live forever and some which have a lifespan limited to the duration of their specific duty or service.⁹⁰

On the other hand, the personal identity of angels is defended by the NEW CATHOLIC ENCYCLOPAEDIA, which Connolly quotes:

The Church has defined as dogma that besides the visible world, God also created a kingdom of invisible spirits, called angels, and that He created them before the creation of the world. In conformity with Holy Scripture and with the whole Christian tradition, these angels must be regarded as personal beings and not as mere powers or the like ...⁹⁴

The ambivalence can, I think, be understood when we remember that Christian philosophy regards personal identity as an absolute and immutable property of an individual. In contrast, the Eastern philosophy found in Hinduism and Buddhism sees the individual mind as an illusory construct, much as David Hume did, and the soul or Ātman as a local instantiation of the universal godhead or Brahman. On this point, I think the Eastern perspective is closer to the truth. This makes the idea of our personal identity not absolute but relative to the human perspective; likewise, it has a similar implication for the idea of the angels' personal identity. For the angels, however, the illusion of personal identity is more transparent than ours — since, it is claimed, they lack a rich personal history and stable sensory body, they possess a direct intuitive knowledge of their nature, and they may be subject to emanation and reabsorption by the godhead at any time, whereas humans pass through a regular path of development from birth through maturity to death. On this view, Christian theology will not be able to get a correct grasp of the identity of angels until it embraces the Eastern conception of selfhood. Or, rather, until it reconnects with the Eastern streams of thought that originally fed into the Judaeo-Christian tradition thousands of years ago.

Judaic thinking seems to be more open to the Eastern conception, at least as regards angels. For instance, Connolly quotes from an interview with Rabbi Mordecai Finley:

... I went back to Los Angeles, and at that time I had a spiritual teacher there, from the Hassidic tradition. I asked him, ‘What are angels to you?’ And he said, ‘Discrete packets of divine energy doing God’s work’. And we talked about the idea that divine energy is mediated, and it becomes manifest in different ways. Perhaps it can even take over a person, causing that person to act for the divine in a given moment.⁹⁷

It is not necessary, though, to assume that angels constitute a ‘mediation’ of God’s energy (or God’s consciousness as I think it is better to call it), as Finley’s teacher assumes. For, in the Hindu Advaitan understanding, the soul or Ātman of the individual, be it a human or an angel, is not different from the godhead or Brahman. The isolation of the soul from God is an illusion generated by the individual’s mistakenly identifying itself with its impermanent stream of conscious experience.

Guardian angels

Of course, what gives angels their widespread appeal is their benign intervention in human affairs. The most poignant form of this lore is that of the ‘guardian angel’, an angel that stays with you throughout your life, helping in certain ways: giving protection from danger when possible; offering advice and guidance, even if only through the undetectable method of placing thoughts in the individual’s mind; and creating opportunities for spiritual progress, for example by seemingly chance meetings with the right people at the right time. Again, Connolly provides a range of references:

Angelic guardianship, Thomas Aquinas wrote, begins at the moment of birth and continues without interruption for every moment of human life. ... ‘For every soul, there is a guardian watching it’ — the Koran. ‘There is an unseen hand, a guiding angel, that somehow, like a submerged propeller, drives us on’ — Rabindranath Tagore.⁸⁸

There is an obvious problem with the naïve notion of there being a single, anthropomorphic guardian angel assigned to each individual person: it would be a mind-numbingly tedious occupation. Most people never communicate with their guardian angel, so the unfortunate guardian angel would have the demoralising prospect

of not just ingratitude but complete disregard on the part of the person in their charge. Furthermore, most of the time, the individual gets on with the predictable routine of everyday life, and there is no requirement for the guardian angel's assistance. Obviously, such an occupation allows little scope for the guardian angel to lead an active and fulfilling existence. For this reason, as well as for reasons of celestial economy, we might think it more plausible to consider some alternative models of angelic guardianship. (a) Each guardian angel might be assigned several individuals, and she might divide up her time for looking after each of them, visiting them at times when they are in need of help, or receptive to guidance; (b) or we might even suppose that guardianship is arbitrarily distributed among whichever angels happen to be on duty, so that there is no fixed relationship between a given individual and a given angel; (c) the angel might enter a state of suspended animation for long periods of time, and become active only when the individual is frightened or worried, or when the angel is invoked; (d) the angel might not be very anthropomorphic at all, but might rather be robotic, having no difficulty with the thankless task of perpetual vigilance. The truth, I suspect, lies somewhere between these conjectures, especially if we bear in mind that angels probably do not possess personal identity. The question of whether a given angel is the same as some other angel may not be meaningful. We may be closer to the truth if we think in terms of a reservoir of angelic consciousness, which can become individuated into an instantiation of an angel in order to perform a particular task, which may be triggered by an individual's despair or need for spiritual assistance.

Counting and classifying angels

Significant effort has, in the past, been expended on counting how many angels there are, and determining their classification. There are, I am sure, grounds for going along with John Calvin's dismissal of this as "the vain babblings of idle men".⁹¹ That comment, however, was made in the backlash after it was discovered that the works formerly attributed to Dionysius were a sixth century 'fraud', and the dominant view among the Protestants was that the Bible was the only source of theological knowledge. To be sure, we should at least be open to the possibility of there

being some merit in detailed angelological schemes. Nevertheless, attempts to determine how many angels exist seem to be based on the most tenuous of arguments. Moreover, they ignore the opinion, discussed above, that angels control all the minutiae of the physical world, and are therefore likely to be infinite in number; and, moreover, that they are probably emanated and reabsorbed by the godhead as required for this or that task.

Many writers have proposed that angels naturally divide into nine orders. The titles given to these orders vary somewhat but here is an example. Pseudo-Dionysius grouped them into three choirs and labelled them as follows, in descending rank (this scheme being followed by Hildegard of Bingen and Thomas Aquinas):

- First choir
 - Seraphim (bearers of heat)
 - Cherubim (bearers of knowledge)
 - Thrones (interpreters of God)
- Second choir
 - Dominations (regulators of angels, and governors of the physical world)
 - Virtues (providers of inspiration)
 - Powers (fighters against darkness)
- Third choir
 - Principalities (overseers of human destiny)
 - Archangels (liaising between God and humankind)
 - Angels (messengers to humankind)

There is, I think, a certain arbitrariness about these names, and perhaps the whole structure. There is also a more fundamental problem in schemes for classifying angels. In order for it to make sense that there are different orders, there needs to be some conceptual difference between the angels of different orders. What is it, for instance, that differentiates a ‘Seraph’ from a ‘Cherub’? This is a point very often glossed over by authors who just list the names of the orders without attempting to work out a basis for differentiating them. I have annotated the above list with indications of differential functions as suggested by Tim Propert on his web page.²²⁶ Those annotations, though, are far from self-explanatory. For instance, what is meant by ‘heat’ and ‘knowledge’ here? In the

cabbalistic tradition, there is a more promising, but still rather obscurely founded doctrine. According to the Zohar, there are ten orders of angels associated with the ten ‘sefiroth’, which are emanations of the godhead that underlie creation. In descending rank, these orders are: Arelim, Ishim, Bene Elohim, Malakim, Hashmallim, Tarshishim, Shinnanim, Cherubim, Ofanim, and Seraphim. How all this can be tied together, I do not yet know.

5.7.2 Berkeleian view of traditional angels

Before considering how to understand the nature of angels, we should at least acknowledge the warning given by the poet John Keats:

Do not all charms fly / At the mere touch of cold philosophy? / There was an awful rainbow once in heaven: / We know her woof, her texture; she is given / In the dull catalogue of common things. / Philosophy will clip an Angel's wings.

I think Keats was wrong. My belief is that by acquiring an intellectual understanding of a genuinely beautiful, awesome, or poignant phenomenon, we will not thereby deprive ourselves of that feeling. On the contrary, the understanding can rather accentuate it. Let me give you one example. Last night, I was waiting on a railway platform in the isolated village of Betzdorf: the brilliant full moon dominated the clear, cold, starlit night, but I found that my sense of its splendour and excitement was heightened by the knowledge that the moon was actually a vast mass of rock, as tangible and heavy as any on Earth, suspended in the void, with nothing between it and me but a thin layer of atmosphere and a finite extent of empty space; and in fact I felt a sheer astonishment at the fact that I was standing on the surface of this huge globe of rock that was sweeping bodily through empty space. What is true of the natural wonders of this world will, I believe, also be true of the mental and spiritual worlds. Whatever is truly wondrous, will continue to be at least as wondrous when we understand it, and perhaps more so.

In previous sections, I have suggested that the metamind, which governs the physical world, operates through metamental objects, which are mind-like entities lacking any volition or self-awareness, and dæmons, which do possess those two faculties. On

the basis of the brief sketch of angel lore given above, I would put forward the hypothesis that angels — in the broad sense of powers that control the physical world — correspond to the metamental objects and dæmons collectively; and angels in the narrower sense of entities that engage with human individuals correspond to metamental dæmons.

We can, I think, envision angels as parcels of consciousness with certain limited powers of intuition and cognition, as well as volition and even reflectiveness, but without the rich personal history of a human, and hence without the attachment to existence and the objects of desire that bind us emotionally to the world. We might be tempted to use the somewhat colder terminology of likening them to ‘robots’ of the spiritual realm, but that would be to deny their experience of emotion, which is probably rather like ours.

5.8 Angels in Swedenborg’s work

The Swedish scientist and philosopher Emanuel Swedenborg (1688-1772) published *HEAVEN AND ITS WONDERS AND HELL: FROM THINGS HEARD AND SEEN* in the Latin language, in 1758. This book contains a complex picture of a world of angelic entities. It will be worth our while to examine Swedenborg’s writings fairly closely, for the following reasons: first, it is an unusually large and detailed exposition of what is reportedly a first-hand account of contact with angels; second, its author previously had achieved not only competence but some eminence in the fields of science and engineering of the day, and may therefore reasonably be presumed able to make a careful, true, and intelligent account of what he saw and heard, and indeed to interrogate the angels in an intelligent manner; third, in reading this book, one gets the subjective impression of the author’s striving to articulate genuinely substantive ideas about the nature of the angels and about their function and organisation.

The words that Swedenborg uses, and his peculiar expressions, may seem on a first reading seem to suggest that his work is no more than a bizarre fantasy. On closer inspection, we find something more interesting, which meshes well with what we have derived from the metaphysics of Berkeley. Although Swedenborg and Berkeley (1685-1753) were contemporaries, I have not found

any evidence that they were aware of each other's work. Berkeley wrote his main philosophical works as a young man, before he reached the age of thirty-five in the year 1720, whereas Swedenborg lived through a career as a scientist and engineer before embarking on his second career of philosopher and mystic late in life in the 1750s. We could therefore not expect any of Swedenborg's data to inform Berkeley's theories. On the other hand, the Irish Bishop's PRINCIPLES had been around for four decades when Swedenborg published HEAVEN & HELL. One possible reason for Swedenborg's apparently ignoring Berkeley's work is the language barrier: whereas Latin was the common means of expression in philosophical literature, Berkeley deliberately switched to writing in English for his major works in order to stick to plain, unambiguous vernacular.

Swedenborg's account bears many of the characteristic features of modern reports of contact with ufo 'occupants', but his work has been unduly neglected in the ufological literature. Colin Wilson does make one, somewhat oblique reference to him, in connection with Robert Monroe's reported explorations of a spirit world:³⁶⁵ "All this bears a remarkable similarity to Swedenborg's descriptions in Heaven and Hell",³⁶⁶ but does not pursue the comparison.

For now, I have time only to scratch the surface of Swedenborg's large corpus of writing. This will, however, be enough to indicate the value of his work.

5.8.1 The Angelic World

Swedenborg reported that he saw and conversed with angels on numerous occasions over a period of years. These visitations, it seems, were hallucinatory in nature, for he writes:

... a man cannot see angels with his bodily eyes, but only with the eyes of the spirit within him....these things can be seen by man when he has been withdrawn from the sight of the body, and the sight of the spirit has been opened.²⁹⁷

His reference to the senses' being withdrawn from the body also describes the state of mind induced in Tibetan Buddhist meditative practices, where the mind becomes completely attentive to a single projected image and becomes oblivious to the surroundings and sensory stimuli.

Swedenborg's description of the angelic realm is strikingly similar to the picture of the mental universe that we have derived from Berkeley. Angels are not bodily entities moving through three-dimensional space as we are. Instead they exist in a non-spatial domain, and create the illusion of spatiality for convenience.

All things in heaven appear, just as in the world, to be in place and in space, and yet the angels have no notion or idea of place and space.³⁰²

Correspondingly, angels have no real movement through space. What they experience as if it were locomotion is actually a change in experiential state:

All changes of place in the spiritual world are effected by changes of state of the interiors, which means that change of place is nothing else than change of state. In this way I have been taken by the Lord into the heavens and also to the earths in the universe; and it was my spirit that so journeyed, while my body remained in the same place. Such are all movements of the angels; and in consequence they have no distances, and having no distances they have no spaces, but in places of spaces they have states and their changes.³⁰³

The above passage is strikingly suggestive of the reports of ufo contactees, the main difference being that Swedenborg realised that it was a spiritual journey that he made, not a literal one. Ever since George Adamski's famous reports, numerous abductees have claimed that they have been invited or forced on board flying saucers and taken on visits to other planets. It is encouraging to the trust that we place in Swedenborg's reports that he realised that these journeys were in his mind, and not in the physical world.

Swedenborg's description of space in the angelic world is a very clear corroboration of the conclusion that we earlier drew from Berkeley, that minds may correctly be thought of as disembodied streams of consciousness existing in a fundamentally non-spatial domain. One mind is neither near to, nor far from, any another mind in the Berkeleian universe. The apparent bodily movements that we seem to engage in within the world around us are really projections in a virtual reality, which Swedenborg describes as "changes of state". It is true that he ascribes this

apparent nature of spatiality to the angels only, not to humans, whereas the Berkeleian metaphysic entails that it applies to all beings that experience spatiality. But I think that Swedenborg simply did not realise that the nature of human space (or “meat space” as it is called in the modern jargon of the internet) is ultimately of the same nature as the angelic space. This is a reasonable mistake to make, given the structural constancy of our waking world.

5.8.2 Angelic communication

Angels apparently talked to Swedenborg in Swedish, and he asserted that, as a general rule, angels spoke to each person in his or her own language. Again, this matches the reported mode of communication used by aliens in ufo contacts. The process by which Swedenborg says this happens, however, is very interesting, for it amounts to the ‘data sharing’ that we have posited as the mechanism of telepathic communication in the Berkeleian universe: the two minds overlap.

Angels who talk with man do not talk in their own language, nor in any language unknown to man, but in the man's own language, or in some other language with which he is acquainted. This is so because when angels speak with man they turn themselves to him and conjoin themselves with him; and this conjunction of angel with man causes the two to be in like thought; and as man's thought coheres to his memory, and this is the source of his speech, the two have the same language.³⁰⁴

We also find a further point of contact with a feature that is repeatedly reported in encounters with aliens and demons, namely that the entity exhibits a comprehensive knowledge of the observer’s private memories:

Moreover, when an angel or a spirit comes to a man ... he so enters into the entire memory of the man that he is scarcely conscious that he does not himself know whatever the man knows.³⁰⁴

Swedenborg then makes an interesting distinction between ‘spiritual thought’ and ‘natural thought’:

[T]heir conjunction with the man with whom they are speaking is with his spiritual thought; but because his spiritual

thought flows into his natural thought, and his natural thought coheres to his memory, the language of the man and all his knowledge appear to them to be their own.³⁰⁴

What counts as ‘spiritual thought’ is not entirely clear. A plausible speculation is that spiritual thought is the pre-conceptual, pre-linguistic mental activity that takes place before words or actions take shape in our mental life. To be sure, it has often been proposed in some quarters that human thinking is always and necessarily carried out in the medium of language, but I find that theory is manifestly false. We can see this from everyday introspective experience. In fact, I find that most thinking is done outside language, and becomes clothed in language only when doing so is necessary for some purpose such as communicating with other people, or making the thoughts tighter and more precise, or connecting the thoughts with previous verbal expressions. Some of my thinking, especially in abstract mathematics, is done visually, with rough mental sketches. The majority of thinking, though, is naked and divested of any sensual form: it is invisible to introspection and made manifest only in its products. Such thinking, we might suppose, is what Swedenborg called ‘spiritual thought’. On this view, what Swedenborg is asserting is that the angel’s mind melded with his human mind at the pre-conceptual and pre-linguistic level, so that the angel’s thoughts arose inside his mind clothed in his own language and idiom. How, then, did Swedenborg tell which thoughts were his own and which were the angels? By the same means that anyone can differentiate the voluntary from the involuntary, be it inside the mind or outside it, namely by knowing whether or not one has willed it oneself.

There follows a further confirmation of the hallucinatory nature of Swedenborg’s angels, as their communications are directed exclusively to the observer. Other people who are present did not hear the angels, yet they would have done so if they had been material beings with tangible organs of speech.

The speech of an angel or spirit with a man is heard by him as audibly as the speech of man with man, yet by himself only, and not by others who stand near; and for the reason that the speech of an angel or spirit flows first into a man’s thought, and by an inner way into his organ of hearing, and thus moves it from within....[I]t flows also into the tongue,

causing a slight vibration, but without any such motion as when the man himself by means of the tongue forms the sound of speech into words.³⁰⁵

His mention of tremors in his own speech organs is intriguing, and connects with the known neurophysiological fact that when someone imagines speech — plays it in her inner ear, as it were — then subdued electrical signals are indeed transmitted to the tongue and the vocal cords.

One thing is slightly puzzling here: Swedenborg says that the Angel's thoughts arrive first in his own thoughts, and only then are translated into sound and vision. Yet, usually, when one has thoughts of one's own, one cannot render them in clear sensory forms. Could it be that Swedenborg had an exceptionally acute ability to imagine things in vivid visual and auditory forms, and the angels utilised this facility inside his mind to render themselves visible and audible?

5.8.3 Experience and volition: ‘light’ and ‘heat’

Swedenborg uses the word “light” to refer to the means by which we have mental experience, and the word “heat” to refer to the means by which we have volition. In fact, he uses these words quite extensively, but it is not until Chapter 15, LIGHT AND HEAT IN HEAVEN, that he explains his use of the terms. Consequently, the reader may easily take entirely the wrong meaning, or no meaning at all, from many passages. Here, Swedenborg clarifies what he means by “light”:

The light of heaven is not a natural light, like the light of the world, but a spiritual light.²⁹⁸

... there is a true light that enlightens the mind, wholly distinct from the light that is called natural light (lumen)....Because there is a light that belongs to the understanding, the same things are said of it as of the eye, as that it sees and is in light when it perceives, and is in obscurity and shade when it does not perceive, and so on.²⁹⁹

The precise relationship between experientia and what Swedenborg calls “light” is not entirely clear. If we follow his analogy, however, spiritual light seems to refer to the rendering of meta-mental objects in qualitative experience.

He is less forthcoming about heat.

Something shall now be said about the heat of heaven. That heat in its essence is love....It is evident, therefore, that the heat of heaven, like the light of heaven, is spiritual.³⁰⁰

But what is “love”? Its connection with the will is indicated in the next passage:

Angels, like men, have understanding and will. The light of heaven constitutes the life of their understanding, because that light is divine truth and divine wisdom therefrom; and the heat of heaven constitutes the life of the will, because that heat is divine good and love therefrom.³⁰¹

This indicates clearly that spiritual heat stands in relation to volition as spiritual light stands in relation to experience. Therefore, we may say that spiritual heat is the means by which we exercise volition.

In the following passage, we see the same basic division that Locke and Berkeley knew as the will and the understanding, applied to God, or the metamind:

The internal and the external in the heavens...hold the same relation as the voluntary and intellectual in man .. Every thing voluntary has its intellectual; one cannot exist without the other. The voluntary may be compared to a flame and the intellectual to the light therefrom.²⁹³

Furthermore, one cannot help but see an adumbration of Schopenhauer’s doctrine of every phenomenal thing being a presentation of Will.

5.8.4 Degrees of angelic minds

Swedenborg differentiates different ‘degrees’ of angels according to how closely they embody the will of God. He makes the distinction twice: in Chapter 4, he separates ‘heaven’ into two ‘kingdoms’ but, in Chapter 5, he postulates three ‘heavens’. In both chapters, the defining criterion is the degree to which an angel embodies the metamental will, and it seems redundant to have two such classifications. The latter classification, into three heavens, is more precise and is given more rationale. Furthermore, the division into heavens seems to be an expansion of the division into kingdoms: for, Swedenborg applies the term ‘celestial’ to both the first kingdom and the inmost heaven; and the term ‘spiritual’ to both the second kingdom and the middle heaven; while the outmost heaven

(to which there is no corresponding kingdom) is called ‘natural’. I shall therefore assume that Chapter 5 supersedes Chapter 4. In the following paragraphs, however, I shall outline both classifications.

Kingdoms

Swedenborg here begins a fundamental distinction between two different degrees of angelic mind: the ‘celestial’ angels that have the privilege of direct access to God, and ‘spiritual’ angels that receive information indirectly from God and must deliberate on it in much the same way as humans do.

There are angels that receive more interiorly the Divine that goes forth from the Lord, and others that receive it less interiorly; the former are called celestial angels, and the latter spiritual angels. Because of this difference heaven is divided into two kingdoms, one called the Celestial Kingdom, the other the Spiritual Kingdom.²⁸⁸

What Swedenborg means by ‘interiorly’ is indicated his saying that:

[Celestial angels] have Divine truths written in their hearts, and they perceive them, and as it were see them, in themselves; nor do they ever reason about them whether they are true or not.²⁸⁹

For a reason that is not made clear, the celestial and spiritual angels cannot communicate directly:

Because of this difference between the angels of the celestial kingdom and the angels of the spiritual kingdom they are not together, and have no intercourse with each other. They are able to communicate only through intermediate angelic societies, which are called celestial-spiritual.²⁹⁰

Heavens

Despite this division of ‘heaven’ into the celestial and spiritual ‘kingdoms’, Swedenborg also asserts there are three ‘heavens’, which differ in respect of precisely the quality that he uses to distinguish the kingdoms, namely the manner in which the divine, or metamental, will is received. First, he asserts this strict division:

*There are three heavens, entirely distinct from each other, an inmost or third, a middle or second, and an outmost or first.*²⁹¹

Then he defines the distinction between heavens rather more precisely than he did for the kingdoms. First, he makes it clear that by being ‘in’ one of these three heavens, he just means having an appropriately close linkage with God. The heavens are not places or spaces, but states. Second, the relevant linkage with God occurs in both the faculty of the volition, so that the will of God acts through the being (angel, spirit, or human) and the faculty of understanding, so that the being can experience the volitions of God directly. The three degrees are then defined thus:

*Those who ... admit the [the Divine truths] at once in the life, thus into the will and into action therefrom, are in the inmost or third heaven. Those who do not admit truths at once into the will but into the memory, and thence into the understanding, and from the understanding will and do them, are in the middle or second heaven. But those who live morally and who believe in a Divine, ... are in the outmost or third heaven.*²⁹⁴

Swedenborg places stress on the fact that angels from the different heavens cannot interact with one another. The reason for this is not fully explained, but it is manifested in the fact that angels from different heavens cannot see or talk to each other. We could speculate that this has to do with maintaining a universal phenomenal language: if angel could speak until angel, Babel would reign. A comparable restriction is placed upon humans and renders our minds invisible to one another, and compels us to communicate through our bodily movements. It is true that strange manifestors bypass this restriction, but that is the exception to the rule. There is, nevertheless, an ‘influx’ from the inner heavens to the outer: it passes from the celestial (first heaven) to the spiritual (second), thence from the spiritual to the natural (third heaven), and also directly from the celestial (first) to the natural (third). The influx is conveyed by intermediate angels. This ‘influx’ is also not defined, but seems to give some sustenance, for Swedenborg says: “What is not connected through intermediates with the First can have no permanent existence, but is dissipated and becomes nothing”.²⁹⁵

Swedenborg emphasises that it is not just angels, but also spirits and humans that can embody the will of God to these degrees, and are therefore subject to the same classification. In this way, a human can be ‘in heaven’ even while alive on Earth, if she fully submits herself to the will of God. This is an idea that finds obvious resonances in a range of traditions, from the Jesus’ statements about the Kingdom of God to the Hindu notion of attaining enlightenment.

After a human’s death, Swedenborg considered that the selection of angels that one then meets with is determined by the degree to which one had previously embodied God’s will:

*The interiors of man, which belong to his mind and disposition, are also in like order. He has an inmost, a middle, and an outmost part; ... For this reason also man, as regards his interiors, has communication with the heavens and comes after death among the angels, either among those of the inmost, or of the middle, or of the outmost heaven, in accordance with his reception of Divine good and truth from the Lord during his life in this world.*²⁹²

Again, this resonates with Eastern traditions, where the after-death experience is largely determined by the kind of mind that one has built up during life.

Internal and External Angels

Separately from his mutually exclusive classification by degrees (inmost, middle, and outmost), Swedenborg also separate the ‘internal’ and ‘external’ angels:

*In each heaven there is an internal and an external; those in the internal are called there internal angels, while those in the external are called external angels.*²⁹³

From what we saw earlier of Swedenborg’s definition of ‘internal’ and ‘external’, we may describe these beings as angels of volition and angels of cognition. This suggests a picture of the whole metamind divided into a volitional system comprised of dæmons that perform only a volitional rôle, and a cognitive system comprised of dæmons that perform only a cognitive rôle.

5.9 Angels in the modern era

Belief in the existence of angels, and reports of encounters with angels are very widespread. For example, a survey in 1993 indicated that 69 per cent of Americans believe in the existence of angels.¹⁰⁴ And, according to Connolly,

A Gallup Youth Survey conducted in September and October of 1992 found that 76 percent of American teenagers ages 13 to 17 believe in angels. This figure is up from 64 percent in 1978 during a period when teen belief in other supernatural and paranormal phenomena has declined.⁹³

At the same time, the church authorities continue to support the belief in angels. For instance, Connolly quotes Pope John Paul II in 1993 stating that angels “do exist” and “have a fundamental rôle to play in the unfolding of human events.”⁹⁵

People do see angels, but usually through an inner vision. For example, Connolly quotes from an interview with Jane Howard, who is dedicated to promoting angels through lectures, workshops, and her book, COMMUNE WITH THE ANGELS: A HEAVENLY HANDBOOK.

I see angels in many forms. I can see them when they take on the form of a male or female. I can see them as an energy — like a wave, a rippling effect of different colours of energy when they want to make themselves known that way. Regardless, I do actually see them as clearly as I see human beings. I see them what I call ‘inner eyes’ — I know it’s beyond my eyes, almost inside of my eyes.⁹⁸

Chapter 6

Psi Technology

6.1 Impossibility of psi machines

Whenever technologists and militarists think seriously about psi phenomena, they start to fantasise about psi machines. The sort of thing that these people want is, say, a telepathy machine on which you can key in a message, together with the name and address of the recipient, and the message will immediately start to appear as an auditory hallucination in that person's mind. Technological fantasies of this kind are often fuelled by physicalist theories of psi phenomena. For example, if telepathy were really achieved by transmitting extremely low frequency radio waves, then there would be no reason, in principle, why we could not build a telepathy machine.

I do not think this fantasy has any chance of being realised. My reasons for saying this are as follows. (a) From a fundamental perspective, physical machines have no objective existence of their own, as they are really just imaginative constructs derived from patterns in our sensory experience of the world. Even if we consider the metamental object that corresponds to a physical machine, we see that it is essentially a mental transponder that generates sensory impressions in accordance with physical laws. (b) Telepathy is necessarily a trans-physical phenomenon: it consists in two or more minds sharing mental elements directly, as opposed to conveying signals via the engine of the metamind. Therefore, what we call physical objects are simply not the right sort of thing to do telepathy with. Telepathy can be done only from one mind to another.

Similar considerations will also lead us away from other fantasies of psi hardware, such as telekinesis machines. For, telekinesis

is necessarily the movement of matter other than as determined by the laws of physics. The notion of a telekinesis machine is thus an oxymoron.

This is not a pedantic point about the definition of telepathy, telekinesis, and so on. Rather, it reflects the fact that the great system of metamental objects that generates the virtual reality that we call the ‘physical world’ is specifically constructed so as to respect the laws of physics. If we want to do things outside the range of possibilities that is allowed for in the physical world, then we must by-pass the engine of the metamind, we must circumvent the system of metamental objects and intervene directly in either another person’s mind or in the metamental objects themselves. Since physical machines are themselves embedded in the physical world, and necessarily operate in accordance with physical laws, the idea of a psi machine is just nonsensical.

The foregoing comments do not apply to hardware that contains non-deterministic components whose probabilistic behaviour can be modulated telekinetically. Such a device may, in effect, receive and act on telekinetic signals. Such machines might be described by some people as ‘psi machines’, but I think that that would be a misnomer. The term ‘psi machine’ should really describe machines that perform psi actions, not machines that happen to be acted on passively by psi forces. I would suggest the term ‘psi receivers’ for the latter kind of machine.

6.2 Psi receivers

A ‘psi receiver’ is a machine that takes as its input the intention of a conscious mind, conveyed only via a psi process, and modifies its function in accordance with the presence of such a signal (a ‘presence detector’), or the content of such a signal (a ‘content detector’). On the other hand, a ‘psi transponders’ would be a device that relays psi forces to another mind, rather than acting physically.

Such devices as psi receivers already exist. They have been used for some years in university research laboratories in Nevada and Princeton, and elsewhere.

Recently, the American company Mindsong Inc.¹⁷⁸ obtained US Patent 5,830,064 in 1998, entitled “An Apparatus and Method for Distinguishing Events Which Collectively Exceed Chance Ex-

pectations and Thereby Controlling an Output". The method defined in this patent has been incorporated into a technology that they have called *ShifterCellTM*. This is now being marketed commercially as the *MindsongResearchMicroREGTM*. ("REG" stands for Random Event Generator.) This is an electronic device that provides a non-deterministic stream of binary signals (0s and 1s). The output stream is delivered as bytes of eight random digits to a serial RS232 cable, which can be plugged into a domestic PC.

It is interesting that Mindsong have moved so quickly to exploit this technology commercially. In contrast, the giant Japanese electronics company Sony ran a parapsychology laboratory for nine years but, although they established the real existence of psi phenomena, could not find a way of applying them in a way that was commercially exploitable.

The *potential* for practical applications of this technology is very great. It will be very interesting to see how this potential is realised. Some applications that have been mentioned have been utterly banal, such as domestic light switches that do not require you to get out of bed. There are other, serious applications being considered, which it is not appropriate to give details of before a patent application has been submitted.

In scientific research, this electronic device could turn out to be a very useful work-horse. Obviously, it could facilitate basic experiments to support investigations of the nature and characteristics of micro-telekinesis.

There is another interesting and important area that would be beyond the pale for university parapsychology research departments — because of their obligation to preserve some semblance of adherence to the physicalist orthodoxy — namely that of using it as a gateway for communication with disembodied minds. Two possible formats for such an application are as follows.

- First, one could devise an electronic ouija board. The screen could display letters of the alphabet, supplemented with the space character and, if it were thought necessary, other punctuation signs. The movement of the cursor and the click of the mouse could be controlled by the signal from the REG. For instance, the eight-bit byte signal could be interpreted by the computer thus: the first four bits could code movements of the

cursor by one pixel in the four cardinal directions — left, right, up, and down — and the last four bits could code for a mouse-click when the binary value 1111 comes up. Each time the mouse-click event occurs, the computer will record and display the letter on which the cursor was standing.

- Second, one could simply interpret each byte sequence as a binary number representing a printable character in the ASCII code. The resulting character would then be displayed on the screen. Most of the time, this would just be gibberish, but a disembodied mind could convey written messages by means of psi-expressed intention.

As it has been shown that ordinary, embodied minds can affect random event generators to a statistically significant degree, it is plausible to suppose that if disembodied minds exist then they can also affect the event generator in a systematic way. It would therefore be interesting to take an electronic ouija board, of the sort suggested here, to a house in which poltergeist activity had been reported, and present questions to the space.

The advantage that such electronic communication with disembodied spirits would have over conventional mediumship and channelling is that it eliminates a large stream of possible contamination from the unconscious mind of the medium or channeller. From the perspective of the physicalist, it would add to the credibility of any messages obtained by such means. On the other hand, from the perspective of someone who is already satisfied of the existence of psi processes, it would improve the trustworthiness of the content, although it is still vulnerable to telekinetic influence from the minds of human observers. That is probably unavoidable. In the longer term, we may hope that that risk would be reduced when a higher level of meaningful exchange of information is achieved with disembodied spirits.

Needless to say, there would be resistance to such a method from conventional mediums, who assert they already operate with perfect reliability and no contamination from their own minds. It is, however, common sense that a controlled channel such as the electronic ouija board promises to be potentially a more reliable medium.

6.3 A possible psi technology

Although active psi hardware can never be more than a fantasy, this does not oblige us to leap to the opposite conclusion, that psi phenomena cannot be harnessed in a technological manner, or that a successful use of psi requires a laid-back, undisciplined New Age mind-set. In order for the metamind itself to operate, the mental world must be strictly rule-governed. Otherwise, we would be immersed in eternal, unremitting chaos. If all mental operations are ultimately subject to specific laws and principles, and if we make the reasonable assumption that those laws and principles are knowable, then we can conceive of our building up a repertoire of disciplined mental skills that permit the controlled use of psi. Moreover, we can plausibly take a further imaginative step and consider the development of automatic mental processes that harness the psi phenomena — which we may describe as a purely mental ‘technology’.

I am making the distinction here between a ‘psi skill-set’ and a ‘psi technology’ because using a skill implies performing some action under conscious and voluntary control. For instance, carrying out telepathy by entering a state of mental relaxation and focusing on the action of giving some thought or image to another person: this is a demanding task that takes up all of your attention while you are doing it. In contrast, in everyday life there are actions such as walking, driving a car, painting, or playing a piano, which are mentally automated but nonetheless lie within the stream of consciousness: they are not subject to the minute control of conscious deliberation and volition, but are controlled by a program of instructions that the conscious mind has laboriously built up through training. We might call these actions ‘weakly automated’: they are just below the surface of conscious awareness, you can switch into an awareness of them at will, and they will emerge into full awareness whenever anything goes wrong — for instance, if you find yourself in winter walking or driving on black ice and you must think carefully about each step you take. Beyond these, there are ‘strongly automated’ actions, such as breathing, heartbeat, and vasodilation (narrowing or widening peripheral blood vessels). Normally, these operate deep beneath the limit of conscious awareness, cannot (except breathing) be ac-

cessed by ordinary deliberation, and never jump into our awareness. One can, however, develop an awareness of them through meditation or biofeedback. Then, we realise that really they are present in the stream of consciousness all the time, but we entirely fail to notice them.

Automatic mental functions are not always created through deliberate training. Often, they are set up unconsciously as mental scripts for dealing with emotionally painful situations. This, after all, is the origin of phobias, obsessive compulsions, and neuroses. Such scripts can have such effects as the following: make you perceive things that are not there; or fail to perceive things that are; or compel you to do things irrespective of whether you want to or not; or prevent you from doing things even when you want to.

Let us suppose that, in a similar way, psi actions could be automated mentally. What sorts of things might this cover? At a rudimentary level, we could envisage continual polling for telepathic signals of a particular kind, such as a danger of some sort, and a triggering of some reaction (conscious or unconscious); or continual transmission of a signal, such as a request for help; or a continual telekinetic activity (more plausibly, a micro-telekinetic activity such as might be involved in fighting germs in the body). These are all rudimentary in the sense that their execution does not require any complex logic. They do not involve preplanned sequences of action, or conditional action, or non-trivial logical dependencies.

6.3.1 Programmable telekinesis

From the standpoint of the mathematical discipline of automata theory, the gold standard for assessing the power of any automatic system is the ‘universal Turing machine’. This is an abstract mathematical description of the capabilities of a computing device that can perform all known algorithms, and hence doing anything — however complex — that can be precisely defined as an automatic process. The so-called Turing machine itself is quite simple, but it has enough flexibility and power that it can, when set up appropriately, execute arbitrarily complex tasks. Automata theory provides the mathematical foundation for the theories of computer science, which have been put into practice in the design

of electronic circuitry with great success. There is, though, no reason whatsoever why automata theory should not apply with equal rigour and efficacy in the metaverse. Mental constructs must follow the same fundamental logico-mathematical principles as digital circuits. Therefore, if we can get so far as to construct a Turing machine in disembodied mental processes, then we know that we will meet with no fundamental limits to the construction of arbitrarily powerful computers operating in the metaverse.

We discussed in the previous section the feasibility of psi receivers and transponders — electronic hardware that can react in a systematic way to conscious intention, and thereby either perform physical action or convey mental action. Devices of the latter kind need not be made of hardware. A psi receiver could be built purely mentally in the metaversal domain, and carry out its function without any physical counterpart.

To illustrate what I mean by such a device, let me give a purely conjectural example. Imagine that a navigational device were set up that, given your location, can guide you to your desired location, or at least to the nearest town. You would invoke it by concentrating mentally on an auditory key word, or a visual insignia. In the content-addressable metaverse, this would be enough to establish a connection. The device would then present itself in a ‘user-friendly’ format. Just as modern computers have ‘graphical user interfaces’ (GUIs), this device would have a ‘mental user interface’ (MUI). The design and choice of the MUI could be quite arbitrary. It could, for instance, be a little blob of blue light that leads you on in the direction you need to go. Or it could be something more elaborate, such as an audio-visual hallucination of an angelic figure, which tells you which way to walk. Having accomplished its objective, the mental device would log off and the MUI would vanish. The MUI itself would consist of experientia generated directly in your conscious mind, and would not be perceptible to other people.

(There is, of course, an interesting parallel between these conjectural mental devices and the metamental dæmons appearing as strange manifestors, which were proposed as an explanatory model for ufos and such-like entities. They also remind us of the tulpas, or manifested beings, that according Tibetan folklore can be created by Buddhist monks. We might make the further con-

jecture that these daemons would employing precisely the same technology of mental devices.)

How would we build these mental devices? By guided visualisation, essentially. To achieve the required degree of precision and stability, it would probably be necessary to enter into an altered state of consciousness, such as hypnosis or lucid dreaming. The ability of the mind to generate realistic sensory imagery under hypnotic suggestion is well known. A comparable capacity in lucid dreaming has been demonstrated by Stephen LaBerge's research at the Lucidity Institute. One of the experiments carried out by Edwin May with LaBerge at SAIC, under the US government's remote viewing programme, involved the successful receipt of telepathic imagery, which confirms that the mind can interface with psi processes during lucid dreaming. I am not aware of any reports of attempts to implement what I am proposing here, so this is largely speculative. The construction procedure might involve imagining the required device in a visualised form, and instructing it to persist after the end of the altered state of consciousness. These instructions may be given verbally, as in so-called 'neuro-linguistic programming'. An ability of the subconscious mind to understand and respond effectively to verbal instructions has been amply demonstrated in hypnosis. My conjecture is that mental devices that are intended to function autonomously will inherit that linguistic capacity.

How would we actually set about the first stages of proof-of-principle, of building elementary logic circuits? Again, purely as illustration, I would imagine something like the following. Suppose that an electronic random-event generator (REG) has been set up, and connected to a computer with a graphical display of the input. Suppose that this graphical display shows a dial from 0 to 100, depicting the number of 1s generated in the past 100 events generated by the REG machine. Normally, the dial hovers around 50. In the corner of this display, there is a light that shows either red or green. This source of this light in the corner is independent of the REG. It might be manual, or based on time, or a table of pseudo-random numbers, or another random-event generator. Now, visualise some suitable visible form, such as a globe of light hovering over the REG, and performing the following task: when there is a green light showing, move the dial to the right, yield-

ing an increase of 1s, and when the light is red, desist from this activity. Then express the intention that this globe will continue functioning for the next twenty-four hours, either by visualising it continuing to work when the laboratory is empty and throughout the night, or by verbally telling it. The conjecture here is this: provided that the subject has a telekinetic ability, as revealed by more conventional tests, then the REG will be found to have an imbalance of 1s when the green light is on. If this is successful, you could then proceed to test propositional logic in the programming of the telekinetic process. For instance, you could have four lights, each of which will at each moment be showing either red or green; and apply the rule that the REG should increase its generation of 1s if light no. 1 is green and either light no. 3 or light no. 4 is green. Having mastered this, you can then proceed to attempt stored-data logic. For example, you could visualise a memory cell within the global of light, capable of containing, for instance, a white blob or black blob. The blob is initially white; it alternates between white and black whenever four green lights come on together. When there is a white blob, the globe follows this logic: if light no. 1 alone is green, the REG is to generate more 1s, otherwise do nothing; but when there is a black blob, the globe follows the alternative logic: whenever any of the lights 2 to 4 are green, the REG is to generate more 1s, otherwise do nothing.

These conjectural experiments could all be carried out and tested quite easily using the REG from MindSong Inc. plus the time of a competent telekinetic subject.

To anyone who is not familiar with computer science, these experiments with coloured lights may seem silly and pointless. But to anyone who is acquainted with the basics of computer science, the implications of obtaining successful results from such experiments are staggering. If the psi process of telekinesis can be programmed to perform these elementary logical actions, and if such instructions can be concatenated, then there is no apparent reason for there to be any limit to the complexity with which the psi process can be programmed. We should, in effect, be able to construct a universal Turing machine in the metaversal domain.

6.3.2 Psi informatics

Most of the parapsychological thinking that can be called theoretical falls into the category of psi energetics. There is a background assumption that psi processes essentially involve a new kind of energy, and that understanding psi phenomena amounts to no more than obtaining an analytical account of its energy dynamics. I have argued earlier that this is wrong, and that a more credible approach comes from the alternative assumption that psi processes essentially involve a new kind of informatic activity in the realm of consciousness.

If my conjectures on programmable telekinesis, in the preceding section, prove to have any validity, then we will have the opportunity to develop a new branch of computer technology, which I have called ‘psi informatics’. The seemingly interminable debates about whether or not psi exists would then be sidelined by the production and use of effective instruments and tools operating entirely by psi processes in the metaversal domain.

Applications of psi informatics in medicine are the most promising. This is for three reasons: first, human welfare is of primary importance; second, physicalistic medical science, despite some spectacular successes such as antibiotics, has great difficulty coping with a range of health issues, especially those that are not to do with emergencies; third, there is a lot of anecdotal and systematic evidence from complementary medicine that indicates that there is already a high level of strong, naturally occurring interactions between the mind and the body. Therefore we might hope that there will be many points of contact through which a psi-driven mental device of the sort we have been considering could exert influence or control over physiological parameters.

Besides physiological change, is psychological change, which is and probably easier to achieve. Psi devices could be used to immote³⁰⁶ people remotely, for example calming people in distress or relieving their pain in hospitals.

As well as therapeutic psi processes, there are also reports of using telecognition for diagnosis. I have some reservations about this. First, most conventional medical practitioners would completely ignore any such diagnosis. So, if we limit our consideration to conventional therapy, then the only benefit of such diagnosis

would be to alert people to developing, potentially serious conditions that they are not yet aware of. Second, the diagnoses are often expressed in unscientific terms, such as blocked chi energies, which have no rational entailment in either conventional or unconventional medicine. Third, spiritual healing usually seems to operate on a systemic basis: the healer does not need to know what the illness is, and does not need to focus intention on a specific intention, but only needs to engage a desire for a healthy intention. It is as if the healing impulse activates some local healing processes, which already possesses the information and intelligence required to do the job. If so, then diagnosis is informatically irrelevant. Its value would then be purely as a dramatic prop.

6.4 Ethics

The vast literature that exists on psi research is focused on proving the existence of psi, on developing psi techniques, and on various theories and pseudo-theories of how psi works. There is exceedingly little discussion of the ethics of using psi phenomena. The few points that have been raised in the literature are somewhat simplistic, and I will briefly go through them here.

6.4.1 Should we use psi at all?

There are religiously motivated injunctions to avoid any use of psi. It is not uncommon for conservative members of religious communities to forbid any engagement with supernatural forces, other than God and His angels. Usually these bans refer to traditional forms of psi, and extend to such seemingly innocuous activities as reading Tarot cards and performing spiritualist services. For example, a shop in North London was prevented from opening near an Anglican church because it was planning to offer Tarot readings, openly advertised in the shop window. Apart from the infamous passage specifying the murder of witches, the Bible itself contains no prohibition of psi research or technology. On the contrary, the general drift of books such as Genesis is that mankind is supposed to have dominion over the manifest world, which I would take to include psi phenomena.

The motivation behind the prohibition seems to be that of keeping people in their place, and presupposes a canonical distribution of power in the universe. There is a feeling that, if

psi powers exist, then it is not our business to use them. God has given us the material world to order our affairs in, and that should be enough for us to carry out God's will on Earth. I see no basis for this belief. First, there are no scriptural grounds for it: as noted above, the Bible rather encourages us to take responsibility for managing the world in general, which we may suppose includes the paranormal aspects of the world as well as the normal ones. In any case, even if there were scriptural prohibitions, they would not have absolute authority, as the Bible itself is just a text written by fallible humans. Second, it is a common thread in all world religions that we have duties of benevolence, to use our powers of reason to acquire, maintain, and regulate such command of the manifest world as will promote the pursuit of happiness and freedom. If psi phenomena can be harnessed to that end, then we have a duty to do so. I therefore conclude that there are no fundamental religious grounds for banning the use of psi phenomena.

6.4.2 Dangers from psi entities

A secondary religious objection is that using psi is too dangerous. Within the context of their historical traditions, there is concern that there are incorporeal entities or forces that may be released, or put into contact with humans, through psi activities. There is a supposition that normal mundane life is hermetically sealed and that consequently malicious disembodied entities — demons, in other words — cannot normally get a handle on human life. But, when channels of communication are created between the human world and the spirit world, those entities are able to penetrate our world with adverse consequences. This is, I suspect, a well-founded fear. Nevertheless I think the proper response is not to abandon the psi realm, but to develop techniques for countering the danger.

In many cultures, methods have evolved for dealing with evil or obstructive disembodied entities. In the Christian church, for instance, there are services of exorcism. There is considerable scope for those traditions to contribute to developing health and safety precautions and defences for use by psi workers.

6.4.3 Dangers from psi use

A further concern about psi dangers, which is often proposed on religious grounds, but could equally be held by secularists, is that psi is too potent: it is a power tool that mankind is too immature to handle. Certainly, it is an appalling reflection on mankind's collective spiritual development that whenever a new technology has become available, the keenest use to which it is put is warfare, the deliberate harming of other human beings. If we accept the scientific evidence that psi phenomena genuinely exist, then we must face the prospect that they can be used in warfare. Indeed, it is noted that the biggest funding of psi research has been military: twenty million dollars have been spent on the US programme, initially funded by the Central Intelligence Agency but predominantly by the Defense Intelligence Agency, and the operational use of psi within that programme was predominantly for army tasks. Besides the remote viewing, which has received most publicity, the programme also involved remote influencing. There have been rumours on the internet of individuals being killed by remote influencing: these are probably apocryphal but, in principle, we may expect that actions of this sort will be possible and will be carried by military and other groups.

Two responses are possible to this challenge: prohibition and open management. Historical experience suggests that the main effect of prohibition would be to drive it underground, where its covert use would not be subject to public scrutiny or control, and where it would be surrounded by a publicly unaccountable or criminal culture. With regard to the prohibition of private use of psi, there are clear precedents. The dismal and violent experience in the USA during 1920 to 1933, when the manufacture, sale, and distribution of intoxicating liquors was banned by constitutional amendment sets an example of what we might expect. Further back in time, the persecution of witches through show-trials in Europe and North America in the seventeenth century gives a more directly relevant example. There is no corresponding example of the prohibition of a technique from use by governments, because state powers rarely ban themselves from using anything that is militarily useful. There are, however, encouraging instances of the regulation of certain kinds of munition by world

powers: biological warfare and nuclear warfare are held to have such enormous potential for devastation that they are subject to specific treaties. The two main obstacles are those of monitoring and policing any prohibition or restriction, and of defence against violators. As an example of the former, we have had the spectacle of UN monitors in Iraq trying in vain to track the development of biological and nuclear weapons of mass destruction. And, as an example of the defence against violators, we have the British government continuing research in biological warfare in order to maintain and improve effective defences against other countries should they ever use biological agents against us.

Controlling the use of psi also faces the formidable obstacle of detecting its use. As far as I am aware, there are no reports of psi events such as telecognition or telekinesis giving off any detectable side-effects. There is no tell-tale signature or smoking gun. This may be soluble within the technology of telecognition itself.

The use of telecognition could also have an adverse impact on civil liberties, initially by invasion of privacy. If telecognition performs as it is claimed, then it gives authorities (and others) the power to monitor the private activities, and even the thoughts, of any individual. This capability vastly exceeds in the extent of its penetration any existing methods of surveillance. It is therefore disturbing that there is, as far as I am aware, no legislation regulating its use. In the UK, a police officer requires authorisation from the Home Office before she is legally permitted to tap your telephone. She requires no permission at all to use remote viewing to perform the same task.

Paradoxically, intelligence agencies have taken telecognition seriously enough to take steps to maintain security in their research and operational work. For example, CIA staff member Kenneth Kress, recorded in his memoir "Parapsychology in Intelligence", the time when the psychic Pat Price was first tested in remotely viewing some 'structures':

It was agreed that if Price described these structures, I would be prepared to have him sign a secrecy agreement.¹⁶⁹

In his postscript dated 1999, Kress records that the FBI later established that Price was indeed spying for another organisation.

If US Government agencies consider it worth while to take defensive measures against abuse of telecognition, then surely we,

as citizens or subjects, should correspondingly seek protection against such abuse by the state, or by other organisations?

6.4.4 Proposals

I would suggest the following proposals for consideration, which I list in the order of their diminishing likelihood of being taken up.

- **Voluntary control of telecognitive invasion of privacy**

All practitioners of telecognitive methods in the traditional private sector such as spiritualistic mediums, Tarot card readers and such-like, should endorse and follow a voluntary code of conduct. This code should insist that any personal information that is obtained telecognitively about a third party will be regarded as confidential and not disclosed to a client. This may seem a rather minor and even trifling regulation, but I believe it is an achievable first step toward a culture of ethical responsibility in the use of psi phenomena. Since there is no drive to obtain and sell confidential personal information amongst these practitioners, I would expect a voluntary code of practice to suffice.

- **Legal control of telecognitive invasion of privacy**

In the wake of the disbanding and declassification of the US Government's programme of remote viewing, a number of commercial 'psychic spy' agencies have been set up. These can, and apparently do, have some legitimate functions to perform. Nevertheless, they may also be offering services involving the invasion of privacy of individuals. This should be prohibited. It should be made illegal for anyone to use, or to offer to use, telecognition to get confidential personal information and pass it on to third parties. It will, of course, be difficult — although not necessarily impossible — to detect the actual use of telecognition. Therefore the law would in effect prohibit agencies from *offering* to abuse telecognition in this way. So, for instance, an advertisement in which an agency offers to obtain confidential personal information by 'remote viewing' would be a breach of this law.

- **Regulation of state use of telecognition.**

The existing laws that restrict the use of conventional methods of interception, such as tapping telephone lines and opening

mail, should be extended to the use of telecognition. Such legislation is more likely to succeed in the USA than in the UK. After all, if the US Government has spent twenty million dollars of taxpayers' money on testing and developing telecognition, and has concluded that the phenomenon exists, then it is not unreasonable for private citizens to insist that the Government should at least follow basic standards of conduct in using it on them.

- **Military use of psi**

Certain categories of psi activity should be classed as munitions and the use of, and training in, such activities should correspondingly be restricted. Invading another person's mind, either to extract information or to exert influence, or using bio-telekinesis to affect another person's body — without the target person's prior consent — should be prohibited from use by private citizens, and its use by the state should require authorisation from an appropriately high level of seniority. The exporting of training in these techniques to countries having non-democratic regimes should be prohibited by an international treaty for the non-proliferation of psychic warfare.

At the time of writing, the forthcoming international conference *Toward a Science of Consciousness* in Tokyo proposes to make a declaration that the results of research into consciousness should not be used for military purposes. It does not mention psi research specifically, but psi phenomena are a manifestation of consciousness, so psi research falls under the same rubric. This declaration, it seems to me, is simplistic and unrealistic. If, as seems likely, psi phenomena can be employed in warfare, then we have a moral obligation to develop defences against possible future psi attack. To prohibit the military use of psi would be consistent only with the unworkable ideology of pacifism. The correct approach is not to stifle the technology, but to establish the open and democratic control of it.

War is an unspeakable horror, but unilaterally abandoning research in an area of defence technology will not make it go away. As far as I can see, the only means of preventing war in the short term is through effective defence; and, in the long term, through the spread of democracy.

I apologise for the focus on destructive uses of psi phenomena. Constructive uses, such as medical diagnosis and healing, ought to be given more attention, but they do not require legislation to restrict them.

In this connection, we may wonder whether the US Government would have had more to show for its money if it had spent twenty million dollars on psychic welfare rather than warfare. An idea that is in circulation is the Taoist notion that the forces of psi are geared specifically for the welfare of sentient beings, and will resist attempts to use them for destruction. This is the reverse of our normal understanding of technology as a neutral and inert tool, and its concomitant belief that only the *use* of technology is value laden. Like the Zone in Andrei Tarkovsky's mystical film *STALKER*, the metamind may have its own agenda, and may have incorporated its own beneficent objectives deeply in the fabric and machinery of the metamental world.

Chapter 7

Conclusion

I will very briefly draw together the main points of this book. I have suggested that reality is primarily mental, and the physical world is essentially a convenient fiction, a construct that serves to model the regularities exhibited by our experience of the natural world. The contents of our conscious experience when we perceive the ‘outside world’ can be thought of as a virtual reality. The engine that generates this virtual reality is a mind-like system called the ‘metamind’. The architecture of the metamind is probably like that of artificial virtual reality systems: there are active modules, called ‘mentamental objects’ corresponding to the objects we find around us. There may also be ‘mentamental dæmons’ that possess autonomy. These we may think of as disembodied minds.

The world that we encounter on a day-to-day basis is held fairly rigidly in place by the metamind. We cannot walk through walls, nor will we fall through the floor or levitate to the ceiling. Nevertheless, there appear to be loopholes, gaps in the determinism with which the metamind governs the world. These loopholes create windows through which ordinary minds can exert paranormal influence over events, and engage in paranormal communication with other minds. And through which disembodied intelligences may operate in the manifest world without violating the law-like regularities that we observe in the normal world.

There are probably mentamental dæmons, which interact directly with people, and may present themselves as ‘strange manifestors’, which are able to generate imagery directly in a subject’s mind, bypassing the normal channels offered by the metamind.

It is suggested that reported encounters with a range of phenomena, variously described as visitations by angels, demons, fair-

ies, ufos, or aliens, may in fact be strangely manifesting meta-
mental daemons.

Finally, it is suggested that research should be directed toward:
developing a rigorous and sound science of psi phenomena; estab-
lishing meaningful communication with such disembodied intelli-
gences as may exist; applying the new science of psi to producing
a psi technology, with especial emphasis on human welfare.

Notes

- [1] Augustine, CITY OF GOD
- [2] Baldwin, 1996. "Three faces of regression therapy", online paper at SpiritWeb.
- [3] Baldwin, undated, "Close Encounters of Possession Kind", online excerpt
- [4] Baldwin & Baldwin, "Past Life or Attached Entity?", online paper
- [5] Berkeley, NOTEBOOK A, 429
- [6] Berkeley, NOTEBOOK A, 472
- [7] Berkeley, NOTEBOOK A, 478
- [8] Berkeley, NOTEBOOK A, 517
- [9] Berkeley, NOTEBOOK A, 577
- [10] Berkeley, NOTEBOOK A, 578
- [11] Berkeley, NOTEBOOK A, 580
- [12] Berkeley, NOTEBOOK A, 581
- [13] Berkeley, NOTEBOOK A, 636
- [14] Berkeley, NOTEBOOK A, 674
- [15] Berkeley, NOTEBOOK A, 701
- [16] Berkeley, NOTEBOOK A, 712/3
- [17] Berkeley, NOTEBOOK A, 714
- [18] Berkeley, NOTEBOOK A, 736
- [19] Berkeley, NOTEBOOK A, 769
- [20] Berkeley, NOTEBOOK A, 773
- [21] Berkeley, NOTEBOOK A, 788
- [22] Berkeley, NOTEBOOK A, 812
- [23] Berkeley, NOTEBOOK A, 814
- [24] Berkeley, NOTEBOOK A, 820/1
- [25] Berkeley, NOTEBOOK A, 828/9
- [26] Berkeley, NOTEBOOK A, 831
- [27] Berkeley, NOTEBOOK A, 832
- [28] Berkeley, NOTEBOOK A, 835
- [29] Berkeley, NOTEBOOK A, 841
- [30] Berkeley, NOTEBOOK A, 875
- [31] Berkeley, NOTEBOOK B, 194
- [32] Berkeley, NOTEBOOK B, 194a
- [33] Berkeley, NOTEBOOK B, 176
- [34] Berkeley, NOTEBOOK B, 223
- [35] Berkeley, NOTEBOOK B, 282
- [36] Berkeley, NOTEBOOK B, 293a
- [37] Berkeley, NOTEBOOK B, 300
- [38] Berkeley, 1710, PRINCIPLES, 2
- [39] Berkeley, 1710, PRINCIPLES, 3
- [40] Berkeley, 1710, PRINCIPLES, 6
- [41] Berkeley, 1710, PRINCIPLES, 7
- [42] Berkeley, 1710, PRINCIPLES, 8
- [43] Berkeley, 1710, PRINCIPLES, 11
- [44] Berkeley, 1710, PRINCIPLES, 17
- [45] Berkeley, 1710, PRINCIPLES, 18
- [46] Berkeley, 1710, PRINCIPLES, 22
- [47] Berkeley, 1710, PRINCIPLES, 24
- [48] Berkeley, 1710, PRINCIPLES, 27
- [49] Berkeley, 1710, PRINCIPLES, 35
- [50] Berkeley, 1710, PRINCIPLES, 46
- [51] Berkeley, 1710, PRINCIPLES, 48
- [52] Berkeley, 1710, PRINCIPLES, 51
- [53] Berkeley, 1710, PRINCIPLES, 63
- [54] Berkeley, 1710, PRINCIPLES, 70
- [55] Berkeley, 1710, PRINCIPLES, 71
- [56] Berkeley, 1710, PRINCIPLES, 82
- [57] Berkeley, 1710, PRINCIPLES, 105
- [58] Berkeley, 1710, PRINCIPLES, 112
- [59] Berkeley, 1710, PRINCIPLES, 120
- [60] Berkeley, 1713, DIALOGUES, Preface to 2nd Dialogue
- [61] Berkeley, 1713, DIALOGUES, 2nd Dialogue, 209 & 210
- [62] Berkeley, 1713, DIALOGUES, Philonous in Dialogue 2, page 212
- [63] Berkeley, 1713, DIALOGUES, Philonous in Dialogue 2, page 214
- [64] Berkeley, 1713, DIALOGUES, 2nd Dialogue, 216

- [65] Berkeley, 1713, DIALOGUES, 2nd Dialogue, 224/5
- [66] Berkeley, 1713, DIALOGUES, Dialogue 2, 225
- [67] Berkeley, 1713, DIALOGUES, 2nd Dialogue, 225/6
- [68] Berkeley, 1713, DIALOGUES, 2nd Dialogue, 226
- [69] Berkeley, 1713, DIALOGUES, 3rd Dialogue, 229
- [70] Berkeley, 1713, DIALOGUES, 3rd Dialogue, 230
- [71] Berkeley, 1713, DIALOGUES, Philonous in Dialogue 3, page 240
- [72] Berkeley, 1744, SIRIS, 328
- [73] Berkeley, 1744, SIRIS, 338
- [74] Berkeley, 1744, SIRIS, 342
- [75] Berkeley, 1744, SIRIS, 352
- [76] The Bible, King James Version, Acts, 17:33-34
- [77] Blackmore, 1994, "Alien abduction", New Scientist, 19th November 1994
- [78] op. cit., p 31
- [79] Chiltern, c 1999, ODYSSEY OF THE SOUL, online excerpt
- [80] Cole, 1996, "Auraopathy: A New Medicine", Intl Assoc. of New Science
- [81] Connolly, 1993, IN SEARCH OF ANGELS, p 14
- [82] Connolly, 1993, IN SEARCH OF ANGELS, p 22
- [83] Connolly, 1993, IN SEARCH OF ANGELS, p 23
- [84] Connolly, 1993, IN SEARCH OF ANGELS, p 26
- [85] Connolly, 1993, IN SEARCH OF ANGELS, p 33
- [86] Connolly, 1993, IN SEARCH OF ANGELS, p 34/35
- [87] Connolly, 1993, IN SEARCH OF ANGELS, p 35 & 130
- [88] Connolly, 1993, IN SEARCH OF ANGELS, p 37-39
- [89] Connolly, 1993, IN SEARCH OF ANGELS, p 59
- [90] Connolly, 1993, IN SEARCH OF ANGELS, p 69
- [91] Connolly, 1993, IN SEARCH OF ANGELS, p 76
- [92] Connolly, 1993, IN SEARCH OF ANGELS, p 103
- [93] Connolly, 1993, IN SEARCH OF ANGELS, p 125
- [94] Connolly, 1993, IN SEARCH OF ANGELS, p 126
- [95] Connolly, 1993, IN SEARCH OF ANGELS, p 128
- [96] Connolly, 1993, IN SEARCH OF ANGELS, p 138
- [97] Connolly, 1993, IN SEARCH OF ANGELS, p 141
- [98] Connolly, 1993, IN SEARCH OF ANGELS, p 144
- [99] According to information from the Religious Movement Resource Centre, reported in The Guardian, 17 October 1998
- [100] DeQuincey, 1997, "Language, Energy & Consciousness?", Network, November 1997
- [101] Dossey, 1997, "Energy Talk", Network 63
- [102] Eddy, 1875, SCIENCE AND HEALTH, p 298-299
- [103] Eddy, 1875, SCIENCE AND HEALTH, p 512
- [104] Nancy Gibb, "Angels Among Us", Time, 27th December 1993
- [105] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p xii
- [106] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 4
- [107] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 26
- [108] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 37
- [109] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 40
- [110] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 50
- [111] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 72
- [112] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 73
- [113] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 81
- [114] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 114
- [115] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 115/6
- [116] Graff, 1998, TRACKS IN THE PSYCHIC WILDERNESS, p 136
- [117] Herbert, 1986, QUANTUM REALITY
- [118] Hyman, 1996, "Evaluation of a Program on Anomalous Mental Phenomena", JSE 10(1)31-58
- [119] Hyman, 1996, "Evaluation of a Program on Anomalous Mental Phenomena", JSE 10(1)31-58, p 33
- [120] Hyman, 1996, "Evaluation of a Program on Anomalous Mental Phenomena", JSE 10(1)31-58, p 38
- [121] Hyman, 1996, "Evaluation of a Program on Anomalous Mental Phenomena", JSE 10(1)31-58, p 39
- [122] Hyman, 1996, "Evaluation of a Program on Anomalous Mental Phenomena", JSE 10(1)31-58, p 43
- [123] Harpur, 1996, DAIMONIC REALITY
- [124] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 8
- [125] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 9
- [126] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 18
- [127] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 22
- [128] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 41
- [129] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 42
- [130] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 45
- [131] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 47
- [132] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 46
- [133] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 58
- [134] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 60
- [135] Sankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 64

- [136] Śankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 68
- [137] Śankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 111
- [138] Śankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 112
- [139] Śankara, VIVEKA-CHUDAMANI, in trans. Prabhavananda & Isherwood, p 122
- [140] Journal of Scientific Exploration, volume 10, number 1, pp 1-110, and volume 13, number 1, pp 69-90
- [141] Journal of Scientific Exploration, Press Release, 22 March 1996
- [142] Jung, 1959, FLYING SAUCERS, p xiii
- [143] Jung, 1959, FLYING SAUCERS, p 2
- [144] Jung, 1959, FLYING SAUCERS, p 3
- [145] Jung, 1959, FLYING SAUCERS, p 8
- [146] Jung, 1959, FLYING SAUCERS, p 9
- [147] Jung, 1959, FLYING SAUCERS, p 16
- [148] Jung, 1959, FLYING SAUCERS, p 17
- [149] Jung, 1959, FLYING SAUCERS, p 18
- [150] Jung, 1959, FLYING SAUCERS, pp 19-20
- [151] Jung, 1959, FLYING SAUCERS, p 58
- [152] Jung, 1959, FLYING SAUCERS, p 109-110
- [153] Jung, 1959, FLYING SAUCERS, p 137
- [154] Jung, 1959, FLYING SAUCERS, p 147
- [155] Jung, 1959, FLYING SAUCERS, pp 149-150
- [156] Jung, 1959, FLYING SAUCERS, p 151
- [157] Jung's use of the word "archetype" is quite different from Berkeley's use of the same word.
- [158] Jung, 1955, SYNCHRONICITY, p 36
- [159] Katha Upanishad, 6.65
- [160] Keel, 1970, OPERATION TROJAN HORSE
- [161] Keel, 1975, COSMIC QUESTION, p 65
- [162] Keel, 1975, COSMIC QUESTION, p 11
- [163] Kingsley, 1995, ANCIENT PHILOSOPHY, MYSTERY, & MAGIC
- [164] Kingsley, 1995, ANCIENT PHILOSOPHY, MYSTERY, & MAGIC, p 91
- [165] Kingsley, 1995, ANCIENT PHILOSOPHY, MYSTERY, & MAGIC, p 92
- [166] Kingsley, 1995, ANCIENT PHILOSOPHY, MYSTERY, & MAGIC, p 230
- [167] Kress, 1999, "Parapsychology in Intelligence", JSE 13(1)69-86, p 70
- [168] Kress, op. cit., p 71
- [169] Kress, op. cit., p 74
- [170] Kress, op. cit., p 75
- [171] Kress, op. cit., p 78
- [172] Kress, op. cit., p 81
- [173] Juan Mascaró, UPANISHADS, Introduction
- [174] Katha Upanishad, part 6; p 65
- [175] Michael Miley, 1995, "Aliens in the New World: A New Paradigm for Ufology", UFO Magazine, vol. 10, no. 6
- [176] Edwin C. May, "The American Institutes for Research Review of the Department of Defense's STAR GATE Program: A Commentary", The Journal of Parapsychology, 60:3-23, March 1996. Also available on the Cognitive Science Laboratory web site.
- [177] Edwin C. May, interview by the Retro-Psychokinesis Project, 12th May 1996, available at their web site.
- [178] MindSong Inc., web site
- [179] Monroe, 1994, ULTIMATE JOURNEY, p 4
- [180] Monroe, 1994, ULTIMATE JOURNEY, p 5
- [181] Monroe, 1994, ULTIMATE JOURNEY, p 17
- [182] Morehouse, 1996, PSYCHIC WARRIOR, p 6
- [183] Morehouse, 1996, PSYCHIC WARRIOR, p 9
- [184] Morehouse, 1996, PSYCHIC WARRIOR, p 53
- [185] Morehouse, 1996, PSYCHIC WARRIOR, p 54
- [186] Morehouse, 1996, PSYCHIC WARRIOR, p 94
- [187] Morehouse, 1996, PSYCHIC WARRIOR, p 108
- [188] Morehouse, 1996, PSYCHIC WARRIOR, p 109
- [189] Morehouse, 1996, PSYCHIC WARRIOR, p 111
- [190] Morehouse, 1996, PSYCHIC WARRIOR, footnote, p 111
- [191] Morehouse, 1996, PSYCHIC WARRIOR, p 112
- [192] Morehouse, 1996, PSYCHIC WARRIOR, p 113
- [193] Morehouse, 1996, PSYCHIC WARRIOR, p 114
- [194] Morehouse, 1996, PSYCHIC WARRIOR, p 124
- [195] Morehouse, 1996, PSYCHIC WARRIOR, p 131
- [196] Morehouse, 1996, PSYCHIC WARRIOR, p 134/5
- [197] Morehouse, 1996, PSYCHIC WARRIOR, p 136
- [198] Morehouse, 1996, PSYCHIC WARRIOR, p 139
- [199] Morehouse, 1996, PSYCHIC WARRIOR, p 154
- [200] Morehouse, 1996, PSYCHIC WARRIOR, p 184
- [201] Nikhilananda, SELF-KNOWLEDGE, p 29
- [202] Nikhilananda, SELF-KNOWLEDGE, p 42
- [203] Nikhilananda, SELF-KNOWLEDGE, p 44
- [204] Nikhilananda, SELF-KNOWLEDGE, p 49
- [205] Nikhilananda, SELF-KNOWLEDGE, p 46
- [206] Nikhilananda, SELF-KNOWLEDGE, p 47

- [207] Nikhilananda, SELF-KNOWLEDGE, p 51
- [208] Nikhilananda, SELF-KNOWLEDGE, p 56
- [209] Nikhilananda, SELF-KNOWLEDGE, p 57
- [210] Nikhilananda, SELF-KNOWLEDGE, p 58
- [211] Nikhilananda, SELF-KNOWLEDGE, p 68
- [212] Nikhilananda, SELF-KNOWLEDGE, p 69
- [213] Nikhilananda, SELF-KNOWLEDGE, p 70
- [214] Nikhilananda, SELF-KNOWLEDGE, p 71
- [215] Sankara, Ātmabodha, in Nikhilananda, SELF-KNOWLEDGE, p 123
- [216] Nikhilananda, SELF-KNOWLEDGE, p 84
- [217] Nikhilananda, SELF-KNOWLEDGE, p 90
- [218] Brahmapindu Upanshad 12, in Nikhilananda, SELF-KNOWLEDGE, p 129
- [219] Nikhilananda, SELF-KNOWLEDGE, p 139
- [220] Nikhilananda, SELF-KNOWLEDGE, p 146
- [221] Nikhilananda, SELF-KNOWLEDGE, p 147
- [222] Nikhilananda, SELF-KNOWLEDGE, p 151
- [223] Nikhilananda, SELF-KNOWLEDGE, p 165
- [224] Jahn, Dunne, & Nelson, 1987, "Engineering Anomalies Research", *JSE* 1(1)21-50
- [225] Plotinus, THIRD ENNEAD, Lib. VI, c. 15; from Berkeley's footnote in *Siris* 329
- [226] Propert, "Angelology: The Study of Angels", web site
- [227] Radin, CONSCIOUS UNIVERSE, p 140
- [228] Radin, CONSCIOUS UNIVERSE, p 157
- [229] Radin, CONSCIOUS UNIVERSE, p 158
- [230] Radin, CONSCIOUS UNIVERSE, p 159
- [231] Radin, CONSCIOUS UNIVERSE, p 163
- [232] Radin, CONSCIOUS UNIVERSE, p 171
- [233] Radin & Nelson, 1989, "Consciousness-Related Anomalies", *Foundations of Physics* 19, 1499-1514
- [234] Rogers, 1999, online brochure
- [235] Sanders, Alan, 1999, personal communication
- [236] Heinrich Schipperges, 1995, HILDEGARD OF BINGEN, p 80
- [237] Schmidt, 1972, "PK with internally different machines", *J Parapsychology* 36, 222-232
- [238] Schmidt, 1987, "The Strange Properties of Psychokinesis", *JSE* 1(2)
- [239] Schmidt, 1997, "Random generators and living systems as targets in Retro-PK", *JASPR* 91, 1-14
- [240] Schmidt's papers are available online at the Retro-Psychokinesis Project's web site, along with other papers and discussions.
- [241] Schnabel, 1997, REMOTE VIEWERS, p 4
- [242] Schnabel, 1997, REMOTE VIEWERS, p 36
- [243] Schnabel, Remote Viewers, p 44
- [244] Schnabel, 1997, REMOTE VIEWERS, p 52
- [245] Schnabel, Remote Viewers p 68
- [246] Schnabel, 1997, REMOTE VIEWERS p 71
- [247] Schnabel, 1997, REMOTE VIEWERS, p 88/89
- [248] Schnabel, 1997, REMOTE VIEWERS, p 93
- [249] Schnabel, 1997, REMOTE VIEWERS, p 107
- [250] Schnabel, 1997, REMOTE VIEWERS, p 209
- [251] Schnabel, 1997, REMOTE VIEWERS, p 126
- [252] Schnabel, 1997, REMOTE VIEWERS, p 230
- [253] Schnabel, 1997, REMOTE VIEWERS, p 232/3
- [254] Schnabel, 1997, REMOTE VIEWERS, p 233
- [255] Schnabel, 1997, REMOTE VIEWERS, p 240
- [256] Schnabel, 1997, REMOTE VIEWERS, p 241-2
- [257] Schnabel, 1997, REMOTE VIEWERS, p 243
- [258] Schnabel, 1997, REMOTE VIEWERS, p 253
- [259] Schnabel, 1997, REMOTE VIEWERS, p 256
- [260] Schnabel, 1997, REMOTE VIEWERS, p 261
- [261] Schnabel, 1997, REMOTE VIEWERS, p 357-8
- [262] Schuessler, Catalog of physiological effects, *JSE*, 1998
- [263] Sheldrake, 1981, NEW SCIENCE OF LIFE and 1995, SEVEN EXPERIMENTS
- [264] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Introduction section A.1.a
- [265] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Theory section A
- [266] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Theory section B.8
- [267] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Theory section C
- [268] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Theory section D.2
- [269] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Structure section B.6
- [270] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage I section B.3
- [271] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage I section E
- [272] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section A
- [273] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section D
- [274] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section E
- [275] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section F
- [276] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section G
- [277] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section H
- [278] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage II section I
- [279] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage III section A
- [280] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage III section D

- [281] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage III section E
[282] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage III section H
[283] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage III section I.1
[284] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage IV section B.1
[285] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage V section A
[286] SRI, 1986, COORDINATE REMOTE VIEWING MANUAL, Stage V section C
[287] Stock, 1776, ACCOUNT OF THE LIFE OF BERKELEY
[288] Swedenborg, 1758, HEAVEN & HELL, 21
[289] Swedenborg, 1758, HEAVEN & HELL, 25
[290] Swedenborg, 1758, HEAVEN & HELL, 27
[291] Swedenborg, 1758, HEAVEN & HELL, 29
[292] Swedenborg, 1758, HEAVEN & HELL, 30
[293] Swedenborg, 1758, HEAVEN & HELL, 32
[294] Swedenborg, 1758, HEAVEN & HELL, 33
[295] Swedenborg, 1758, HEAVEN & HELL, 37
[296] Swedenborg, 1758, HEAVEN & HELL, 74
[297] Swedenborg, 1758, HEAVEN & HELL, 76
[298] Swedenborg, 1758, HEAVEN & HELL, 128
[299] Swedenborg, 1758, HEAVEN & HELL, 130
[300] Swedenborg, 1758, HEAVEN & HELL, 133
[301] Swedenborg, 1758, HEAVEN & HELL, 136
[302] Swedenborg, 1758, HEAVEN & HELL, 191
[303] Swedenborg, 1758, HEAVEN & HELL, 192
[304] Swedenborg, 1758, HEAVEN & HELL, 246
[305] Swedenborg, 1758, HEAVEN & HELL, 248
[306] "immote", term coined by Takeshi Martinez, to mean 'induce an emotion in' someone.
[307] Targ & Katra, 1998, MIRACLES OF MIND, p 121
[308] Tyrel, 1943, APPARITIONS, p 73
[309] Utts, 1996, "Assessment of Evidence for Psychic Functioning", JSE 10(1)3-30, p 3
[310] Utts, 1996, "Assessment of Evidence for Psychic Functioning", JSE 10(1)3-30, p 13
[311] Utts, 1996, "Assessment of Evidence for Psychic Functioning", JSE 10(1)3-30, p 19
[312] Utts, 1996, "Assessment of Evidence for Psychic Functioning", JSE 10(1)3-30, p 22
[313] Vallée, 1988, DIMENSIONS, p 38
[314] Vallée, 1988, DIMENSIONS, p 290
[315] Vallée, 1988, DIMENSIONS, p 299
[316] Vallée, 1988, DIMENSIONS, p 28
[317] Vallée, 1988, DIMENSIONS, p 122
[318] Vallée, 1988, DIMENSIONS, p 136
[319] Vallée, 1988, DIMENSIONS, p 288
[320] Vallée, 1988, DIMENSIONS, p 272
[321] Vallée, 1988, DIMENSIONS, p 275
[322] Vallée, 1988, DIMENSIONS, p 37
[323] Vallée, 1988, DIMENSIONS, p 35
[324] Vallée, 1988, DIMENSIONS, p 54
[325] Vallée, 1988, DIMENSIONS, p 90
[326] Vallée, 1988, DIMENSIONS, p 68
[327] Vallée, 1988, DIMENSIONS, p 128
[328] Vallée, 1988, DIMENSIONS, p 154
[329] Vallée, 1988, DIMENSIONS, p 45
[330] Vallée, 1988, DIMENSIONS, p 70
[331] Vallée, 1988, DIMENSIONS, p 89
[332] Vallée, 1988, DIMENSIONS, p 273
[333] Vallée, 1988, DIMENSIONS, p 51
[334] Vallée, 1988, DIMENSIONS, p xi
[335] Vallée, 1988, DIMENSIONS, p 61
[336] Vallée, 1988, DIMENSIONS, p 170
[337] Vallée, 1988, DIMENSIONS, p 173
[338] Vallée, 1988, DIMENSIONS, p 228
[339] Vallée, 1988, DIMENSIONS, p 258
[340] Vallée, 1988, DIMENSIONS, p 7
[341] Vallée, 1988, DIMENSIONS, p 66
[342] Vallée, 1988, DIMENSIONS, p 92
[343] Vallée, 1988, DIMENSIONS, p 121
[344] Vallée, 1988, DIMENSIONS, p
[345] Vallée, 1990, CONFRONTATIONS, p 31
[346] Vallée, 1990, CONFRONTATIONS, p 30
[347] Vallée, 1990, CONFRONTATIONS, p 26
[348] Vallée, 1990, CONFRONTATIONS, p 99
[349] Vallée, 1990, CONFRONTATIONS, p 216
[350] Vallée, 1990, CONFRONTATIONS, p 80
[351] Vallée, 1990, CONFRONTATIONS, p 138
[352] Vallée, 1990, CONFRONTATIONS, p 15
[353] Vallée, 1990, CONFRONTATIONS, p 137
[354] Vallée, 1990, CONFRONTATIONS, p 146
[355] Vallée, 1990, CONFRONTATIONS, p 82
[356] Vallée, 1990, CONFRONTATIONS, p 142
[357] Vallée, 1990, CONFRONTATIONS, p 131

- [358] Vallée, 1990, CONFRONTATIONS, p 74
- [359] Vallée, 1990, CONFRONTATIONS, p 115
- [360] Vallée, 1990, CONFRONTATIONS, p 156-7
- [361] Vallée, 1990, CONFRONTATIONS, p 82
- [362] Vallée's footnote: Bertrand meheust has summarized his extensive work on ufos, folklore, and science fiction in two well-researched books, both published in Paris by Mercure de France: *Science-fiction et soucoupes volantes* (1978) and *Soucoupes volantes et folklore* (1985).
- [363] Weiskrantz, 1986, BLIND SIGHT
- [364] Wittgenstein, 1953, PHILOSOPHICAL INVESTIGATIONS, 7
- [365] Wilson's reference is specifically to Robert Monroe's Ultimate Journey
- [366] Wilson, 1998, ALIEN DAWN, p 240
- [367] Woodhouse, 1996, "Energy Monism", Network 62
- [368] Woodhouse, 1997, "Energy Monism", Network 64

Bibliography

Adler, Mortimer Jerome (1982) THE ANGELS AND US. Published by Macmillan, New York.

Ahmad, Mirza Ghulam, ESSENCE OF ISLAM, Translated from Arabic by Muhammad Zafrullah Khan, 1981. Published by Alden Press, London.

anon., (1974) "Investigating the paranormal", Nature **251**(18)559-560 (October 1974).

Augustine, Saint, Bishop of Hippo (354-430 CE) CITY OF GOD.

Baldwin, William J. (1996) "Three Faces of Regression Therapy", online paper. Web site <http://www.au.spiriteb.org/Spirit/three-faces-regression-therapy-baldwin.html>

- (1997) SPIRIT RELEASEMENT THERAPY: A TECHNIQUE MANUAL, 2nd edition.
- (undated) "CE-VI: Close Encounters of the Possession Kind", online excerpt from forthcoming book, CE-VI: CLOSE ENCOUNTERS OF THE POSSESSION KIND. To be published by Headline Books.
- & Rev. Judith A. Baldwin (undated), "Past Life or Attached Entity?", online paper. Web site <http://www.au.spiritweb.org/Spirit/past-life-attached-spirit-baldwin.html>

Berkeley, George (1707-8) PHILOSOPHICAL NOTEBOOKS. Fraser's edition of the collected works (1871) was the first to include Berkeley's notebooks, which Fraser entitled THE COMMONPLACE BOOK. This material was later retitled PHILOSOPHICAL COMMENTARY by Luce & Jessop in their edition of Berkeley's works, and PHILOSOPHICAL NOTEBOOKS by M.R. Ayers in his.

- (1710, 2nd edition 1734) TREATISE CONCERNING THE PRINCIPLES OF HUMAN KNOWLEDGE.
- (1713, 3rd edition 1734) THREE DIALOGUES BETWEEN HYLAS AND PHILONOUS.
- (1721) DE MOTU. Translated as ON MOTION by A.A. Luce. Translation included in the Everyman Edition of Berkeley's works, ed.

M.R. Ayers, 1975.

- (1744) SIRIS: A CHAIN OF PHILOSOPHICAL REFLEXIONS AND INQUIRIES CONCERNING THE VIRTUES OF TAR-WATER, AND DIVERS OTHER SUBJECTS CONNECTED TOGETHER AND ARISING ONE FROM ANOTHER.
- BERKELEY: PHILOSOPHICAL WORKS, edited & introduction by M.R. Ayers. Published by Everyman's Library, imprint of J.M. Dent, London, pb, 358 pp (1983). Includes all of the above items except SIRIS.
- THE WORKS OF GEORGE BERKELEY, edited by A.C. Fraser. Published by Clarendon Press, Oxford; reprinted by Thoemmes Press, Bristol, hb, 4 volumes (1998). Includes all of the above items.
- Some of the above works are available on the internet. See web site <http://easyweb.easynet.co.uk/ursa/philos/berkeley.htm> for links.

Blackmore, Susan (1994) "Alien abduction", New Scientist, 19 November 1994, pp 29-31.

Bowen, Charles, ed. (1969) THE HUMANOIDS. Includes "The pattern behind the ufo landings" by Jacques Vallée. Published by Futura, London, pb, 256 pp (1974).

Calvin, John (1536) INSTITUTES OF THE CHRISTIAN RELIGION, Volume I, Book 1. Translated by John Allen, 1816. Published by Philip H. Nicklin, Philadelphia.

Chiltern, Pamela, Hugh Harmon, and 'Light' (undated, c 1999) "Odyssey of the Soul: A Trilogy. Book 1: Apocatastasis", online extract. Web site http://www.bookbrowse.com/nonfiction/excerpts/odyssey_of_the_soul.html

Cole, Dorothy (1996) "Auraopathy: A New Medicine", paper presented to the International Association of New Science, 5th October 1996, Denver, Colorado. <http://www.castle.net/mystic/pages/spirheal.html>

CSL, Cognitive Sciences Laboratory, web site <http://www.lfr.org/csl/>.

De Quincey, Christian (1997) "Can 'energy talk' enlighten us about the mind?", Network (November 1997), Journal of the Medical & Scientific Network.

Dossey, Larry (1991) MEANING AND MEDICINE. Published by Bantam, New York.

- (1992) "But is it energy? Reflections on consciousness, healing, and the new paradigm", *Subtle Energies* 3(3)69-82.
- (1993) **HEALING WORDS**. Published by HarperSanFrancisco, San Francisco.
- (1994) "Healing, energy, and consciousness: into the future or a retreat into the past?", *Subtle Energies* 5(1)1-33.

Eddy, Mary Baker (1875) **SCIENCE AND HEALTH WITH KEY TO THE SCRIPTURES**. Published by First Church of Christ, Scientist, Massachusetts, and republished 1934, pb, 700 pp (1994).

Graff, Dale (1998) **TRACKS IN THE PSYCHIC WILDERNESS: AN EXPLORATION OF ESP, REMOTE VIEWING, PRECOGNITIVE DREAMING AND SYNCHRONICITY**, with foreword by Edgar Mitchell. Published by Element Books, Boston. Mass market edition published by Element Books Ltd, Shaftesbury, pb, 277 pp.

Harpur, Patrick (1996) **DAIMONIC REALITY: A FIELD GUIDE TO THE UNDERWORLD**, Published by Arkana, imprint of Penguin Books.

Herbert, Nick (1986) **QUANTUM REALITY**. Published by Dutton, New York.

Hynek, J.Allen (1977) **THE HYNEK UFO REPORT**. Published by Sphere Books Ltd, pb, 299 pp (1978).

Jahn, Robert G., Brenda J. Dunne, & Roger D. Nelson (1987) "Engineering Anomalies Research", *Journal of Scientific Exploration* 1(1)21-50.

Jung, Carl G. (1952, trans. R.F.C Hull, 1955) **SYNCHRONICITY: AN ACAUSAL CONNECTING PRINCIPLE**. Published by Routledge & Kegan Paul, London, pb.

- (1959) **FLYING SAUCERS: A MODERN MYTH OF THINGS SEEN IN THE SKY**, translated from the German by R.F.C. Hull. Published by Routledge & Kegan Paul, London, pb, 184 pp (1977).

Keel, John A. (1970) **UFOS: OPERATION TROJAN HORSE**. Published by Abacus, imprint of Souvenir Press, GB, pb, 320 pp (1971). (There is some confusion about the title of this book: the inside title page says the title is simply **OPERATION TROJAN HORSE**.)

- (1975) **THE COSMIC QUESTION**. Published by Panther, imprint of Granada Publishing, London, pb, 224 pp (1978).

Kingsley, Peter (1995) **ANCIENT PHILOSOPHY, MYSTERY, AND MAGIC: EMPEDOCLES AND PYTHAGOREAN TRADITION**. Published by

Clarendon Press imprint, Oxford University Press, Oxford, hb, 422 pp.

Kress, Kenneth (1999) "Parapsychology in Intelligence", Journal of Scientific Exploration **13**(1)69-85.

LaBerge, Stephen (1985) LUCID DREAMING: THE POWER OF BEING AWAKE & AWARE IN YOUR DREAMS. Published by Ballantine Books, New York, pb, 304 pp.

- & Howard Rheingold (1990) EXPLORING THE WORLD OF LUCID DREAMING. Published by Ballantine Books, New York, pb, 335 pp.

LFR, Laboratories for Fundamental Research, web site
<http://www.lfr.com>.

Maimonides, Moses (1135-1204) THE GUIDE OF THE PERPLEXED. Translated by Shlomo Pines, 1963. Published by University of Chicago Press, Chicago.

Marshall-Warren, Deborah (1999) MIND DETOX, Published by Thorsons, imprint of HarperCollins, London, pb, 195 pp. Web site <http://www.ursasoft.com/detox/>.

Mascaró, Juan (1965) THE UPANISHADS, Introduced & translated from the Sanskrit. Published by Penguin, Harmondsworth, pb, 143 pp.

May, Edwin (1996) "The AIR review of the Department of Defense's Star Gate program: a commentary", Journal of Scientific Exploration, **10**(1)89-108 (Spring 1996).

May, Edwin, Spottiswoode, & James (1994) "Shannon entropy: a possible intrinsic target property", Journal of Parapsychology (December 1994).

McDonald, William J., ed. (1967) NEW CATHOLIC ENCYCLOPAEDIA. Published by McGraw-Hill, New York.

Mindsong Inc., web site <http://www.mindsonginc.com>.

Monroe, Robert (1972) JOURNEYS OUT OF THE BODY, Published by Doubleday, New York, pb.

- (1985) FAR JOURNEYS. Published by Doubleday, New York, pb.
- (1994) ULTIMATE JOURNEY. Published by Doubleday, New York, pb, 303 pp (1996).
- web site <http://www.monroe-inst.com/>.

Morehouse, David (1996) PSYCHIC WARRIOR: THE TRUE STORY OF THE CIA'S PARANORMAL ESPIONAGE PROGRAMME. Penguin Books, London, pb, 258 pp.

Nikhilananda, Swami (1946) translation of, and introduction to Śankara's SELF-KNOWLEDGE (ĀTMABODHA). Published by Ramakrishna-Vivekananda Center, New York, hb, 228 pp (1974).

Prabhavananda, Swami, and Christopher Isherwood (1947) translation of, and introduction to, Śankara's CREST-JEWEL OF DISCRIMINATION (VIVEKA-CHUDAMANI): TIMELESS TEACHINGS ON NON-DUALITY. Published by Vedānta Press, Hollywood, pb, 139 pp (1978).

Pseudo-Dionysius, the Areopagite, CELESTIAL HIERARCHY. Translated by John Parker, 1894. Published by Skeffington, London.

- MYSTICAL THEOLOGIA. Translated 1949. Published by Shrine of Wisdom, London.

Puligandla, R. (1975) FUNDAMENTALS OF INDIAN PHILOSOPHY, Published by Abingdon Press, New York, pb, 363 pp.

Puthoff, Hal, and Russell Targ (1974) "Information transmission under conditions of sensory shielding", Nature **251**(18)602-607 (October 1974).

- (1976) "A perceptual channel for information transfer over kilometer distances: historical perspective and recent research", Proceedings of the IEEE **64** (March 1976).

Puthoff, Hal (1996) "CIA-initiated remote-viewing program at Stanford Research Institute", Journal of Scientific Exploration **10**(1) (Spring 1996).

Radin, Dean (1997) THE CONSCIOUS UNIVERSE: THE SCIENTIFIC TRUTH OF PSYCHIC PHENOMENA. Published by HarperEdge, imprint of HarperSanFrancisco, San Francisco, hb, 362 pp.

- & Roger D. Nelson (1989) "Evidence for consciousness-related anomalies in random physical systems", Foundations of Physics, **19**, 1499-1514.

Retro-Psychokinesis Project, web site <http://www.fourmilab.ch/rpkp/>, maintained by John Walker.

Rogers, Ellen (undated, downloaded 1999) "Metaphysical Consultant Services", online brochure. Web site <http://www.wowpages.com/releasement/home.html>

Schipperges, Heinrich (1995) HILDEGARD OF BINGEN: HEALING AND THE NATURE OF THE COSMOS. Translated from the German by John A. Broadwin, 1997. Published by Markus Wiener Publishers, Princeton, pb, 122 pp.

Schmidt, (1972) "PK tests with internally different machines", Journal of Parapsychology **36**, 222-232.

- (1987) "The Strange Properties of Psychokinesis", Journal of Scientific Exploration **1**(2).

- (1997) "Random generators and living systems as targets in Retro-PK Experiments", Journal of the American Society of Psychical Research, **91**, 1-14.

Schnabel, Jim (1997) REMOTE VIEWERS. Published by Dell Publishing, New York, pb, 452 pp.

Schopenhauer, Arthur (1819) THE WORLD AS WILL AND REPRESENTATION, Volume I. Translated & introduction by E.F.J. Payne (1958). Published by Dover, New York, pb, 534 pp (1969).

Schuessler, John F. (1998) "A Catalog of Ufo-Related Human Physiological Effects", Journal of Scientific Exploration.

Sheldrake, Rupert (1981) A NEW SCIENCE OF LIFE: THE HYPOTHESIS OF FORMATIVE CAUSATION. Published by Tarcher, Los Angeles.

- (1995) SEVEN EXPERIMENTS THAT COULD CHANGE THE WORLD. Published by Riverhead Books, New York.

SRI, (Stanford Research Institute) (1986) COORDINATE REMOTE VIEWING MANUAL, attributed to Ingo Swann and co-workers, under contract to Stanford Research Institute. Posted on web site <http://www.firedocs.com/remoteviewing/answers/crvmanual/> by P.J. Gaenir, 5th July 1998.

Stock, Joseph (1776) AN ACCOUNT OF THE LIFE OF GEORGE BERKELEY, D.D., LATE BISHOP OF CLOYNE IN IRELAND. Posted on web site <http://www.maths.tcd.ie/pub/Histmath/People/Berkeley/Stock/Life.html>, by Dr D.R. Wilkins, School of Mathematics, Trinity College, Dublin.

Swedenborg, Emanuel (1758, in Latin) HEAVEN AND ITS WONDERS AND HELL: FROM THINGS HEARD AND SEEN. Standard edition, translated by J.C. Ager (1952). Published by Swedenborg Foundation Inc., New York. Web site <http://www.primenet.com/vodhner/hh.html>, created and maintained by Victor Odhner. (See also <http://www.swedenborg.com>.)

- Targ**, Russell (1996) "Remote viewing at SRI in the 1970s: a memoir", *Journal of Scientific Exploration*, **10**(1)77-88 (Spring 1996).
- & Jane Katra (1998) *MIRACLES OF MIND: EXPLORING NONLOCAL CONSCIOUSNESS AND SPIRITUAL HEALING*. Published by New World Library, Novato, California, hb, 325 pp.
- Thompson**, Richard L. (1993, 2nd ed. 1995) *ALIEN IDENTITIES: ANCIENT INSIGHTS INTO MODERN UFO PHENOMENA*. Published by Govardhan Hill, pb.
- Utts**, Jessica (1996) "An assessment of the evidence for psychic functioning", *Journal of Scientific Exploration* **10**(1)3-30.
- Vallée**, Jacques (1965) *ANATOMY OF A PHENOMENON: UFOS IN SPACE*, Published by Tandem, London, pb, 268 pp (1974).
- & Janine Vallée (1966) *CHALLENGE TO SCIENCE: THE UFO ENIGMA*, with foreword by J. Allen Hynek. Published by Tandem, London, pb, 210 pp (1974).
- (1969) *PASSPORT TO MAGONIA: ON UFOS, FOLKLORE, AND PARALLEL WORLDS*.
- (1988) *DIMENSIONS: A CASEBOOK OF ALIEN CONTACT*. Foreword by Whitley Strieber. Published by Souvenir Press, London, pb, 304 pp.
- (1990) *CONFRONTATIONS: A SCIENTIST'S SEARCH FOR ALIEN CONTACT*. Published by Ballantine Books, New York, pb, 241 pp (1991).
- (1981) *MESSENGERS OF DECEPTION*.
- (1992) *FORBIDDEN SCIENCE: JOURNALS 1957-1969*. Published by North Atlantic Books, hb, 466 pp.
- Weiskrantz**, L. (1986) *BLINDSIGHT: A CASE STUDY AND IMPLICATIONS*. Published by Oxford University Press, Oxford, hb.
- Wilson**, Colin (1998) *ALIEN DAWN*. Published by Virgin Publishing Ltd, London, hb, 322 pp.
- Wittgenstein**, Ludwig (1953) *PHILOSOPHICAL INVESTIGATIONS* Translated by G.E.M. Anscombe. Published by Basil Blackwell, Oxford, pb (1978).
- Woodhouse**, Mark B. (1996) *PARADIGM WARS*. Published by Frog Ltd, Berkeley.

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