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**THE NATURE OF MAN –
HAS THE GHOST IN THE MACHINE
FINALLY BEEN EXORCISED?***

The machine

Gilbert Ryle expressed the scepticism of the age when he disparagingly referred to the traditional notion of man as composed of a spirit interacting with a brain as 'the ghost in the machine'.¹ For centuries dualism has been the prevalent view amongst philosophers, found embryonically in Plato and reaching its classical statement in Descartes. Man's composite nature has also been assumed by theologians, whose arguments have centred on whether he consists of a body, soul and spirit (e.g. Origen), or just a body and soul/spirit (e.g. Augustine). But today more and more Christian thinkers are echoing contemporary philosophers and scientists in assuming that man is a single entity who cannot be separated out ontologically into physical and spiritual parts. Instead it is argued by scholars like John Robinson² that Scripture presents man in a functional way so that when it mentions, for example, man's spirit, it is not alluding to an entity within him, but is rather referring to the whole man viewed from a spiritual perspective. A man's body is part of what he is, not something which he has.

Some eminent Christian scientists welcome this shift in theological perspective because it supports their own predilections. In the scientific realm there have been various developments which can embarrass the dualist. Many brain researchers, for example, claim to have found a direct equivalence between brain events and mind events such that it seems they are two aspects of the same thing. It is claimed that there is no evidence of one causing the other. Then there has been the rapid development of computer technology

leading to the conclusion of some scientists that there is no qualitative difference between a brain and a sophisticated computer. Anyway, the concept of the spirit interacting with the brain is an awkward one for the scientist who assumes that every event has a physical cause, and who naturally finds the thesis rather incredible that some brain events are the result of 'mind-miracles' produced by a metaphysical spirit. What is more, how could such an intangible spirit affect the brain? It would be like a weary phantom trying in vain to sit on a solid chair.

Malcolm Jeeves, a psychologist, and Donald MacKay, a brain researcher and computer scientist, are both Christians who have written influential books presenting an original kind of monism known as Identity Theory or Comprehensive Realism³ which argues that there is no causal relationship or interaction between mind and brain, rather:

It seems to me sufficient . . . to describe mental-events and their correlated brain events as the 'inside' and 'outside' aspects of one and the same sequence of events, which in their full nature are richer - have more to them - than can be expressed in either mental or physical categories alone.⁴

In his various books, MacKay offers a number of analogies including that of an electric sign which is nothing but light bulbs, electric circuits etc. when examined physically, but from another viewpoint it may be correctly understood as a sign conveying a certain message. Similarly, it is argued, brain events are totally explicable in terms of physical causation, yet there is still a whole dimension remaining, namely consciousness. These two perspectives are discrete and do not overlap in any way. It would involve what Ryle calls a

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'category mistake' to suppose one influences the other. Instead, for every mind event there is a complementary brain event. There never could be a subjective experience without corresponding activity in the brain, although obviously there can be brain activity without a change in consciousness. Indeed there can be healthy brain activity without any consciousness at all, as in the state of dreamless sleep. MacKay rejects both Idealism which allows only the full reality of mind, and Epiphenomenalism which tends to treat mind as a ghostly shadow cast by the brain. Instead, he affirms the full importance and reality of both. Needless to say, MacKay and Jeeves believe that the Bible supports their functional model of man.

The ghost and the machine

It is very tempting, therefore, for the informed Christian to consider dualism redundant and even *passé*. But let us take a further look at the evidence of psychology and theology. To begin with, it should be noted that basic common sense is on the side of dualism. It seems to us that 'brain' and 'mind' have two distinct denotations. It also appears that there is interaction between my mind and my body. For example, I (mental) may choose to instruct my arm (physical) to drop a pain-killer into my mouth, with the result that the pain (mental) disappears due to the tablet alerting my brain chemistry (physical). It seems that we have brains rather than that we are brains; in fact we naturally speak of 'racking our brains', and the irate teacher may shout: 'use your brains!'. Doctors are also talking more and more about psychosomatic illness which involves the mind, albeit unconsciously, affecting the body adversely. However, as the philosopher knows, common sense conclusions are fallible, so let us turn to other evidence to see where it leads.

As has been mentioned, Jeeves concludes that the Bible is in harmony with Identity Theory. He writes:

First, the New Testament clearly establishes that man is a unity, a psychophysical or psychosomatic unity . . . Second, although man is a unity, it is possible nevertheless to make valid distinctions between aspects of his functioning such as the physical and psychological, and in making these distinctions one derives greater insight into the nature of man.⁵

It is certainly true that biblical authors often employ anthropological terms functionally, for example, Paul can use 'flesh' to denote the total man from the perspective of his separation from God (e.g. Romans 8), but it would nevertheless seem that there are plenty of intimations in Scripture that man is a composite of at least two entities, one physical (the body/brain complex) and one metaphysical (the soul or spirit). For instance, Jesus contrasted the death of the body and the destruction of the soul (Matthew 10:28). The spirit is said to leave the body at death (e.g. James 2:26) and when a person is miraculously brought back to life, his spirit is said to return (e.g. Luke 8:55). And what is one to make of: 'For what person knows a man's thoughts except the spirit of the man which is in him?' (1 Corinthians 2:11)? This is not to be confused with the dualism which bedevilled Greek thought. Body is not a tomb, neither is it intrinsically evil, rather: 'My body is my soul's proper home. My soul is my body's proper master'.⁶ They belong together. Jeeves fails to take account of passages which indicate that there is a ghost in the machine.

Throughout the history of the church the overwhelming majority of theologians have accepted that a man does not cease to exist at death; he lives on in an intermediate state, awaiting his resurrection body. The nature of this state was much debated, but the fact of it assumed, by such Church Fathers as Justin Martyr, Irenaeus, Tertullian, Ambrose, Augustine and Calvin. This orthodox view has much support in Scripture which does not teach that the dead are non-existent; rather we are warned not to attempt communication with them (e.g. Deuteronomy 18:9-12). Although the resurrected Jesus said that he was not a ghost (Luke 24:39), he did not deny their existence. Indeed, in an admittedly obscure passage, Jesus himself is depicted as

having experienced the intermediate state while his body was in the tomb (1 Peter 3:18f). Jesus' words to the penitent thief on the cross (Luke 23:43) corroborate this.⁷ Perhaps the evidence is not entirely unambiguous, but the New Testament does seem to teach some kind of interim state of existence prior to the general resurrection (e.g. John, 11:25f; 2 Corinthians 5:1-6; Hebrews 12:22f; Revelation 6:9). The ghost can outlive the machine. How do Jeeves and MacKay interact with this doctrine? They tend to ignore it totally, and with unwarranted dogmatism Jeeves writes:

. . . a biblical account of what happens to a man after death cannot lead to the view that the soul survives in some disembodied form but rather that the whole man, recreated in body, is to live anew.⁸

But, of course, Jeeves and MacKay cannot entertain the possibility of the survival of a disembodied mind because it contradicts their *a priori* assumption that every mind event has a corresponding brain event. For them, when the brain dies the mind ceases to exist, only to be reconstructed when a replica but glorified brain is created as part of the resurrection body. Besides the moral objections to such a view (Is it right to condemn a newly-created being for the sins of one long extinct; or to call someone up from oblivion only to consign him to everlasting torment?), it has been clearly shown that it runs counter to the traditional understanding of the teaching of Scripture.

Unlike the monist, the dualist is also able to accommodate the Bible's teaching regarding demon possession, which might be described as two or more ghosts in one machine! Similarly he can explain the work of the Holy Spirit within the personality (a case of *deus in machina!*). Not so the Christian monist who is reduced to the limited assertion: 'The God of the Christian is one who upholds and sustains everything at all times (Hebrews 1:3)⁹ which is true but does not go far enough. God also intervenes and works directly in the lives of men according to Scripture. Often in the Old Testament he is described as coming mightily upon men (see e.g. Judges 3:10; 6:34), and in the New Testament Paul assures the Philippian converts: '. . . for it is God who

works in you . . . ' (Philippians 2:13). This strand of biblical teaching is totally absent from Jeeves' chapter on conversion because his basic model seems to be a causally enclosed universe.

Another major weakness of Comprehensive Realism concerns moral responsibility. Jeeves follows MacKay in claiming that free-will is compatible with the view that all brain events are physically determined, but in so doing they are forced into defining freedom in an unacceptable way. It is envisaged that in principle a scientist could be cognizant of all the factors that together cause my brain events, and could accurately predict all my future thoughts and actions. However, this knowledge is 'logically indeterminate' (MacKay) in that I could always choose to disregard his prediction if it were known to me. He could not coerce me, and thus I remain free from constraint and, according to MacKay's definition: "had the act a non-physical cause?" but rather: "was the act the outcome of a decision?".¹⁰ But one senses a sleight-of-hand here. In fact all MacKay is establishing is that I have an illusion of freedom since all of my actions are ultimately physically determined. They do not stem from my will even though they may be mediated through it. In the usual sense of the term I am not therefore responsible for my actions.¹¹ Identity Theory involves a covert form of soft determinism which threatens God's justice as he consigns some to heaven and others to hell, and even his goodness, because if all events are the result of physical causes, it is difficult to avoid the conclusion that God, who is the only agent whose freedom is real rather than apparent, is directly responsible for evil. A similar problem haunted Calvin.

Many scientists today admit that there is hard evidence in favour of at least some para-normal phenomena,¹² and enemies of monism have been quick to cite, for instance, telepathy as an example of a non-physical force transmitted and received by immaterial minds.¹³ However, the monist could argue either that telepathy is still unproven, or that it is a physical phenomenon, like the transmission of radio waves. Experiments have been performed which seem to show that, unlike radio waves, telepathic messages are unaffected

by distance or barriers such as lead shielding, but the validity of these experiments has been questioned.¹⁴ The dualist must avoid dogmatism, therefore, when appealing to para-psychology in support of his case. Nevertheless, he is bound to be fascinated by current research in these areas, and if reports of out-of-the-body experiences in particular are ever scientifically verified, the monists will find themselves in an embarrassing position. Presently, studies are being made on those who claim to be able to leave their bodies at will, as well as on those who have survived clinical death, claiming not only that they had never lost consciousness, but also that they had been able to view their bodies from the outside.¹⁵ But the results are preliminary and we must be patient.

Perhaps there is space for just one more problem facing the monist which dualism explains, and this is the issue of personal identity. Every seven years or so all the cells in the body are totally replaced, and yet I have continuous sense of identity, going as far back as I can remember. More importantly, although brain events are multitudinous throughout the whole brain area, my subjective experience is unified. Perhaps, after all, there is a simple ghost operating a dazzlingly complex machine.

The ghost in the machine

The dualist case becomes even stronger when one realizes that a number of very distinguished scholars and scientists, not all Christians, find monism inadequate. On the basis of his work on the exposed brains of conscious epileptic patients, the eminent neurosurgeon Wilder Penfield does not believe there is a direct equivalence between brain and mind events. He has found that when low voltage currents are applied to points on the cerebral cortex, the patient experiences, for example, a vivid memory or a jerk of the arm depending on which part of the brain is stimulated. The limb moves involuntarily as far as the patient is concerned; it does not feel as if the movement is the result of an act of the will as one would expect according to the monist model. Penfield concludes that the electrode does the work which the mind normally performs, and he consequently finds the dualist hypothesis the best one to explain the facts:

Something else finds its dwelling place between the sensory complex and the motor mechanism . . . There is a switchboard operator as well as a switchboard.¹⁶

He maintains that the brain can temporarily continue operations subject to the limits of its 'programming' without the intervention of mind. He has observed, for example, how epileptic victims can 'black-out' for a time, during which they still continue to execute routine tasks. Needless to say, the very concept of programming implies a programmer who, for instance, decides what information to consign to the brain's long-term memory banks.

Again we find ourselves drawing an analogy between brains and computers. Is there a qualitative difference between the two? It would seem the answer will depend upon one's assumptions concerning human nature. As one would expect, MacKay sees no reason in principle why it should not be possible to build thinking machines subject to physical causation. Neither does he believe human dignity or worth would be threatened by such a conscious computer. He writes: 'From the biblical point of view the extent to which consciousness could be sustained in artificially constructed organisms is left an open question - entirely up to the Creator.'¹⁷ Ought we to give computers the benefit of the doubt then, and assuming they have minds, consider it murder to unplug one? For the dualist the answer seems clear, and he finds himself echoing the words of Sir Karl Popper, who is himself an interactionist: 'I predict that we shall not be able to build electronic computers with conscious subjective experience.'¹⁸

As we have seen, another objection to dualism is based on the premise that we live in a causally enclosed physical universe, but post-Einsteinian physics shows the situation to be far more mysterious. For example, the medium in which electro-magnetic waves form turbulence has itself no physical properties; here we are bordering on the metaphysical. Koestler suggests there might be a direct parallel between the way brain dovetails into mind and the way the physical universe blurs into that which is beyond the physical. For support, he quotes a passage from Sir James Jeans' Rede Lectures (1937):

Today there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading towards a non-mechanical reality; the universe begins to look more like a great thought than like a great machine.¹⁹

The final objection mentioned concerned the problem of how the ghost could get a purchase on the machine to influence it. It is a comparable problem, however, to how God who is Spirit can create the physical universe. To answer this question, certain Greek thinkers introduced the notion of intermediary demi-urges that act as a kind of metaphysical buffer, and Christians like Origen used the soul in their anthropology as a similar buffer between spirit and body. Perhaps our honest response should be that we believe but do not understand how God created the universe, and it is no more difficult for us to believe that mind influences brain without understanding the mechanics. But there remains the alternative of accepting the thesis of Sir John Eccles, the physiologist who received the Nobel Prize in 1963, who maintains that mind influences brain not via the pineal gland as Descartes believed,²⁰ but by operating upon neurons in the cortex.²¹ Eccles postulates a:

. . . Self-conscious mind which during normal life is engaged in searching for brain events that are in its present interest and of integrating these into the unified experience that we have from moment to moment.²²

As a post-script one might note that there is accumulating evidence for P.K. (psycho-kinesis), that is the movement of objects either by direct application of will-power, or by forces emanating from the unconscious mind (e.g. in the case of Poltergeist phenomena).²³ Many scientists dismiss this evidence on the same *a priori* grounds, namely that intangible mind could not influence material objects.

The ghost

The intriguing question now poses itself: what is the nature of the ghost which inhabits the machine? Popper commits himself thus far:

. . . in a way the self-conscious mind has a personality, something like an ethos of a moral character and . . . this personality is itself partly the product of actions done in the past.²⁴

This chimes well with the traditional Christian view that goes back at least to Irenaeus that this life is 'a vale of soul making'. It also accords with the Bible's revelation of a God who is Spirit and yet also Personality. Indeed God is one who not only can think and feel, but also see and hear (Psalms 94:9). Will the same be true of us in the intermediate state when our eyes and ears are dust? Perhaps we will be able to see things with a faculty like clairvoyance (cf. 2 Kings 6:8-12), and to communicate telepathically (cf. the word of knowledge in 1 Corinthians 12:8). Certainly those who claim out-of-the-body experiences (cf Ezekiel 8-11) maintain that they could see and hear. But what then is the use of our sense organs? They begin to seem a little superfluous. H.H. Price prefers to draw an analogy between one's consciousness in the intermediate state and dream perceptions which are vivid, but do not involve sense organs.²⁵ It is interesting to note that we are always ourselves in our dream world, even when our dream is very weird. In fact, we are arguably more ourselves than when awake, since our unconscious traits are often clearly manifested in our dream selves. Price's suggestion is an interesting one. To believe the human spirit is capable of thought and experience without need of brain is one option then.

Yet some might feel the problems with this view are insuperable. After all, brain damage and senility drastically impair one's ability to think. Also, it is evident that personality is at least partially conditioned by genetic factors. But there is another interesting approach opened up by the work of R.C. Zaehner, a scholar of comparative

religion, who contends that the interior mystical experience of Hindu meditators is not an experience of God (Brahman) as they believe, but rather an awareness of their naked spirit devoid of all sense impressions or even thought itself.²⁶ He supports his hypothesis by quoting Buber and Ruysbroeck amongst others who make a clear distinction between their direct experience of God and this experience of their own being. The enjoyment of the inner self Zaehner labels 'enstasy', as apposed to the 'extasy' of the saint who reaches out to the enjoyment of God. Transcendental Meditation would be a modern example of a method of achieving enstasy. Perhaps, then, we may understand the Hindu Scriptures (most particularly the Mānūkyā Upanishad) as profound studies in depth psychology, written by men with first-hand experience of their isolated spirits, and we may gain useful insights from them concerning the nature of the human soul even though we may feel that they are totally ignorant about the living God. In fact one finds three objectives recurrently applied to Brahman: *Sat-Chit-Ananda* (Being-Consciousness-Bliss). The final one causes problems since the Bible seems to teach that the intermediate state of the unregenerate is unpleasant (e.g. 2 Peter 2:9), but the founder of Transcendental Meditation throws light on this when he asserts that it is not the state of Brahman which is blissful but the transition into and out of this state:

The mind does have the ability to experience when it is on the verge of transcending . . . It is at this point that the mind experiences the nature of absolute bliss consciousness.²⁷

So we are left with being and consciousness. Being, perhaps, in that the spirit is far more ultimate than the perishable body and brain, and consciousness in that this is the prime quality which distinguishes people from, for example, spirit-less computers. Interestingly, Descartes also maintains that consciousness is the salient attribute of the soul. But what of our spirits when we are unconscious? Perhaps a clue is found in the testimony of mystics of all faiths that our everyday egos are different from our spirits,²⁸ and Thomas Merton believes that most of us only become aware of our true selves after death:

This 'I' that works in the world, thinks about itself, observes its own reactions and talks about itself is not the true 'I' that has been united to God in Christ. It is at best the vesture, the mask, the disguise of that mysterious and unknown 'self' whom most of us never discover until we are dead.²⁹

Merton's contention is supported by some of those who have been brought back from clinical death. Victor Solow was clinically dead for twenty-three minutes and during this time he experienced a strangely different self:

This new 'I' was not the 'I' that I know, but rather a distilled essence of it, yet somehow vaguely familiar, something I had always known buried under a super-structure of personal tears, hopes, wants and needs.³⁰

Again, a similar idea is found in Jung:

The self is a quality that is subordinate to the conscious ego. It embraces not only the conscious but also the unconscious psyche and is therefore, so to speak, a personality which we also are.³¹

Is it this self which lies gazing while we are asleep?

In the philosophy of Yoga, the spirit is ascribed similar qualities to Brahman, for example, timelessness and transcendence. 'Only when it is conjoined with . . . matter can it seem to act or do anything'.³² (In the Sankhyâ-Kârikâ Scriptures the picturesque metaphor is used of a lame man mounted on the shoulders of a blind one to describe the union of spirit and body). In Christian terms, perhaps one's eternal fate is fixed at death because in the intermediate state one is incapable of thought or development since mind, as we know it, is the product of the interaction between brain and spirit.

If one adopted something like this view and wanted to draw an analogy with God, one might wish to cite the early Church Fathers who viewed God as absolute being and simple in

his essence, an idea reworked by more recent theologians like Tillich and Macquarrie. Or alternatively, one might be stimulated by the notion of process theologians like Ogden (although the idea goes back to Diogenes) that God's mind is a product of his interaction with the world, which is his 'body'.³³ It is a welcome fact that although process theologians are so avant-garde in trying to incorporate modern theories like evolution and relativity into their theology, they are old-fashioned enough to assume an interactionist view of man!

Be that as it may, finally we are wise to maintain a healthy agnosticism concerning the nature of the ghost. We are also wise to approach with humility the whole subject of the nature of the machine. G.E. Pugh expresses our dilemma in a neat paradox: 'If the human brain were so simple that we could understand it, we would be so simple that we couldn't.'³⁴ But as this article has sought to show, we are in a precarious position as Christians if we deny altogether that there is a ghost in the machine. Now our knowledge is largely theoretical, but one day it will be empirical:

Then all cerebral activity ceases permanently. The self-conscious mind . . . now finds that the brain that it has scanned and probed and controlled so efficiently and effectively through a long life is no longer giving any messages at all. What happens then is the ultimate question.³⁵

Footnotes

1. G. Ryle, *The Concept of Mind* (London 1949)
2. J. Robinson, *The Body* (London 1952)
3. Their books include: M.A. Jeeves, *Psychology and Christianity* (Leicester 1976), D.M. MacKay, *The Clockwork Image* (London 1974), and more recently, MacKay's *Brains, Machines and Persons* (London 1980). (For an example of a recent Christian book which is sympathetic to the MacKay approach, see: D. Gareth Jones, *Our Fragile Brains*, Downers Grove 1981).

4. *Brains, Machines and Persons*, 14
5. Jeeves, *Op.cit.* 72
6. A.C. Custance, *The Mysterious Matter of Mind* (Grand Rapids 1980) 91
7. Admittedly the Greek could conceivably be translated: 'I tell you today, you will be with me in paradise', but the standard translation is the most natural reading, according to most scholars. See e.g. O. Cullmann, *Christ and Time* (London 1962) 238
8. Jeeves, *op. cit.* 77
9. *ibid* 142-143
10. J.R. Smythies (ed.) *From Mechanism to Mind* (London 1965) 188
11. MacKay's view is original and subtle, and my somewhat cursory treatment fails to do him full justice. For a more detailed criticism see e.g. C.S. Evans, *Preserving the Person* (Downers Grove 1977) 108-117
12. e.g. H.J. Eysenck has written: 'Experiments ... have shown that both clairvoyance and telepathy must be presumed to exist.' *Sense and Nonsense in Psychology* (London 1957) 139
13. e.g. M.P. Cosgrove, *The Essence of Human Nature* (Grand Rapids 1977) 34
14. J. Taylor, *Science and the Supernatural* (St. Albans 1981) 72-75
15. e.g. L. Watson, *The Romeo Error* (London 1976) 140-148. R.M. Moody, *Reflection on Life after Life* (London 1977)
16. W. Penfield, *The Physical Basis of Minded.* P. Laslett (Oxford 1950) 64

17. *Brains, Machines and Persons* 64
18. K. Popper and J. Eccles, *The Self and its Brain* (London 1977) 207-208
19. A. Koestler, *The Roots of Coincidence* (London 1978) 58
20. But for some, Descartes' theory is still tenable. See L. Watson, *op.cit.* 117-120.
21. See A. Koestler, *op.cit.* 73-76 for an outline of Eccles' position. For a succinct description of the views of Penfield, Eccles and Popper, see A.C. Custance, *op.cit.*
22. K. Popper and J. Eccles, *op.cit.* 356
23. e.g. A. Doublas, *Extra Sensory Power* (London 1976) ch. 19
24. K. Popper and J. Eccles, *op.cit.* 472
25. H.H. Price, *Essays in the Philosophy of Religion* (Oxford 1972)
26. R.C. Zaehner, *Concordant Discord* (Oxford 1970). A sensitive description of this state of consciousness is found in W. Wordsworth's poem: *Tintern Abbey*, lines 37-49.
27. Maharishi Mahesh Yogi, *A New Translation and Commentary on the Bhagavad-Gita* (London 1979) p. 437
28. e.g. F.C. Happold, *Mysticism* (London 1970) 48
29. R.C. Zaehner, *op.cit.* 100
30. P. Cotterell, *I want to know what the Bible says about: Death* (Eastbourne 1979) 48
31. C. Jung, *Two Essays on Analytical Psychology* (Collected Works, 7, 175)
32. R.C. Zaehner, *op.cit.* 98

33. e.g. S.M. Ogden, *The Reality of God and Other Essays* (New York 1966)
34. L. Watson, *Lifetime* (London 1980) 161
35. K. Popper and J. Eccles, *op.cit.* 372