

THE MIND-BODY PROBLEM with JULIAN ISAACS, Ph.D.

JEFFREY MISHLOVE, Ph.D.: Hello and welcome. Our topic today is the brain-mind relationship, and my guest, Professor Julian Isaacs, is a member of the Parapsychology Department at John F. Kennedy University in Orinda, California, an applied psychologist. Welcome, Julian.

JULIAN ISAACS, Ph.D.: Thank you.

MISHLOVE: In the field of science -- mainstream science, neuropsychology, neurophysiology, brain research -- it's generally assumed, I understand, that the mind is an epiphenomenon, an emergent property of the brain, a by-product of the physical, materialistic universe. Is that basically correct?

ISAACS: Yes, that's right. The consciousness of each individual is taken to be simply the inside view of what's going on in that brain. This is very important for modern science, because modern science says that nothing exists in the universe except physical bits and pieces, including the molecules and atoms of which the brain is made, and that consciousness itself is not a physical or even a non-physical existent. In other words, there's no such thing as consciousness; that's simply a process which somehow, rather mysteriously, we're aware of, but perhaps a computer could also be conscious, and therefore the computer would be aware as an insider of the currents in its transistors and things.

MISHLOVE: Now there's a paradox here already, because modern science is based on the notion of empirical testing, verifying things through experiment, and to say that nothing can exist outside of the physical universe is to postulate something metaphysical, something philosophical, not really testable.

ISAACS: That's true, and consciousness has always had this paradoxical, difficult-to-pin-down property. It's the central problem, in some ways, of a great sort of convergence of the different

sciences, and of course there's no test for consciousness per se. We normally say people are conscious because we contrast that with them being asleep or unconscious. But there's no real way of telling whether people are conscious or not in some final sense.

MISHLOVE: In fact psychology, the science of the psyche or the mind -- most psychologists will tell you that's not what they really are anymore; they are behavioral scientists.

ISAACS: That's true, except that's changing too, because the cognitive move within psychology as a whole has made looking at conscious processes much more respectable, because we expect to be able to model those in computer and mathematical terms.

MISHLOVE: And there is, I suppose, a small but prestigious minority of elite scientists who maintain that the materialistic viewpoint that the mind somehow emerges from the brain doesn't really hold up.

ISAACS: Yes, there have always been outstanding neurologists such as Sir John Eccles, who's a British neurologist --

MISHLOVE: Nobel laureate.

ISAACS: Indeed, yes. And Wilder Penfield, too -- both of whom believe that the brain in some sense was an instrument which was played upon by a nonphysical mind. Of course this view is very ancient. I'm sure it goes back to paleolithic times, when people believed in the survival of the spirits of their forebears. One of the reasons why I'm so interested in this viewpoint, which is these days called the dualistic viewpoint, is because it's one of the possible theoretical explanations for the phenomena of parapsychology.

MISHLOVE: The typically mainstream scientists and positivistic behavioristic philosophers get a little upset, a little indignant, even if you use the phrase the mind, or the soul. They claim you're making a categorical error, that you're describing a process as if it were a thing.

ISAACS: Yes, that's true. The sort of position that you're outlining, classically would be that taken by the British philosopher Gilbert Ryle, who wrote *The Concept of Mind*, in which he sought to prove that mind talk was a way of talking about behavioral dispositions. In fact later philosophers have seen that this clearly cannot be the case, and there are very powerful technical problems in reducing statements about people's behavior to statements about intentions or beliefs or consciousness.

MISHLOVE: In other words, what you're saying is that to view the mind as an entity, as a thing in and of itself, is now considered acceptable in mainstream philosophy.

ISAACS: I'm not saying acceptable. I'm saying that the attempt to reduce mind to just being the brain seems to have failed in some way, and that the philosophers are aware of that. But the people who have bright hopes for artificial intelligence in the computer world still expect the reduction of consciousness to being some form of brain process, to occur. And of course we mustn't forget that if we are talking about the existence of a nonphysical mind, that's importing something very strange and very different into the universe from the regular matter which the physicists have so far told us does exist.

MISHLOVE: But something very akin to what spiritual religious traditions have been saying all along.

ISAACS: What interests me is the fact that the kind of view of man as consisting of at least two separable elements -- that is, a body including the brain, and a mind which can separate from it at death -- seems to have been a consistently held view by very widely divergent groups in different parts of the world, different forms of culture, and at different times and places. If we look at parapsychological phenomena, if we look at the phenomena of the out-of-body experience, the phenomenon of the apparent survival of people through death --

MISHLOVE: The near-death experience.

ISAACS: The near-death experience, the deathbed experience itself, where people allegedly see their departed relatives coming in to welcome them into the nether lands, and also many other forms of psychic happening, are explicable on the basis that there does exist a separate mind from the body. The real problem is to produce a theory which is modern, which describes this in terms which make sense to us as twentieth-century psychologists, rather than in the seventeenth-century terms of Rene Descartes, who was the paradigmatic dualist theoretician, or the old forms of the anthropologically interesting but obviously scientifically invalid view of the spiritualists, the occultists, and the different sorts of primitive groups who believe this.

MISHLOVE: One might think that one of the reasons that many mainstream scientists today reject the evidence of parapsychology is because it does challenge their materialistic view of the brain-mind system.

ISAACS: That's certainly true, and unfortunately as parapsychologists we have a set of phenomena which seem to be very, very naughty, from a Monty Python point of view, in the sense that they won't lie down, they won't go away, and they won't behave themselves and become normal physical residents of the universe. For example, in precognition people seem to be able to pick up information about the future. This simply shouldn't be possible. Equally, ESP -- telepathy between people, for instance -- doesn't fall off with distance like radio waves would. And in addition to that, we have my people at the laboratory affecting instrumentation in ways that we simply don't understand, which really don't look as if they're normal physical processes. All of this suggests that perhaps what we're dealing with is a realm of phenomena where somehow we're transcending the normal limits of space and time, and this was a very clear position held by many parapsychologists throughout the history of the subject.

MISHLOVE: I think the crux of the argument must boil down to what we mean by the normal limits of space and time. After all, physics -- quantum physics, the fundamental philosophical foundations of physics -- are in great uproar right now, and there are big disputes as to whether the equations of quantum physics can be taken to literally mean that there are multiple dimensions of space, or that time could run in both directions.

ISAACS: That's true. We're in a very interesting period, because it looks as if the whole issue of what interpretation should be given to the mathematics of quantum physics is virtually up for grabs. And perhaps a form of dualism may come in through that particular approach. I know that the theoretician Evan Harris Walker has said that essentially what makes a quantum reaction finally get to some determinate end point is a human consciousness observing it. I'm not sure that that's really all that need be said about that area, but this is certainly one position which is being advocated.

MISHLOVE: Evan Harris Walker, we might mention for our viewers, is a physicist working with the U.S. Army Ballistics Research Center in Aberdeen, Maryland. Interestingly enough, that was a center very crucial in the development of the computer, and the same point was made thirty years earlier by John Von Neuman, the great mathematician who invented the Von Neuman machine, which is the basic architecture of all computers. He suggested exactly that -- that the collapse of the quantum wave function, or the basic observation in quantum physics, really occurs when someone, some conscious entity, becomes aware of that.

ISAACS: That's true, because when you look at the mathematical descriptions of the quantal process, it cannot give you an explanation for why the collapse should occur, according to this viewpoint. The consciousness movement in California is very fond of citing these arguments as being definitely true.

MISHLOVE: Julian, neither you nor I are physicists, but I think we have to try and explain what we mean by collapse of the quantum wave function. It's so esoteric.

ISAACS: OK. What we're talking about is that when a quantum reaction occurs -- say two particles collide -- there are various different possibilities which could actually occur as a result, as an outcome of that particular encounter. What the quantum terminology of the mathematics says is that the system actually is in every one of those possible states.

MISHLOVE: It could be hundreds, or millions.

ISAACS: That's right. It could be thousands, and they're not necessarily well defined apart from each other. What then happens is that when you observe the system you find the electron or the particle in only one particular place. What's said to happen is that that realm of possibilities which was inherent in the situation becomes collapsed from being diffused out, almost like some kind of spatial cloud, into one particular event, and hence we talk of the collapse of the state vector.

MISHLOVE: There's a sense, then, in which the very physical world, as we observe it -- all of this nuts and bolts and knock on wood, etcetera -- is actually created by our act of observing it.

ISAACS: That is a very interesting viewpoint, because working in psychokinesis one is very aware of the way that events are being created, apparently by people's conscious or unconscious intention. The idea is around in parapsychology that perhaps large aspects of the world are created by people, and that maybe what we're living in is a mind-dominated universe where the human race has come to a consensus as to what things should be like, and the world therefore operates along those lines. And if as a group we totally changed our minds, then the planet might operate in a different way. This kind of viewpoint was first really clearly summed up by the German philosopher Kant, who said that it's only human beings who impose

the notion of space and time on what is really a sort of smeared-out existence without things being separate from each other -- very much as the English philosopher and physicist David Bohm talks about it, in his notion of the implicate order, in which the universe exists most of the time, and what we see are just eruptions out of this sort of void.

MISHLOVE: In other words, we have a physical world, or we observe the world around us to be physical. We have the laws of physics. But in effect, all of our laws of physics, all of our observations, are generated by our brains, or by our nervous systems, or perhaps by our minds.

ISAACS: That's true. When you say "by our minds," one of the things that interests me in the parapsychological theories of the existence of minds separate from bodies is that parapsychologists have wanted to produce a picture of the mind which is more detailed, and especially more detailed in talking about the relationship between the mind and the brain, than anybody ever has done so before. And there were two British theoreticians, Thouless, who was a professor at Cambridge University, and V.P. Weisner, who was also at Cambridge, who produced a theory of dualism, which said that the mind in its relationship to its brain uses psychokinesis, the ability to affect matter, to initiate the voluntary action of the body, and uses ESP to scan the brain. In this case the brain becomes this very sophisticated sensory system for scanning its environment, preprocessing information, and then displaying it to the mind entity, which reads the information off the surface of the cortex by ESP. This is an important theory, because in some final sense it gives a place for ESP and psychokinesis. It gives a reason why they should be in the world, because otherwise they just appear to be rather strange and bizarre, rather meaningless peripheral features of the world.

MISHLOVE: It also suggests then that any individual who is able to use their brain to function in the world is automatically psychic, at least internally, within themselves.

ISAACS: That's right. And the problem of using psychic ability becomes the problem of taking the attention of the mind entity away from the brain and going directly into the physical world, as in clairvoyance, or maybe into somebody else's brain or perhaps somebody else's mind, as in telepathy, and then, if you are able to take your mind power, so to speak, and use it directly on the physical world, you then have psychokinesis.

MISHLOVE: It addresses an interesting question, and that is, when out of an act of pure will I decide, say, to lift my hand, how did I do that?

ISAACS: Well, the neurophysiologists such as Eccles and Penfield would say that what happened was that your mind manipulated your brain in such a way as to initiate that series of voluntary actions.

MISHLOVE: How is that view regarded in science?

ISAACS: Well, the view is not taken seriously at all, because it's not yet proven. The difficult thing about dualist theories is it's very difficult to prove that they're true. One of the things I've been interested in doing is to see if we could deduce provable, empirical, experimentally testable consequences from dualist theories of mind.

MISHLOVE: It would seem, insofar as science is a search for order and for elegance in the universe, that a dualistic theory would always somehow be unsatisfying, that people would always want to get to the ground of existence, in which mind and matter are somehow really unified.

ISAACS: That's true. The parapsychologist J.B. Rhine certainly thought that. He thought that we had to acknowledge that there was a mind entity. But he thought that on a more fundamental level of existence of the universe, in order for mind and matter to simply interact at all, there must be some more fundamental substratum which was the ground in which that interaction occurred. That view is called neutral

monism, because the ground of the interaction is neutral as between mind and matter.

MISHLOVE: I think there's an interesting synchronicity at play here, in that parapsychologists use the word psi to describe psychic phenomena, extrasensory perception, and psychokinesis, and yet in physics psi waves are used to refer to the probability waves, the probability functions, that underlie physical phenomena. Maybe that is the ground.

ISAACS: Yes, that's right. In fact Eccles and Thouless and Weisner thought that how psychokinesis affected the brain was to very subtly and very slightly change the probabilities of transmission between different nerve cells across the synapses of the brain, and that what you saw was a very gentle but mass effect on thousands and millions of different neurons, so that the steering could be very subtle and very well coordinated. This in many ways is very consistent with our picture of psychokinesis, because it seems to have the property that it's independent of the complexity of the task that's involved. Psi as a whole seems to have this independence of complexity, in the sense that if you give somebody an ESP task, and you give them a psychokinesis task, and then you give them a task which involves both, people seem to have about the same level of success at doing the two tasks separately as they would if they had to do both tasks to get the outcome. Which suggests that somehow the extra complexity doesn't matter.

MISHLOVE: Or tests of psychokinesis using multiple targets at the same time.

ISAACS: Yes, that's right. In fact, Rhine went the whole hog there. He had a wonderful machine at one time, which would roll ninety-six dice all at the same time, and he found that people could still affect the system in a significant way.

MISHLOVE: For some of our viewers who may not know, since J.B. Rhine died some years ago, it's worth mentioning that he is

considered really the founding father, the grandfather, of the discipline of parapsychology. He did his research at Duke University, originally, back in the 1930s.

ISAACS: That's right. What he did was to use the very rigorous statistical methodology of the behavioral sciences to prove that ESP and psychokinesis existed, because he produced tests which were both fraud-proof, and which were very highly standardized and could be used in a sense as a means of measuring ESP, where other informal methods using mediums and looking at spontaneous ESP simply couldn't give that degree of certainty.

MISHLOVE: It's interesting, when we talk about the underlying ground of the physical universe to be not particles like atoms or even energy forms, but probability waves, it's ironic to think that of the billions of wave functions, probability waves, that we would emerge at all.

ISAACS: Yes, that's true. It's a very boggling thought, and the philosopher Austin in England was always very amusing, because he understood this point, and he said that philosophers and scientists generally, other than the physicists, dealt with the world of medium-sized dry goods

--that what we're dealing with is a world of tables and chairs, and that as a result the sorts of properties of the microworld boggle us, because we cannot use analogies derived from our normal experience of medium-sized dry goods to actually understand how that strange world of probabilities works. Yet it looks as if we really have dematerialized matter with quantum physics, and that the world does dissolve into a sea of energy and probabilities, and that this view is finally what we're left with -- that we cannot go back to a classical view. And yet the diffusion of this change in viewpoint is only occurring in a very slow fashion, because it's so counter-intuitive and so against our normal experience of the world, that my fellow applied psychologists certainly are not aware of the fact that the universe has changed in that way.

MISHLOVE: But the younger generation of people who are being educated now in more of the principles of quantum physics, the way we were trained in some of the more classical physical notions, will have an easier time accepting this viewpoint, I should think.

ISAACS: Yes, I think that's true. One thing I do want to do, because I'm a picky philosopher myself, is to sound a note of warning against some of the tendency that I find around myself in California, where people assume that because we have some very interesting speculative ideas to link quantum physics with large-scale questions about reality and with parapsychological phenomena, that therefore automatically we've simply solved the problems. I want to say this is a starting point, and we need to do a very large amount of precise research to really check this out, rather than simply assuming that our views are true.

MISHLOVE: It's likely to be many generations before we're able to integrate quantum physics with something as fundamental as neuropsychology, neurophysiology, let alone parapsychology.

ISAACS: Yes, I'm seriously hoping that reincarnation is a fact, because I'd like to be around when that synthesis occurs.

MISHLOVE: What do you see as being a viable mind-brain relationship that may emerge from all of this?

ISAACS: I really don't know. I think that it's too soon to say. What I am seriously interested in doing is trying to elaborate a dualist theory with enough detail to allow us to produce predictions, and the sorts of view which seem to emerge from that picture, which I'm not saying is true, but which I'm saying is interesting enough to try and test, is of a mind that may be located in some sense out of space and time, which therefore can perform psychic things, and which is in contact with its brain, which is located in normal physical space and time. And that as soon as you ask the question, "Well, supposing you have a nonphysical mind, the next question is, where do nonphysical minds come from?" And there are some very difficult

questions here. For example, at what point does the nonphysical mind become attached to the body? The Catholic Church has a wonderfully bureaucratic answer to this, which is that at three months it kicks in, and that's that. This is the rules of the system. But there are other questions too, like where does mind arise first in nature?

MISHLOVE: Interesting. There are those who would theorize that you can find the beginnings of mind. Arthur Young, the cosmologist who invented the Bell helicopter, suggests that there are aspects of mind apparent even in photons.

ISAACS: Yes, this is a very interesting viewpoint, because there are two really difficult positions. One's on the horns of a dilemma when you ask that question, because one of the horns is to say, as Arthur Young does, that inert matter has properties of mind. The problem is that those properties seem to be so different from what we associate as being properties of mind that there's the question, well, do you really mean it's the same thing? Because photons simply don't understand what's going on, or write letters to each other, or talk to each other in the way that we would understand as being mindful. And yet, if you talk of mind as being some nonphysical entity which is associated with the body, the whole issue of how that association takes place, and where do minds come from, arises.

MISHLOVE: The other view that seems to be coming out of systems theory is that mind emerges as a property of the whole, as a property of a complex system like a human brain. You can't find it in any of the atoms, in any of the cells or organs or structures within the brain, but when you see it as a whole, there it is.

ISAACS: Yes, that's true. One can have both materialist forms of that emergence, and one can also have dualist forms, where you think that there's some basic pure awareness which belongs to some nonphysical entity, and that consciousness per se -- structured, socialized, individuated consciousness such as you and I presumably

have -- arises through the interaction of mind and brain. This is Professor Charles Tart's view, and he talks of an emergent interactionist view of the mind-body relationship -- that consciousness is actually an emergent property of the interaction of mind and body.

MISHLOVE: Tart, we might mention, is a parapsychologist and psychologist at the University of California at Davis, the author of many books on states of consciousness and psychic functioning as well. Let's try and articulate that view again -- that mind is an emergent quality.

ISAACS: That's right. What Tart hypothesizes is that perhaps there is some form of overall, total mind stuff, of which we become individuated small subsections, when somehow -- and he hasn't explained this -- there is an association between this basic awareness and the brain. And that what happens is that the consciousness that we know has been shaped by the society that we live in, by our individual personal psychology and our goals and our social environment, and that that then constitutes our normal state of consciousness, and that states of consciousness are only permitted to be of certain types within our society. You can be drunk, you can be asleep, you can be dreaming, or you can be various other things. But for example, we're not allowed, in terms of our society, or our society doesn't value, certain states of consciousness which might be much more common amongst primitive peoples, for example.

MISHLOVE: Or amongst yogis.

ISAACS: Yes.

MISHLOVE: Well, it seems as if on the one hand you've got the absolute, materialistic view -- mind emerges from matter, is conditioned by it. It seems that Tart's getting close to that, except he's adding the social dimension, being a materialistic form of conditioning the mind. On the other hand is the dualistic view that you've mentioned. I suppose we ought to say on the other end are

the idealists, who suggest in the vein of Bishop Berkeley that the entire physical universe is simply a subset of the mind.

ISAACS: Yes, and going back to our question about Walker, Walker has produced an experiment which is very Berkeleyan, in the sense that he actually seriously believes that quantum systems are indeterminate except when they're being observed by human beings. You can test that in an experiment, and that will be very interesting to see. If the Berkeleyan view is true, it will allow parapsychology to be much more readily explicable, but the problem is, how on earth do you prove the Berkeleyan view?

MISHLOVE: Well, it's dismissed in philosophy as something disgusting -- solipsism. Yet the intriguing thing to me is that solipsism, the view that everything is mind, cannot be disproven.

ISAACS: Yes, but solipsism isn't just that everything is mind. It's rather that there is one single mind, which happens to be me. That's the solipsistic point of view, whereas idealism allows there to be lots of other minds, and as a parapsychologist I think that one of the views that one would like to take, if you view the universe as created by mind, is that we all have a democratic vote as to which way the universe should be.

MISHLOVE: Julian, I'm going to have to cut you off. We're out of time. Thank you very much for being with me.

ISAACS: Thank you.