

John C. Eccles, Nobel laureate and Darwin doubter

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John Eccles was one of the world's leading neurophysiologists. After a lifetime of research and scientific publication that culminated in a Nobel prize and a knighthood, he concluded that only a divine creator can explain the existence of the human brain. He also concluded from his research that naturalism could not explain life, contradicting the common claim that science by definition requires naturalism. This definition of science is still used to reject even considering ideas, such as intelligent design, that look for evidence of intelligence in the biological world.

Sir John Carew Eccles (1903–1997) was born in Melbourne, Australia. He graduated with first-class honors in medicine from Melbourne University, and went on to earn a Rhodes Scholarship that allowed him to pursue an M.A. and Ph.D. at Oxford University. Eccles studied under the world's leading neurophysiologist of day, Charles Scott Sherrington, and collaborated with him on some of his most critical research. Eccles' distinguished career culminated in the 1993 Nobel Prize for Medicine and Physiology awarded for his work on the neuron synapse and for determining the relationship between nerve cell inhibition and cell membrane repolarization. He became professor of physiology at Oxford and "helped lay the cornerstones of modern neurophysiology".¹

Eccles' many important contributions to science in the area of brain research include an understanding of nerve impulses and neuromuscular transmissions. He proved that when a nerve cell is stimulated, it releases a neurotransmitter that binds to a membrane receptor of a neighboring cell, thereby allowing the message to continue its journey. This system functions as a switch that helps to regulate many body functions. Eccles also demonstrated that the same mechanism could be used by a nerve cell to inhibit the electrical activity of nearby nerve cells.² Specific neurotransmitters, such as acetylcholine and serotonin, are involved in this complex system. Eccles also proved that message transmission from nerve cell to nerve cell was chemical and not electrical as had been widely assumed by scientists.³

His numerous honors

The numerous prestigious honors that Eccles was awarded include a knighthood by the Queen of England in 1958. His scientific distinctions include membership in the Royal Society of London, the Royal Society of New Zealand, and The American Academy of Arts and Sciences. He was also listed in *100 Most Important People in the World Today*.⁴ In Eccles' long and productive research life, he published six books and over 300 scholarly articles, many in leading scientific journals.

For much of his career he was a professor at Oxford University and a research scientist at several major institutions.⁵ In 1966, Eccles accepted an invitation by the

American Medical Association to become the director of the Institute for Biomedical Research in Chicago, and in 1968 he became professor of physiology and medicine at the State University of New York in Buffalo.

Eccles spent his entire career in brain research because he believed that understanding the brain is the "ultimate problem confronting man. In terms of its complexity, the problem is much bigger than the whole problem of cosmology."⁶ He wrote that "the belief held by many scientists that science will ultimately deliver the final truth about everything" is false because science cannot deliver absolute truth:

"... what it provides are hypotheses in an attempt to get nearer to truth. But scientists must never claim to know more than that. The scientific concepts that we have are always going to be changed as science progresses."⁷

For example, Eccles points out that Newton's gravitation law

"... was not the final truth. All our ideas are being remolded all the time in the light of further investigations. In our lifetime alone, there have been tremendous changes. Unfortunately, many scientists and interpreters of science don't understand the limits of the discipline. They claim much more for it than they should. They argue that someday science will explain values, beauty, love, friendship, aesthetics and literary quality. They say: 'All of these will eventually be explicable in terms of brain performance. We only have to know more about the brain.' That view is nothing more than a superstition that confuses both the public and many scientists."⁷

His conclusions about naturalism and divine creation

Eccles published widely in scholarly literature, and most of his publications dealt with the brain. He made it very clear in his writings as to where he stood regarding biological origins and his support of intelligent design. For example, he wrote that "naturalism fails to account for our experienced uniqueness", and for this reason "I am constrained to attribute the uniqueness of the Self or Soul

to a supernatural spiritual creation.” The facts require, in his words, “Divine creation” because

“... no other explanation is tenable; neither the genetic uniqueness with its fantastically impossible lottery, nor the environmental differentiations which do not determine one’s uniqueness, but merely modify it. This conclusion is of inestimable theological significance. It strongly reinforces our belief in the miraculous origin ... a Divine creation. There is recognition not only of the Transcendent God, the Creator of the Cosmos ... also of the loving God to whom we owe our being.”⁸

He concluded that Darwinian evolution “does not account for the highest levels of consciousness in *Homo sapiens*.”⁹ Eccles also made his views about naturalism crystal clear:

“I think that promissory materialism is still a principal belief of the scientists. But it is promissory: that everything will be explained, even intimate forms of human experience in terms of nerve endings ... This is simply a religious belief ... a superstition based upon no evidence worth considering at all. The longer we go on understanding the performance of the human brain, the more remarkable does it become, the more unique are we from anything else in the material world.”¹⁰

He recognized that science and religion have many similarities. For example, both

“... are imaginative and creative aspects of the human mind. The appearance of conflict is a result of ignorance. We come to exist through a divine act. That divine guidance is a theme throughout our life; at our death the brain goes, but that divine guidance and love continues. Each of us is a unique, conscious being, a divine creation.”¹¹

He concluded that this “is the only view consistent with all the evidence”. Professor Gliedman added that Eccles’ work had opened up the view that “traditional materialism is seriously incomplete”.¹² Eccles added that the two most fundamental religious concepts are:

“[First,] God the Creator of the cosmos with its fundamental laws, beginning with the exquisite quantitative design of the so-called Big Bang and its aftermath ... The other is the Immanent God to whom we owe our existence. In some mysterious way, God is the Creator of all the living forms ... and ... human persons, each

with the conscious selfhood of an immortal soul. On this transcendent vision we have to build our lives with self-conscious purpose.”¹³

In one of the most comprehensive works on brain evolution, which Sir Karl Popper called “the most important of all the big problems—the evolution of the human brain, and of the human mind”, Eccles evaluated the “latest critical developments of Darwinism” such as the research on the genetic basis of the brain. He concluded that materialism does not, and cannot, explain either the existence or the operation of the mind.¹⁴ When asked why the essential features of the mind have not been written about more often, he notes that it

“... could be that the brain evolution story appears to be empty of facts and good only for unjustified speculations. While recognizing that much is unknown or only imperfectly known ... The theme of the book *goes beyond the materialistic concepts of Darwinism only in the last three chapters* [emphasis mine].”¹⁵

When asked directly about the origin of humans, Eccles stated that he concluded the evolution of life is an “immensely improbable event” and added that the origin of life and humans “is in fact” a result of “design, a divine design”.¹⁶ He added that if

“... you do not believe in purpose and design, then you can argue that this is just chance and necessity. But it is silly to be caught with chance and necessity for your existence. The naturalists want, on the other hand, to be leaders of thought, to be the great prophets of the age and, yet, at the same time they want to get themselves out of the process. They need a little more humility.”¹⁷

Eccles then stressed his view that it is openly foolish to deny that the whole cosmic design was made for a purpose.¹⁷ After a lifetime of research, Eccles concluded that, at the very onset of the putative “hominid evolution there is a mystery ... there is an almost complete fossil ‘black-out’ for 5 million years after this most critical time of hominid evolution.”¹⁸

He latter added that Darwinism does not explain the origin of the brain and cannot account for consciousness. The biggest problem is “Darwinian evolution would not account for the highest levels of consciousness in *Homo sapiens*, which are the unique experiences of human selves”, and most problematic is the origin of the “central core of conscious experience that is labeled the psyche, the self, or the soul”.¹⁹ The only viable conclusion, Eccles



Photograph from <jesmir.anu.edu.au>

Figure 1. Sir John Eccles in his laboratory.

stressed, is that all life, including humans, is the product of “divine design ... wonderfully organized and planned”.¹⁷ He openly stated that humans came “to exist through a divine act”, not naturalism as orthodox evolution proposes.¹¹

Eccles knew the evidence for brain evolution better than most every scientist alive in his time, yet he recognized, and made clear in his writings, that only intelligent design could explain the reality that he described so well, and in so much detail, in his many scientific publications. Orthodox neo-Darwinian evolution cannot explain the brain. While not a young-earth creationist, if he were alive today (he died on 2 May 1997), Eccles would be very comfortable with the intelligent-design view of origins compared to orthodox Darwinism. In his words, the “brain is the best bit of communications design you could imagine”.⁶

The implications of Eccles’ conclusions have created much consternation among Darwinists. One example of many is the following incident that occurred at Harvard University, presumed a citadel of objective knowledge. The students at the event did not welcome Eccles’ views, but rather hissed at him when he presented his conclusions at a Harvard lecture:

“Several years ago the great Australian neurobiologist, Sir John Eccles, ended a Harvard lecture on brain organization by admitting that although evolution could account for the brain, it could not, in his view, account for the mind, with its mysterious capacity for consciousness and thought: only something transcendent could account for that. The audience began hissing.”²⁰

Percey wrote about this event, observing that the “... anomaly lies in the fact that the Harvard audience, presumably endowed with mind, consciousness, and thought, and presumably with more intellectual curiosity than most, might have been expected to welcome the views of a famous neurobiologist on the subject—particularly in view of the failure of academic psychology even to address itself to these matters.”²¹

Eccles even concluded that those who reject God sometimes believe that they are God. For example, he wrote that he knew Jacques Monod, who wrote the best seller *Chance and Necessity*, very well. Eccles noted Monod was a materialist but was

“... different from most materialists. He believed he was God. He had this kind of divine obsession. In the last chapter of his book, “The Kingdom and the Darkness” ... He’s gone away from any rationality and has proceeded to deliver doctrine according to the dictates of Jacques Monod. ‘The Kingdom’ is if you follow the beliefs of Monod and become one of his loving disciples. ‘The Darkness’ is if you don’t.”²²

Eccles went further, concluding, in harmony with his Christian faith, that “our nonmaterial self survives the death of the physical brain”, a view that is for “most scientists ... the greatest heresy of all”.²³ Gliedman adds

Table 1. ‘Three Worlds’ according to John Eccles.

WORLD 1	WORLD 2	WORLD 3
PHYSICAL OBJECTS AND STATES	STATES OF CONSCIOUSNESS	KNOWLEDGE IN OBJECTIVE SENSE
1. INORGANIC: Matter and Energy of Cosmos	Subjective Knowledge	Records of Intellectual Efforts
2. BIOLOGY: Structure and Actions of All Living Beings; Human Brains	Experience of: Perception, Thinking, Emotions, Dispositional Intentions, Memories, Dreams, Creative Imagination	Philosophical, Theological, Scientific, Historical, Literary, Artistic, Technological
3. ARTIFACTS: Material Substrates of human creativity, of tools, of machines, of books, of works of art, of music.		Theoretical Systems: Scientific Problems, Critical Arguments

that, for Eccles, this was not an “unscientific leap of faith” but rather a result of “solid scientific” evidence.²³ Eccles also wrote that all cultures

“... have developed myths of origin to satisfy their need for explanations of the world they live in... The Biblical account in Genesis ... was by far the most intellectually and emotionally satisfying ... In its essentials the Biblical account was accepted by Newton, who even believed the creation date that was calculated by Bishop Ussher to be 4004 B.C.!”²⁴

He then notes that modern science’s rejection of the creation story in “Genesis led to the belief that the Universe had always existed”, hence the question of its origin was now meaningless: “There was no creation and *a fortiori* no Creator.”²⁵ Then the discovery that the universe was expanding led to the conclusion that the universe must have had a beginning. Eccles concluded that “in their efforts to escape from a supernatural creation... they had unwittingly proposed continual creation by an Immanent God!”²⁶ Eccles then stated that he personally had concluded “there is a vast design in the origin and history of the Universe. We are not mere creatures of chance and necessity, but are central participants in the great cosmic drama.”²⁷

Eccles openly opposed evolutionary naturalism because science

“... also cannot explain the existence of each of us as a unique self, nor can it answer such fundamental questions as: Who am I? Why am I here? How did I come to be at a certain place and time? What happens after death? These are all mysteries that are beyond science ... Science has gone too far in breaking down man’s belief in his

spiritual greatness and has given him the belief that he is merely an insignificant animal who has arisen by chance and necessity on an insignificant planet lost in the great cosmic immensity.”⁷

In short, he argued that what Popper calls “promissory materialism” is an “extravagant and unfalsifiable” claim.²⁸ Eccles added that the high regard for science in our society causes it to have

“... great persuasive power with the intelligent laity because it is advocated unthinkingly by the great mass of scientists who have not critically evaluated the dangers of this false and arrogant claim. The danger is already evident in the counterproductive flourishing of anti-science.”²⁹

He concluded that:

“My task as a scientist is to try to eliminate superstitions and to have us experience science as the greatest human adventure. But to understand is not to completely explain. Understanding leaves unresolved the great features and values of existence.”⁷

Conclusion

Eccles spent his entire half-century-long career in brain research and published widely in the scientific literature on this subject. He concluded from his research, and his extensive review of the research of others, that the idea that the mind is a product of evolution is wrong and badly misinformed.³⁰ In the end he concluded that only an intelligent creator could account for the existence of the human mind:

“We come to exist through a divine act. That divine guidance is a theme throughout our life; at our death the brain goes, but that divine guidance and love continues ... It is the only view consistent with all the evidence.”¹⁰

Eccles, “a practicing Christian”⁷ also saw the existence of the conscious self as definite evidence for the existence of a divine creator. As he had stressed in his writings, God’s creation is a “loving creation” and He is “a loving Creator” who has given all humans many “wonderful gifts” including our mind.³¹

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