

called instincts. His reason may occasionally tell him to act in opposition to the opinion of others whose approbation he will then not secure, but he will still have the satisfaction of knowing that he has followed his innermost judge or conscience. As for myself I believe that I have acted rightly in steadily following and devoting my life to science. I feel no remorse for having committed any great sin, but have often and often regretted that I have not done more direct good to my fellow creatures. My sole and poor excuse is much ill health and my mental constitution which makes it extremely difficult for me to turn from one subject or occupation to another. I can imagine with high satisfaction giving up my whole time to philanthropy but not a portion of it though this would have been a far better line of conduct.¹²

Conclusion

Darwin's introspection and frankness are interesting. They show an evolution, a change from apparent orthodoxy to skepticism and agnosticism. He bares his soul to his children in the handwritten *Recollections*. No doubt some of the seeds of doubt were planted

during Darwin's childhood, but much of this development came about after he had abandoned his faith in the authority of the Biblical record. He had made the human mind his authority, and it led him from orthodoxy to theism to agnosticism. Indeed it appears he might well be characterized as an atheist, a doubter of the very existence of God. His caution, however, and his recognition of the impossibility from a scientific standpoint of proving a negative led him to characterize himself as an agnostic which he says he is content to remain.

References

1. Darwin, Charles. *Recollections of the development of my mind and character*, Unpublished, pp. 64f.
2. *Ibid.*, pp. 73B, 73C.
3. *Ibid.*, pp. 61f.
4. Darwin, Francis, ed. 1912. *The Life and Letters of Charles Darwin*, Appleton, New York, I:39.
5. *Ibid.*, I, p. 45.
6. *Ibid.*, I, p. 40.
7. Darwin, Charles. *Op. cit.*, p. 62f.
8. *Ibid.*, p. 64.
9. *Ibid.*, p. 63.
10. *Ibid.*, pp. 63f.
11. *Ibid.*, pp. 65-73.
12. *Ibid.*, pp. 73A-73B.

ICE AGES: THE MYSTERY SOLVED? PART III: PALEOMAGNETIC STRATIGRAPHY AND DATA MANIPULATION

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Abstract

This part completes the discussion of dating deep-sea cores by examining the new method of paleomagnetic stratigraphy. Too many unsolved problems exist to objectively date ocean sediments by magnetic reversals. Other possible mechanisms that may cause reversals in rocks or sediments are discussed. The dated oxygen isotope fluctuations are statistically analyzed for the controlling frequencies by power spectrum analysis. The predominant cycle matches the exceedingly weak eccentricity cycle in the Milankovitch theory. Even though this is claimed to prove the theory, it has caused even more serious problems. The question naturally arises of how order can be generated from the chaos of uncertainties and problems to produce their consistent results. It is shown that extreme bias in the astronomical theory has caused the manipulation of data by various means, and the "reinforcement syndrome" acts like a traffic policeman to keep data and researchers in order.

I) PALEOMAGNETIC STRATIGRAPHY

A) Introduction

Part I of this article showed how an uniformitarian ice age was practically impossible. However, many scientists now believe that the radiationally weak Milankovitch cycles have caused regular glacial/interglacial changes. The basis of this belief is the excellent statistical fit between dated oxygen isotope fluctuations of deep-sea cores and the three orbital variations. Part II examined this basis, showing that little really is known about the cause of oxygen isotope fluctuations. Before "absolute" dating methods are applied, cores are stratigraphically pigeon-holed into their geological context. Radiocarbon and the uranium series disequilibrium methods of dating are burdened with currently unsurmountable problems. This section continues with dating methods of ocean sediments.

The third main dating technique applied to Pleistocene deep-sea cores, as well as to other geological periods, is paleomagnetic stratigraphy, which is based on supposed reversals of the earth's magnetic field. Paleomagnetism has been primarily responsible for the revolution in the geological sciences caused by the plate tectonics theory.¹ It was not until the magnetic stripe pattern was discovered on the ocean bottom and related to changes in geomagnetic polarity as the ocean crust spread from certain centers that earth scientists accepted continental drift and plate tectonics. Like other new geological methods, it contradicted other more-or-less established geological beliefs until a compromise was reached. This occurred in the field of paleomagnetism when it was discovered that certain index fossils used to date the Miocene-Pliocene boundary at nine million years ago were dated at five million years ago by the new method.² Since paleomagnetism was considered more reliable, the Miocene-Pliocene boundary was changed to the new date, causing much

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