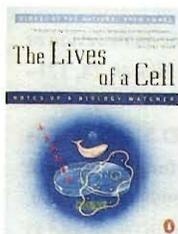


The Lives of a Cell

Harini Nagendra



The Lives of a Cell
Lewis Thomas
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Lewis Thomas has written a number of delightful books, essentially collections of essays on various aspects of biology. These make for a very unusual reading experience – at first ‘read’ they appear to be ‘random walks’ through various aspects of the natural sciences. On deeper reading, one discovers several common threads (some subtle, others even more so!) that weave together these seemingly disparate essays into a wondrous web of biology, approximating real life.

I came across my first Lewis Thomas book, *The Youngest Science* (about which I will be writing another review, later) soon after finishing my BSc – and reading it proved an unforgettable experience. Which is why, when I was asked to review four books of HIS for ‘Resonance’, I jumped at the idea! This is a review of his first book, actually a collection of essays which were first published in the *New England Journal of Medicine* between 1971-1973 – which went on to get the National Book Award in USA.

Born in 1913 in New York, Thomas went to medical school at Harvard in an era when

medicine was as much an art as a science. Following this, he had a varied career as a physician, researcher, teacher, and finally, hospital administration. He combined these varied experiences with a deep interest in the liberal arts including languages, history and literature – which is why you can never be sure what you will find in the next essay you read! This only makes reading him all the more fun...

To give you a flavour of how this book can open your mind to new ways of looking at things, let’s spend a little time on why a book on the nature and interconnections of life on earth, is called *The Lives of a Cell*. Thomas explains this in the introductory essay, where he says he found it very difficult to find the right analogy for the way the earth functions. The earth is often compared to an organism, with different parts such as animals, plants, the atmosphere, soil, etc., which interact with each other in a manner similar to that in which different parts of the body like the heart, kidney and lungs interact. However, while the parts of our body have rather obvious and defined connections with each other, often the relation between different ‘parts’ of the earth, for example between soil and animals is not very obvious. They cannot each be treated as separate organs, since they seem to have their own cycles of birth, life and death – while still interacting with each other in several, non-obvious ways.

Perhaps then, Thomas says, the earth is more like a cell – with its different parts comparable to the cell’s organelles such as the mitochon-

dria and centrioles. Several of these, according to present theories were initially independent organisms of their own – for example it is now fairly well proven that mitochondria are descended from primitive bacteria, which long ago moved into eukaryote cells. Since then, they have been living like semi-independent entities within the cell – they have their own DNA and RNA and do their own replicating. However, they do interact with the other parts of the cell in a more indirect fashion – by providing the cell with energy and in turn using some of the cell's nutrients.

With such analogies, Lewis Thomas goes on to describe various facets of life. In two especially fascinating essays on the development of languages ('Social Talk', and 'Information'), he says that 'language, once it comes alive, behaves like an active, motile organism'. It grows – new words are always being added. Instead of genes, it exchanges meanings with other languages – in this fashion, old languages give rise to new 'children' languages and several of these languages 'die' in the process as people stop speaking them.

However, as in all analogies, one cannot take things too far and assume the development of genes and words to be exactly the same. One essential attribute of words, which genes lack, is ambiguity. You will agree that one of the most beautiful things about poetry and most literature is the sense of ambiguity in the

words. Depending on the context, the mood of the writer or the reader, a word can be interpreted in several ways – which adds to the richness and beauty of the reading experience. Indeed, Thomas says that 'it is often necessary, for meaning to come through, that there be an almost vague sense of strangeness and askewness'. Genes, on the other hand, must carry precise information – a gene that said 'well, you could put a leg or two, somewhere on the right side of this body, maybe towards the head or, for a change, perhaps near the tail', would ruin the poor organism, while a word with the right shade of ambiguity could convert the plainest sentence into a work of art!

I hope the couple of essays I've described will make you go and read this book immediately. The one potential drawback with this book is the rather high cost – however, the 'food for thought' that it leaves you with is well worth the price. This is not a book you can read in a hurry and put down after one sitting. You will find yourself thinking about what the last essay said during the oddest moments – brushing your teeth, catching a bus to college, walking from one class to another – only, don't think about it *during* classes (although I must admit, this is one thing I found very difficult *not* to do!)

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