

role played by it in, for instance, the Stone – Weierstrass theorem or the existence of solutions of differential equations. But mathematicians are a notoriously eccentric lot when it comes to what they consider ‘applications’. [The great Edmund Landau once claimed that analytic number theory was an applied science, since so many of his students had used it to get their Ph.D. degree. On the other hand, it has been the reviewer’s privilege to listen to a distinguished topologist embed Brouwer’s fixed point theorem into the context of economic theory and then proceed to “derive” it from purely economic considerations!]. The occasional looseness of language in the text (a statement on page 43 claims that a “circle is a retract of an annulus” without caring to specify where the circle is

located in the annulus) can serve as an illuminating exercise for students. The economist C N Parkinson once observed that parliamentary transactions were a dreary business. But in France it must be even more tedious, since the whole thing was done in French. A textbook in topology could be daunting enough, without the reader being required to plough through it in Russian. The Universities Press has put the mathematical community in its debt by bringing out a series of titles translated from Russian, at this level. It has done an excellent job with this book too, which, though perhaps, could have been a trifle more reasonably priced for its size.

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The Medusa and the Snail

Harini Nagendra



The Medusa and the Snail
Lewis Thomas
Penguin Books, New York,
1995, pp.175,
Price:US\$10.95

Busy with your regular college syllabus? Then you must feel the need for dipping into something totally different once in a while – and this is a book I would highly recommend. *The Medusa and the Snail* is a collection of

thought-provoking essays on various aspects of the natural sciences, written by Lewis Thomas, that first appeared in the *New England Journal of Medicine*. These essays have been collected and published as a series of books – a review of the first of these, ‘*The Lives of a Cell*’, has already appeared in an earlier issue of *Resonance*.

The Medusa and the Snail is a collection of essays that seem completely different – one could be on cloning, and the next on schizophrenia! But they all have a single common thread running through – each essay explores an aspect of ‘selfness’. It is difficult to give you a sense of what I mean by this,

without a description – so that is just what I will proceed to do.

The very first essay describes a fascinating symbiotic relationship between a jellyfish or medusa, and a snail, found in the Bay of Naples. The adult snail has a tiny parasite, in the edited form of a vestigial jellyfish, attached near its mouth. Looking at this poor emaciated jellyfish, would you believe it actually seeks out the snail to go live with it? Ah, but the story gets stranger. This vestigial jellyfish, at certain times of the year, reproduces to give birth to normal, full-grown jellyfish. These drift around, seeking out snails. When they find one, they (surprise!) swallow it – yes, completely! The snail, meanwhile, refuses to take this lying down. It starts nibbling at the jellyfish from inside, and slowly devours most of it until the snail is on the outside, and the jellyfish, back again in a vestigial form, hanging on near the mouth of the snail.

What makes the snail and the jellyfish seek each other out, to continue this bizarre relationship? There is a peculiar sense of self and non-self involved here. It is a specific jellyfish species that hunts out a specific snail. None other will do. Are these, then, separate species – or are they mirror identities, inseparable twins?

A couple of particularly fascinating essays go into the workings of a committee – Thomas

says that if we were to bump into life on another planet, they might not have oxygen, they may not have our body structure, or means of communication – but one thing they are certain to have, and that is a committee formed to decide how to interact with us! Committees are by design doomed to failure, he says – simply because each person in the group is compelled to demonstrate his or her sense of identity – and this, of course, makes it impossible to ever have collective thinking. Hmm!... seems logical...

This collection of articles examines several such aspects of ‘self’ and ‘non-self’. In one essay, the author discusses a topic particularly relevant in the new century – cloning. Is it at all possible to clone a human being identical in all aspects to the ‘parent’? Thomas says, ‘no’. The environment is as important to the development of the identity, the ‘self’ of a human being, as their genes – and this environment includes parents, other family members, and friends. To replicate a person, therefore, you must also clone her parents, extended family, neighbors, classmates, teachers ... a complete impossibility!

Well, I could go on and on, describing each essay. But since I can’t do as good a job as he has, may I just say – read this book...

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