

“The Science of Sin- Why we do the things we know we shouldn’t”, Jack Lewis, Bloomsbury, Rs 499/- (2018).

Outlook Magazine, 19th Sept, 2018.

Around 300,000 years ago, a new species emerged from the now extinct *Homo erectus*. The new species, *Homo sapiens* differed from its predecessor in several ways but by far the most important difference was the increase in brain size. A larger brain size led over time to greater specialisation of its functionality which in turn led to things which we consider uniquely human- the development of language, development of sophisticated tools and the ability to form social bonds and collaborate with a large number of people. Social bonding led to the formation of large cooperative groups, called InGroups whose membership proved to be crucial for the survival of the species.

Despite what Facebook might claim, our cognitive capacity limits the number of individuals with whom we can maintain stable social relationships. This number, called the Dunbar number, is around 150. In a group of roughly this size, harmony and cooperation was possible with social mores which defined acceptable or unacceptable behaviour. However, meaningful cooperation on a larger scale needed other constructs like religion. With religion came the concept of sin- defined simply as behaviour which was forbidden.

It was only in the 6th century CE that a list of seven deadly sins was drawn up by Pope Gregory. These were pride, gluttony, lust, sloth, greed, envy and wrath. Stripped of the religious mumbo-jumbo, these were basically traits which were acknowledged to be detrimental to individuals as well as the InGroup. Of course, labelling bad behaviour did not make it any rarer- it just led to more guilt. The question then is why have these traits persisted? What are the biological and psychological dimensions of these capital vices? Jack Lewis, a neuroscientist and a television presenter in this new book seeks to explore this terrain.

Studying the human brain was well-nigh impossible till the twentieth century. Paradoxically, the two world wars, with their millions of casualties changed this. The wounded, especially those with brain injuries, offered the doctors a unique opportunity to learn about brain structure and the correlated functionalities. Subsequently, with the development of tools like CAT and MRI scans, scientists could glean enormous information about the amazingly complex organ. In the 1990s, with the advent of the technique of functional MRI, scientists could finally localise brain activity in various parts of the brain and correlate it to stimuli and behaviour.

Lewis looks at each of the seven deadly sins in their many dimensions. Using the enormous amount of scientific data on the human brain that has accumulated over the years with fMRI and other techniques, he tries to explain how the neural circuitry of the brain is involved not only in tempting us to be sinful but also how it restrains us. This can all get

pretty complicated with terms like the Medial orbitofrontal cortex (mOFC) and the Rostral anterior cingulate cortex (rACC) etc. thrown around. Fortunately, the discussion on the nitty gritty of neuroscience is but a small part of the discussion of each of the vices.

What make the book interesting and informative are the socio-cultural, contemporary and historical sidelights woven together with anecdotes and curious tit-bits. Thus, for instance in his discussion on sloth, he talks about the case of a South Korean couple who were so completely absorbed in a game that featured caring for a virtual infant that they accidentally starved their own three-month-old child to death. Or his discussion on how Facebook and reality TV, unlike all the world's major religions, is an ideal breeding ground for narcissism which he links with the vice of pride. Incidentally, pride is considered to be the "queen of all sin" - an exaggerated sense of entitlement and self-importance would make it easier for one to feel justified in taking more than their fair share of anything. In this reading, pride leads to other sins like lust, greed, sloth etc.

Apart from neuroscience, Lewis also uses evolutionary psychology to explain human behaviour. This is the approach where human behaviour is linked to evolutionary adaptations. Unfortunately, evolutionary psychology is methodologically and theoretically somewhat controversial since among other shortcomings, its findings are not verifiable. Intermingling such explanations with hard core neurobiology misleads the non-specialist into thinking that both are on an equal footing as scientific theories go. This is a major lacuna in an otherwise well written and immensely readable book.

We humans are fallible and prone to giving in to our deep-rooted impulses which are mediated through the complex external environment that we inhabit. These impulses can have both good and bad outcomes. Apart from various medical interventions which can curb pathological behaviour, Lewis also suggests various strategies which can be used at an individual level so that we can better manage these inner most impulses which ultimately make us unhealthy, unhappy and unproductive. The best advice turns out to be still what has been known to wise men for millennia- moderation in ones behaviour.

Shobhit.mahajan@gmail.com

9811222582

July 27th, 2018.