



Science and religion in India: beyond disenchantment by Renny Thomas, New York, Routledge, 2022. ISBN 9781032073194, pp. 203

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This book about disenchantment among scientists can be read as an account of a modern research group working on condensed and solid states in India, or of Indian scientists working in contemporary state-funded research institutes. That was not particularly the way Renny Thomas intended it (p. 178): “the book is not an ‘Indian’ case study of science, but a case study of ‘Science’ in an Indian context” he says, preferring to think of science and its practice as universal, though not derivative or uniform.

First let me clarify why this book should be considered by historians of science. Conceived around 2010, with field work in 2012, it describes working and intellectual conditions which are now (in 2022–23) ten years old. The glacial socio-economic movements which brought all those well-trained people together in a spectroscopy lab in Bengaluru began ten and twenty years before 2012, so roughly 1992. This is Thomas’s test of Weber’s thought-experiment on disenchantment which is now one hundred years old. We need modern contemporary histories of scientific practice and conceptual frameworks, like this one, if we are going to achieve an understanding of the histories of science and technology in India after the famous year of 1947. There are many such histories, and they are all intertwined, so we should be glad that people like social historian Thomas see the intellectual continuity involved in his ethnographic work with historians.

The continuity which Thomas constructs with the past is not just with Max Weber’s famous 1917 lecture, but also with PM Nehru’s use of the phrase ‘*scientific temper*’ in his 1946 book *The Discovery of India*, and again in Nehru’s 1963 speech on ‘the scientific temper’. Thomas’s reconstruction of this long thread runs up to the 1981 manifesto called

the ‘*Statement on Scientific Temper*’ organized by scientists, though few of his younger 2012 interviewees would have known details about that long thread. Without prodding in their discussions, that part of the modern history of science in India was lost to them. Thus the disenchantment in this book lies in Thomas’s measurement of the personal distance in scientists’ minds, speech, and practice from the ambient and customary spiritual practice and thought in the wider population outside the lab in the twenty-first century. Are these scientists just detached from that surrounding spiritual world, or are they living in another world disenchanting by the surrounding spiritual world?

In his lecture on Science as a Vocation at the University of Munich, sociologist Max Weber famously observed in 1917 that ‘the fate of our age’ is that ‘the ultimate, most sublime values have withdrawn from public life.’ And why is that the particular fate of our age, asked Weber, just before the end of the mass deaths of WW One? His answer was that it is due to his/our age’s ‘characteristic rationalization and intellectualization’, and is due ‘above all [to the] *disenchantment of the world*’.¹

Since its publication in 1918, Weber’s premise has been applied strongly to explain the presumed detachment of scientific communities and individual scientists from spiritual and/or religious life, if not a professional and vocational hostility to religion. Even occasional anti-theist movements among scientists have been explained by using Weber’s reasoning. In my case, as a young sociologist and anthropologist among scientists (mostly physicists) in the 1960s I inhaled the Weberian premise, expecting to see few signs of the ‘spirited’ or ‘enchanted’ world among people in the labs which I was going to study in Chicago and India. By my mid-twenties, I was accustomed to expect a disenchanted world because there was so much intellectualization and rationalization, some of it about war and poverty, all around

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¹ Thomas draws his Weber quotes from Peter Lassman [ed] *Max Weber’s ‘Science as a Vocation’*. (London, Unwin Hyman, 1989), 30.

me; scientists, among others, seemed unable to address those profound issues. Surely, I thought, Weber was right about those for whom science was a vocation, and not just a job?

When Renny Thomas walked into a nuclear spectroscopy lab in Bengaluru, he wanted to see whether he would be accepted sufficiently to observe the life of the lab and gradually engage the scientists in focused interviews. His timing was good. Bengaluru was reaching its height for a worldwide reputation in high-tech research and development, and with its sublime climate and cosmopolitan culture, was the place that scientists wanted to *live*. He did his field work inside a prestigious 110 year old research-oriented Institute there, and Bengaluru was not (by Indian standards) a megacity. Historians know that C.V. Raman set up a spectroscopy lab in this Institute when he became its director in 1933, and continued to operate that lab until he left that institute in the early 1940s.

The ultimate leader of this particular lab had a nickname before Thomas arrived, and he was known in the Group respectfully as ‘Boss’. This spectroscopy group was one of the largest in the Institute.² The group and individuals are shielded by Thomas’s agreement with them. Fortunately Boss was curious about Thomas’s focus on the religious ideas of the scientists in his group, and enabled him to become a member of the group. Thomas became ‘a lab member’ and thus participated in the required Saturday morning group meetings which were usually about plans for further work. He lived and ate in an adjacent hostel for doctoral students. Suspicious of Thomas at first, most of the 35 members of this group (post-docs, doctoral students, technicians etc.) eventually accepted him and, as in all successful cases of ethnography, treated him as part of the furniture, part of the background. They even accepted his return in 2016 for some further interviews. For this rapport-building the book is worth reading.

Thomas found a high percentage of South Indian Brahmins and South Indian Christians in this well-known lab. There is/was high representation of both these communities in professional scientific communities (doctors, lawyers, university professors, etc.) in Bengaluru and across South India. There were also others in the lab who had not originated from either of these two groups. But his major focus groups were these two. Everyone in the Institute was a member of a research communities first, and a professional community second. Although they defined themselves as ‘professionals’, they said they were committed to a life and

livelihood in scientific research (which meant somewhat lower salaries than they might have sought outside the lab, being mostly physical chemists, not a matter Thomas pursued). Unlike others, the highest caste Hindus in the Institute frequently referred to their ‘calling’ and/or ‘obligation to study’ and their castes’ historic role in India in knowledge keeping and knowledge advancement.

Through 80 interviews across the Institute, and in this research group, Thomas found that both junior and senior scientists were not particularly disenchanting, not particularly alienated from the life of the spirit as a result of their scientific work. They claimed their own personal skeptical ground if they needed to, but often said that they nonetheless engaged in religious practices and observances as a natural part of their social and cultural lives, or to be in tune with members of their families. Importantly for Thomas, some were intent on fulfilling a personal curiosity about their own spiritual development. India is the land, after all, perceived as the origin of the personal spiritual path.

Thomas did not focus on how the relative religiosity among these two social groups might have influenced their scientific practice in spectroscopy, or in other techniques and adjacent fields. Nor did he isolate the work of women in research practice, or the age/role differences in the working research process. Nor did he quantify ‘productivity’ of Boss’s group in contrast to other groups. He interviewed people in other research fields and practices too, not just in spectroscopy, so the variety is impressive. But so that the inclusion of a person in his study would not simply be a result of his sampling strategy, he constructed his own ‘representative variability’. Although these other issues I’ve mentioned might have been tempting, he retained his focus on ‘disenchantment’. In each case he focused on their orientation to religious thought and practice, resonant with the cultures around them—whether in the Institute or in the very large city outside the gate.

Thomas inevitably discovered that there were sub-cultures and sub-groups in the Institute unrelated to the task groups dedicated to laboratory teams: for example he found that ‘cultural nationalists construct an exclusive community based on Hindutva ideologies, and allow only this exclusive community to speak about India’s past’ (p. 16). He participated in the discussion of a group called ‘*Parampara*’ dedicated to exploration of Hindu themes in culture and science in India. Thomas says he also joined a ‘left-leaning’ discussion group named ‘Discussion’ about the histories of science and technology in India. So he seems to have done considerable ‘active listening’, as required in ethnography and history. For a person like me, far from this contemporary direct evidence, the result is most valuable.

Thomas learned during his study period that a Hindu-first movement became prevalent among scientists, and

² Having won the 1930 Nobel Prize in Physics, C.V. Raman was Director of this Institute from 1933 until his resignation in late 1937, and continued to develop a spectroscopy lab in the Physics Department until 1941. For more about this Institute, see my *Nucleus and Nation: scientists, international networks, and power in India*. (University of Chicago Press, 2010), cf ‘The Bangalore Affair’ pp. 57–77.



members of other communities known as ‘minority communities’ (Muslims, Christians, etc.), along with some Hindus in the institute, pointed out that this movement was originally on the margins of their science. Some of his interviews suggested that there might therefore be a heightened awareness of the importance of religious awareness, even among younger scientists.

Given the caste composition of this particular spectroscopy research group, and of the Institute as a whole, Thomas found a concern about ‘the persistence of caste’, as one scientist phrased it, acting like ‘an invisible hand’ even among those who claimed they were indifferent to caste (p. 167). Their self-appraisal as ‘casteless’ was balanced, he noticed, by a wide awareness as to which caste most individuals were from. Members of the Institute from Dalit communities were few, and in this research group even fewer—but not zero. Only now, says Thomas, are historians and sociologists studying the role of caste in the history of science. In my case, I learned some of my lessons through studying the life of physicist Meghnad Saha; he has become a kind of paradigm case of a successful low-caste researcher among historians of science in India. There are doubtless many others because the historic data, when nuanced, are very rich—as Thomas makes clear.

Thomas mentions that members of this research group and other scientists in the Institute, along with Indian historians and sociologists of science whom I know, were bemused by the statements of India’s new ministers of science & technology in 2014 and onward when they spoke to the annual meetings of the Indian Science Congress. Government ministers were repeating the Hindutva movement’s slogans naming one or two of its reigning Hindu deities, and implying that modern Indian science fulfills the vision in their versions of Hindu thought, or is actually derived from, ancient Sanskrit texts. Some ministers in Indian cabinets have previously been scientists, but eventually became rather political scientists. In short, were they all re-imagining the past? I was amused, along with scientists and historians among my contemporaries in the 1970s, when the influential defence physicist S. Bhagavantam wrote rapturously about his pilgrimage to important Hindu shrines. I should not have been

amused. Thomas’s book has reminded me that these people are serious, they are numerous, and there is not much disenchantment among them. Thomas calls them ‘*scientist-believers*’.

Thomas read widely in the early history of the anthropology and sociology of science, even in *Minerva*, the journal of science policy founded and edited by Edward Shils. Thomas found there the 1970 report by Gerald Swatez about his 1963–65 study of the social organization and operations of high energy physics experiments at the Lawrence Radiation Laboratory at the University of California Berkeley. Swatez’s 1965 dissertation at Berkeley, though not widely known, is probably the first ethnography *ever done anywhere* in a high tech industrial-scale research setting involving theoretical and experimental scientists. This is important for historians of science and technology in India where opportunities for histories of modern science (and technology) are abundant.

Thomas wisely allows his subjects to speak at length concerning the relation between their cultural belief systems and their own ideas about their role as scientists or ‘the ideal role of scientists’. He calls for more research in these directions, thus enabling researchers in India and elsewhere who have adequate evidence to compare their research, beyond the well-trodden corridors of Euro-American labs and the studies of scientists working in them. This book is rich in detail and stimulates questions.

‘Beyond Disenchantment’ can also be re-read as an account of how one does ethnography among people who know something esoteric which the historian or sociologist does not. Thomas is remarkably transparent in the book about his methods, and admits his approach and methodology was uncommon in India. From that reflexive angle too, this is a conscientious work in its transparency and thus an important contribution in the history, sociology, and anthropology of science and scientists. It could be used a teaching text with people not particularly interested in the *Indian* angle of this kind of lab group research. But it is also an enrichment of our understanding of the contemporary *Indian* history of science.³

³ My review of this book recently appeared in *Tapuya: Latin American Science, Technology, and Society* journal, Vol 5, no. 1. Necessarily some words and phrases are similar but the framing for a different audience here makes it clear that they are different reviews of the same book.

