As you can tell from the title, I will be talking about Hindutva’s strange and dangerous obsession with science. On the face of it, this subject might look rather remote from issues of poverty. But I believe that a fight against obscurantism has to be an essential component of fight against poverty and social injustice. Unfortunately, in the last two decades or so, Indian intellectuals have taken a strongly anti-modernist and cultural relativist turn which was aided and abetted by the growth of postmodernist theory in the West. As a result, Indian intellectuals and new social movements have been fighting science and modernity rather than many irrationalities and obscurantism that plague their Indian society. In my talk today, I want to show you how this postmodern turn has encouraged the growth of reactionary modernism and how it has produced rational justifications for this thing called “Vedic science.”

This conference has come at a time of great hope and a great challenge for South Asia. The hope, that the democratic process can rein in religious fanaticism, comes from the electoral defeat of the likes of Murli Manohar Joshi, the chief architect of BJP’s noxious ideology of Hindu nationalism. The challenge comes from the realization that the defeat of Joshi does not mean the defeat of Joshism; that the overthrow of BJP does not automatically mean the end of the obscurantism that the Sangh Parivar has infused into India’s civil institutions.

The partisans of secularism in India cannot afford to rest in the afterglow of the recent elections: Hindutva is down, but not out. The battle against Hindutva has to be fought in the realm of ideas, as well as in the realm of politics and economy. We have no choice but to engage with the content of Hindutva ideology in order to refute and discredit its core ideas. Indeed, we will have to go a step further and challenge the irrational and supernatural aspects of Hinduism itself which provide a permanent home for all kinds of demagogues and charlatans. Only a thoroughgoing secularization of the cultural commonsense can inoculate India against the virus of Hindu chauvinism.

The goal of my talk today is to initiate a critical engagement with one of the central dogmas of the Hindu nationalist ideology, namely, Vedic science. As you well know, there was an aggressive revival of all kind of superstitions under the BJP, all in the guise of introducing “holistic” and “decolonized” sciences derived from the Vedas, Puranas and Upanishads. These Hindu sacred texts were treated as if they were textbooks of modern, 21st century physics and biology. Vedic science is a classic example of Orwellian doublethink: it gives the impression that you are talking about quantum physics or the theory of evolution, while you actually mean the 3000-years old Vedic cosmology of magical rituals and mystical ecstasies.
The purpose of my talk is to expose the rules of the game through which this doublethink works. As I will show, Hindutva’s rhetoric of Vedic science dates back to the beginnings of neo-Hinduism in the 19\textsuperscript{th} century. The neo-Hindus, in turn, were recapitulating the classical Vedantic episteme of establishing likenesses and correspondences between unlike ideas and entities.

But this is not a paper on colonial discourse or the history of Bengali Bhadralok. What I am most concerned about is how seemingly secular and progressive intellectuals, many of them from India, and many of them very well-known around the world have contributed to this doublethink of Vedic science. I will show that postmodern and postcolonial critiques of modern science have produced philosophical justifications for the kind of dishonest equivalences and parallels Hindu nationalists draw between the Vedas and modern science.

I will argue that the Hindu rightwing and the postmodernist-leftwing are Manu’s Children, because both are perpetuating Manu smiriti’s injunction to keep reason within the limits of the Vedic canon.

4. As I will be covering a lot of ground, let me give you a brief outline of what I am going to do:
   - I will start by defining Vedic science
   - I will describe the havoc it has created under the Hindutva regime
   - Next I will try to explain why Hindu nationalists are so obsessed with science. Here I will introduce the concept of reactionary modernism.
   - I will then trace the lineage of Hindutva’s reactionary modernism back to Hindu renaissance and forward to the contemporary postmodern critiques of science and the Enlightenment.
   - Finally, I will ask what is to be done.

5. What is Vedic science? It is shorthand for two rather quaint but totally false assumptions:

   The first assumption is that modern science only affirms what was already known to the Vedic seers of the remote past, or as Vivekananda put it famously in his address to the World Congress of Religions in Chicago in 1893, “the Hindu is only glad that what he has been cherishing in his bosom for ages is now going to be taught [by] the latest conclusions of modern science.” The idea here is that as natural science develops, it begins to catch up with Vedic cosmology. (Physicists just stumbled upon …) Modern natural science is only a restatement of the Vedic cosmology in a materialistic language. (from Joshi to RSS big wigs, K. S. Sudarshan. The many Vedanta Ashrams run by Rama Krishna Mission, around the world). Since Santan Dharma is considered to be rooted in the order of nature, getting the endorsement of modern science for the dharmic conception of nature is of vital importance for modern-day Hindus.

   The second assumption is that the Vedic mysticism is a uniquely holistic way of knowing which meets the standards of empiricism and verifiability, as they work in natural science
today. A cultural relativist defense of mystical experience as a legitimate source of empirical evidence of the external world abounds in the writings of neo-Hindu philosophers, especially those of S. Radhakrishnan. Intuitive experience of oneness is supposed to lead to a “higher” or “holistic” science which is not limited by “mere” matter, but touches the Brahman, the “ultimate,” the infinite level of reality where there are no boundaries between objects and subjects. Hindu India is “spiritual” in it is essence, but it is spiritual in a highly “scientific” kind of a way. (CRADLE).

In practice, these two assumptions encourage an easy, unthinking mixing of a modern scientific vocabulary with traditional Hindu rituals. If science resembles Hindu cosmology, and if Hindu spatiality resembles scientific experiments, then the two can be mixed and matched depending upon the occasion.

6. For a long time, this strange obsession with finding parallels between modern science and mysticism was seen as just a quaint but harmless Indian habit. In his classic *When a Great Tradition Modernizes* Milton Singer justified it by suggesting that India’s “cultural metabolism” was such that Indians could only accept the new by making it conform to the old. Mixing up Vedas and science was one more example of the uniquely Indian way of thinking which was supposed to be uniquely contextual and relativist, as opposed to the Western way of thinking, which demanded consistency and universal validity. Except for a few concerned voices -- Edward Shils and Agehananda Bharati, for example, or the occasional rantings of those of us who sympathized with the ideal of scientific temper -- the mainstream of India-scholars saw all this as a sign of the “modernity of traditions,” the great adaptability of India to take in every idea under the sun and find a place for it somewhere in its ancient, multi-level pastiche of a tradition. *Thomas Friedman, “Glocalization.”*

What Singer and many of the later ethno-sociologists failed to point out was that this cultural metabolism was in fact a profoundly conservative strategy of the Hindu orthodoxy. They failed to point out that India also had another kind of cultural metabolism – displayed by such modern-day rebels against the orthodoxy as Jyotirao Phule, the great rationalist neo-Buddhist Laxmi Narusu, Ambedkar and the odd radical humanists like M.N. Roy – who use new ideas to challenge the old. This critical cultural metabolism does not find any space at all, either in works of ethno-sociologists, or in the writings of the later bunch of postcolonial theorists. Indeed, any criticism of the old in the light of the new is seen as an example of “epistemic violence.” I will come to this issue later in the talk.

7. So, for most of the 57-odd years after freedom, combining modern science with orthodox Hinduism was seen as perfectly normal and even desirable. Everyone, from prominent scientists, thinkers, politicians (even secular ones like Nehru), to say nothing of the likes of Mahesh Yogi and his fellow god-men and god-women – seemed so smugly comfortable with the great neo-Hindu “synthesis” of empirical science with mysticism and magic. Even today, we have supreme court judges who support astrology as a kind of science (*recent judgment*) we have nuclear physicists, including the current president,
who bow to Sai Baba; we have highly trained surgeons who will not operate when the non-existent planets Rahu and ketu are casting their evil astral influence.

8. But then came Hindutva. Vedic science became the official ideology of the state. Every kind of obscurantism imaginable under the sun received a new lease of life. Public and private money started flowing into “research” in astrology, vastu, Ayurveda, consciousness studies, faith healing, yagnas as air-purifiers, the training of “scientific priests,” cow-urine based medicine and many such inanities. Even the defense department cashed in: research began in creating new lines of weapons inspired by the amazing miracles recorded in the Vedic literature. We are all familiar with the rewriting of text books staking priority claims for “Vedic Aryans” for all kinds of discoveries from the Pythagoras theorem, quantum physics, relativity theory and plant physiology, including Jagdish Chandra Bose’s work on sensory perception in plants -- a theory, BTw, which was discredit even in Bose’s own lifetime and which is now the province of eccentric biologists like Rupert Sheldrake and the rest of the paranormal crowd). Just about every public speech Murli Manohar Joshi gave – and he gave many speeches, way too many – he glorified the scientificity of Hindu spirituality.

9. It gets worse. In the writings of real hardcore Hindutva ideologues, Vedic science takes on an openly anti-Semitic, anti-monotheistic turn. (I have the writings of Sita Ram Goel, Ram Swarup, Gurumurthy, N.S. Rajaram, Koenard Elst and David Frawley in mind. Strong hints of animostity toward judeo-Christian traditions can also be found in Vivekananda’s writings).

The basic claim of these hate-filled writings is this: Hinduism is scientific, while Semitic monotheisms are irrational and dogmatic creeds. Hinduism, on this account, is rooted in the very order of nature which Vedic “seers” discovered through their direct experience and which has been confirmed by modern science. Monotheistic faiths, on the other hand, need to invoke an imaginary supernatural being whose revelation they take on faith. Because Hinduism is scientific, it has the manifest destiny to become the “guru of nations,” to use Sri Aurobindo’s words. The supposed scientificity of orthodox Hinduism becomes a stick to beat the Christians and the Muslims with. Christianity is the main target.

10. They question is why? Why this obsession with science? In my book, Prophets, I have explained this obsession as a necessary and logical consequence of the reactionary modernism of Hindutva.

Because the concept of reactionary modernism is central to my critique of Hindu nationalism, let me explain what I mean by it.

11. Reactionary modernism is the common minimum program that the modern day religious fundamentalists share with the classical, 20th century fascisms. Both of them are reactionary modernists in so far as they appropriate the technological and institutional forms of modernity – for e.g., the universal franchise, the parliaments, the mass media,
modern technologies, from nuclear bombs to the internet -- in order to fuel mass mobilizations against the growth of modern, secular culture where old centers of authority, the priests, the elders, the castes, lose their power. Both fascists and fundamentalists oppose the liberal, enlightenment values of individualism and secularism as decadent and alienating. They resist these enlightenment values in the name of “rebirth” of the organic community and its traditional values.

The important difference is that while the fascists see the organic community in national and racial terms, as the volk, religious fundamentalists see the people as a community of believers, bound together by one conception of the supernatural. For the fascists, the nation is supreme, for the religious fundamentalists the sacred tradition is supreme. (the sacred tradition may or may not coincide with national volk). Thus the fascists don’t primarily depend upon the clergy or the sant-samaj, to establish their rule even though they use them whenever they can, while the fundamentalists give the clergy a leading role.

Now, Hindu nationalism hybridizes the worst of fascism and fundamentalism: For Hindutva, the national volk is also the community of believers, nationalism is Hinduism. As Sri Aurobindo put it, “it is the Santana dharma which for us is nationalism….” The awakening of santan dharma is seen as a necessary precondition of the rebirth of the real, authentic India, cleansed of all the decadent alien secularist ideologies of liberalism, Marxism and feminism. (Roger Griffin, Jeffrey Herf, George Mosse/ Gabriel Almond and Scott Appleby).

12. Ok, but what does this RM have to do with Vedic science?

As I mentioned earlier, Hindu nationalists, like all reactionary modernists, are aggressive technological modernizers: as the debacle over “India Shining” shows, BJP did not meet a high tech gizmo it did not like. [Modernization without secularization: As Bankim wrote in Anandmath: “the day the European industry and science is united with Hindu dharma, man will be god…”]

But here is the problem that this kind of techno-philia creates for all reactionary modernists: the more they raise the profile of advanced science-based technologies, the harder it becomes for them to ignore the cultural role of modern science. In a Gandhian dystopia of Ram Rajya, where everyone spun their own charkha and where mud-packs were enough to cure disease, Murli manhor joshi would be out of a job: there would be no need to justify traditional sciences, for all science would be tradional and local anyway. Technological modernization, in other words, creates the conditions where science and secularization become real possibilities and have to be engaged with.

13. So the reactionary modernizers cannot ignore science. The question then becomes: What to do with it? Regardless of all the fashionable twaddle about all ways of knowing being equally rational, reactionary modernists know very well that modern science is, in fact, radically different from all pre-modern sciences of nature, be it the renaissance magic of the Christian Europe, the daoist science of the Chinese or the Vedic
sciences of the Hindus. Modern science of nature is the first unique attempt to explain the
natural world in terms of matter and energy alone: no spirit-stuff, no disembodied
consciousness, no god -- and no goddess for that matter – is allowed to explain natural
phenomena. Just as it removed gods from nature, modern science also disallowed
invocation of extrasensory evidence obtained from the mystical insights or revelations.
Secularization of consciousness begins with modern science.

How to defuse the challenge science poses to the pre-modern natural, moral and social
orders? How to blunt the contradictions? Two methods, literalist and eclectic.

14. Christian and Islamic fundamentalists take the literalist option: they hold fast to
the Bible or the Koran as God’s revealed word, which is literally and eternally true.
Because God’s word is true, evidence that contradicts it is resisted tooth and nail.
 Creation science: they do their best to explain the fossil record in terms of the flood
story and 7 days creation. When fail, attack Darwinism as a materialist ideology of the
secular elites, which is what intelligent design people are doing. ((take the truth-claims of
the Bible and science at face value and wrestle over the contradictions).

15. Hindu nationalists, on the other hand, don’t take either the Vedas or modern
science at face value: they freely interpret and connect the two whichever way it suits
them. Rather than wrestle with contradictions between competing truth claims, they have
an eclectic, “anything goes” attitude – an attitude they share with many social
constructivist and postmodern critics of the idea of objective truth.

In the Hindu nationalist discourse, any scientific theory can be accepted, as long as its
content can be restated in terms of the monistic cosmology of the Vedas. This results in
strange hybrids where the words are scientific, but the ideas they point to are as
traditional and as orthodox Hindu as they get. All the achievements of science –
especially the removal of moral meaning from nature – are negated, but the word
“science” is proudly appropriated for the orthodox Hinduism. Let me give you a few
eamples to illustrate what I mean:

- You can, for example, gladly accept the atomic theory of matter as a Vedic
  science, as long as you can describe the positive charge of a proton as the sattvic
guna, the negative charge of an electron tamsic guna. (VHP’s guide to teachers)
- Or, you can assimilate quantum mechanics into Vedanta if you equate quantum
  energy with consciousness (Capra, Deepak Chopra).
- Or even more controversially, you can claim the theory of evolution to be
  originally a Vedic innovation, provided you equate the evolution of species in
  nature with the spiritual progress of atman as it is reborn into bodies which are
  capable of increasing self-awareness. (I am not making it up: Vedic creationism,
  Michael Cremo, Vivekananda, Sri Aurobindo). The possibilities are literally
  endless…

16. This habit of referring modern science to the Vedic corpus, and claiming priority for
Hinduism dates back to the Bengal Renaissance. While Bankimchandra C has hints of
defining maya and karma as scientific concepts, it was Vivekannada who finessed the principles of Vedic science. He declared the very idea of contradictions to be a “Semitic monotheistic” invention which breeds intolerance. In contrast to the people of the Book who insist on the truth of their dogmas, the Hindu, “has a more tolerant view of truth. The Hindu does not travel from error to truth, but from truth to truth, from lower to a higher truth.” It was VN who almost single-handedly turned that tired old line from the Rg Veda, “truth is one, wise men call it by different names” into the holy mantra of neo-Hinduism. Because all knowledges were true, or rather different perspectives on the same ultimate truth, there could be no real contradiction between them. It was perfectly legitimate to encompass the lower truths of modern science into the higher truths discovered by the mystic seers of the Vedas. (If you need a philosophical apologetic of why mystical knowledge is higher than merely empirical knowledge of science, please see Radhakrishna).

17. What Vivekananda and RadhaK started has continued into our times, nearly a century later. Two examples:
-- IIT professor, teach physics as Vedanta.
-- Kak: cosmological constants, speed of light, stellar distances all equated with coded mantras. How did they know? Mystics can see connections between the macrocosm and their selves.

18. This peculiarly inclusive but hierarchical philosophy of science is held up as a badge of honor for Hinduism’s open-mindedness and tolerance of other views. But I suggest to you that this strategy comes straight out the Manusmriti, that rule book of the Brahminical orthodoxy.

As it lays down the proper code of conduct for everything from eating, to sex and marriage, the Manusmriti also lays down the rules for proper use of reason. It encourages the use of reason, but only for supporting the Vedas.

“The man who uses reason, which does not contradict the teachings of the Vedas, he alone and no one else, knows duty.” 12. 106.

Those freethinkers and skeptics who “disregard the Vedas and the tradition because they rely on logic, should be excommunicated by virtuous people as atheists and revilers of the Veda.” 2:11

19. The proponents of Vedic science are doing exactly what the orthodox Hindus have always done: they are keeping all innovations, all new ideas, within the limits of the Vedas.
But the influence of Manu and orthodoxy goes deeper. As the work of many eminent Indologists, especially Brian Smith, Willhelm Halbfass and Jan Heesterman has shown, establishing likenesses, or bandhus, between unlike entities is the dominant episteme of the Upanishads. In the traditional Hindu corpus, the correspondences, analogies and resemblances were made between the microcosm or the self, and the macrocosm, the cosmic order of Brahman. Why do you think tapasya or meditation were so central to
orthodoxy? Spiritual disciplines enabled the tapasvi to see the connections and align the self to the infinite Brahman.

This same logic of resemblances is carried over to science in the modern times: Just as the ancients saw the self and the universe share the same essence, modern Hindus claim that modern science and Vedas share the same essence, that Vedas share the scientific spirit of modern science and therefore, what science describes corresponds to what the Vedas sang about.

The underlying philosophy of science is then one of symmetry between science and Vedas: both are discovering the same truths, only expressing them differently, both are equally empirical, only the Vedas include non-sensory evidence. Because each is valid and rational as a partial perspective of the larger reality, the two can be used interchangeably and mixed together, as long as they don’t contradict the Vedas. This is the epistemology of Vedic science.

20. Now I come to the more controversial part. It is my contention that postmodern and social constructivist critiques of science have arrived at exactly the same logic of equivalences and resemblances between modern science and local knowledges that one finds in the rightwing discourse of Vedic science. It is my contention that the fashionable postcolonial theories of bricolage, borderland epistemologies and critical traditionalism offer intellectual support to the kind grotesque hybrids I have described earlier. It is my contention, furthermore, that the anti-Enlightenment temper of postmodernist critics has silenced the internal critics of Hinduism by labeling them as alien and colonized minds. Postmodernism in India has been more concerned with the “decolonization of science” rather than with a “de-Hinduization” of science. Vedic sciences are postmodernisms chickens come home to roost.

21. Let me start by examining the logic of hybridity and critical traditionalism that are the hallmarks of postcolonial theory. Postcolonial theorists do condemn Vedic sciences but for wrong reasons. They condemn Vedic science propaganda not because it affirms the Vedas in the name of science, but because it dares to bring alien categories of positivism, materialism and dualism to justify the tradition. (RM condemned not because it is reactionary but because it aspires to be modern). Nandy, vinay lal, Vandana shiva acrobatics to distance themselves from Hindutva.

Take for example, Ashis Nandy’s critique of Vivekananda as colonized mind, or Partha chatterjee’s critique of Bankim Chandra’s as an example of “derivative discourse of colonialism.” As I have shown, both VN and BC indulge in Vedic science: they use modern science to justify obscurantist ideas like karma, maya, atman and such. Nandy and Chatterjee accuse them not of obscurantism but of in-authenticity. Their fundamental problem is not that VN, BC and other neo-Hindus are whitewashing the Vedas as scientific. Their fundamental complaint is that they are valorizing the Western ideas of progress and scientific reason and reading them back into the Vedas. Their concern is not how this Vedic hybridization is distorting science and allowing pseudo-sciences to
emerge. Their concern is how modern science distorts the monistic and wholistic tradition.

22. Indeed, Ashis Nandy, Bhiku Parekh, Dipesh Chakrabarty and Gayatri Spivak among the postcolonialists, and Sandra Harding, Donna Haraway, Bruno Latour and David Hess among the social constructivists, have written glowingly about bricolage, hybridization and critical traditionalism as long as it is the culturally authentic, local knowledges of the non-Western people that are used as the standard for how modern science will be interpreted. Their basic claim is that for so long the West has universalized its conceptual categories by the use of colonial violence, it is now time for the postcolonial world to create alternative universals by which to judge the conceptual categories of the West. The point is to provincialize Europe and universalize the victims of Europe’s imperialism. (THIS WHOLE ENTERPRISE IS TAKEN OVER BY THE RIGHT WING. See K. Elst’s Decolonizing the Hindu Mind, for e.g.)

I will give you just two examples of this style of reasoning and refer you to my book for details.

Ashis Nandy has written glowingly about Gandhi’s critical traditionalism. Gandhi, he says, was not opposed to science but allowed that science can be occasionally used by Indians as long as the tradition can maintain its integrity and authenticity. Nandy wants us to follow Gandhi’s example and urges us to “[quote] “assess modern science and integrate only those aspects of it which fit into the framework of our traditional vision of knowledge….use an edited version of Hinduism to assess modern science. Rather than use modern science to edit Hinduism.” Do you not see the spirit of Manu?

The other example comes from Sandra Harding, the well known theorist of standpoint epistemology. In her more recent work on postcolonial science, Harding argues for borderlands epistemology in which she recommends that third world people should learn to take whatever from wherever that affirms their identities and helps them to acquire power. Thus she suggests that we all should learn when to take our vitamins, and when to do other folk-medicines. The important point for Harding is to respect the different local knowledges of everyone, not try to correct them against what we have learnt through modern science, treat modern science as just one more ethno-knowledge. Once all knowledges are equally respected, and science is not treated as a universally valid and objective account of nature, then one can take whatever we want from science.

23. Now we come to the heart of the pomo critique of science which brings it close to the Vedic mantra of all truths are the same, and foolish people call them by different names.

Since the late 1960’s ever since Thomas Kuhn and Paul Feyerabend published their seminal works, radical sociologists of science that go by the name of strong program have insisted on a fundamental symmetry between modern science and any other belief system: what is taken to be as facts in any belief system are the result of social constructions. According to the strong programe, all sciences are ethno-sciences because all facts are constructed out of a culture’s shared biases, metaphors, myths. On this
account, to quote Nandy’s infamous essay against scientific temper, astrology is an ethno-science of the poor, while astronomy is the ethno-science of the powerful. [ethnosciences of the poor are to be preferred because they are more complete – you can see better from the bottom).

Because there is this fundamental symmetry between all knowledges, there is no reason to believe that modern science gives us a uniquely truthful account of nature, or that the logic of modern science is universally valid. For so long science has claimed to be universal, because of imperial power. Now, the post-colonial people must reverse the gaze and use their LKS to question science.

24. While our post-marked intellectuals were engaged in this titanic task of decolonizing modern science, our Hindu rightwing was busy using the same arguments to present Vedic science as an alternative universal.

25. What is to be done

To expose the contradictions

There is no purusa; prakriti is self sufficient
Matter is not an embodiment of Brahman,
Energy is not consciousness,
The one ultimate reality is not pure universal consciousness
Qm does not prove the existence of mind in nature
Guanas are not electrical charges
Plants are not sentient beings
Karma is not the same thing as genetic code, neither is karma simil
Experience in does not include experience of inner eye

26. TAKE BACK SCIENCE FOR ENLIGHTENMENT AND FIGHT A GOOD FIGHT AGAINST THE REACTIONARIES WHETHER THEY ARE HINDUS OR GEORGE-BUSH SYTLE EVANGELICALS, OR MUSLIM MULLAHS.