

The Consequences of Ideas

James Maffie

Meera Nanda argues first-world intellectuals who espouse anti-science, anti-enlightenment, and relativist epistemological theories are guilty of supporting reactionary religious-political movements in India (and elsewhere in the third-world). I contend Nanda's argument betrays the very enlightenment ideas it aims to defend.

Keywords: Science; science wars; Enlightenment; Feminism; Epistemological relativism; Postmodernism; Postcolonialism; Hindu nationalism; Moral responsibility for ideas

I. Introduction

Meera Nanda's *Prophets Facing Backward: Postmodern Critiques of Science and Hindu Nationalism in India* aims to bring the case of contemporary India to bear upon the "science wars" in the first world. Dr Nanda contends that first-world intellectuals who espouse anti-science, anti-enlightenment, and relativist ideas are guilty of unintentionally supporting the fascist Hindu fundamentalism that currently ravages India. Although focusing upon India, *Prophets* is clearly written for a first-world rather than third-world audience. Nanda's principal target are those first-world intellectuals she refers to as "clerks", i.e. "men and women of secular learning, intellectuals who uphold left-wing *political* ideals, but who" (p. 1)¹:

have lost faith in the promise of modernity and the (European) Enlightenment. They argue that modern science and modern secular cultures/institutions have lost their liberatory potential and have turned into sources of the subjugation and mental colonialism of non-Western people, women, and cultural minorities. (p. 19)

They include postmodernists, postcolonialists, feminists, epistemological relativists, strong sociologists of knowledge, social constructivists, advocates of "local knowledges", and exponents of post-Kuhnian science studies. They are guilty of trespassing against the fundamental tenets of enlightenment and the Enlightenment. In so doing, they are also guilty of aiding and abetting the "reactionary modernism" of fundamentalist Hindu fascism². I refer to this grab-bag of views as "the heterodox view" and to Nanda's, as "the orthodox view"³.

Correspondence to: James Maffie is associate Professor, Department of Philosophy, Colorado State University, Fort Collins, CO 80523-1781, USA; E-mail: maffiej@lamar.colostate.edu

Reading *Prophets* presents a number of challenges. First and foremost: while it is abundantly clear that Nanda aims to criticize and reject heterodoxy, what is not as clear is the nature of the argument she means to advance. Should we read *Prophets* as a philosophical critique of heterodoxy, an empirical refutation of the factual accuracy of heterodoxy's accounts of science, enlightenment, etc., or a moral criticism of heterodoxy's consequences in the third world?

I believe *Prophets* is most plausibly read as advancing a tactical or moral argument against heterodoxy based upon a "moral reading" of heterodoxy⁴. Heterodoxy has been co-opted by Hindu fascists and is therefore guilty of supporting Hindu fascism. Heterodox intellectuals are consequently morally responsible for Hindu fascists' wrongdoings. Those heterodox intellectuals committed to democratic self-determination, individual rights and liberties, the emancipation of women and the poor—and hence opposed to fascism—are therefore morally obliged to stop espousing heterodoxy. Moreover, only by advocating orthodoxy can they successfully oppose Hindu fascism, for orthodoxy is not susceptible to being co-opted by Hindu fascists. Heterodox intellectuals must therefore return to the fold of orthodoxy. Nanda thus uses contemporary India as a case study in the ongoing "science wars" for testing the progressive nature of "anti-science" ideas. She concludes the ideas are wanting and must be rejected. In this manner Nanda sees herself as turning the tables on heterodox intellectuals by accusing them of "political incorrectness".

This reading is supported by the fact that Nanda devotes the lion's share of *Prophets* to arguing that heterodox views are morally and politically harmful in India, that heterodox intellectuals are morally responsible for these consequences, and that heterodox intellectuals must therefore recant their views. By contrast, she devotes negligible time to marshalling philosophical criticisms of heterodox views (e.g., by attacking their internal inconsistency) or to disputing their factual accuracy (e.g., by citing empirical studies).

Dr Nanda brings a unique voice to these issues. She speaks as someone with formal training in microbiology (in India) and in science studies (in the USA) as well as someone with personal experience in the trenches of the science wars both in India during the 1980s and more recently in the USA in the 1990s. She reminds us that those individuals and ideas that appear marginal or oppressed from the perspective of the first world are often hegemonic and oppressive in the third world; that "local knowledges" are often the dominant knowledges locally and not emancipatory, and; that first-world scholars need to exercise more caution when speaking of and for third-world peoples. Finally, Nanda poignantly reminds us that many of our debates are not merely "academic" but have real world consequences both domestically and abroad.

This notwithstanding, I argue in section II that Nanda's conception of enlightenment is unacceptably narrow since it excludes a variety of thinkers plausibly characterized as enlightenment thinkers. Moreover, it threatens to exclude her own account of science. Section III contends that in the course of attacking heterodoxy, Nanda betrays enlightenment by adopting a fundamentalist attitude toward the basic tenets of enlightenment. Section IV critically examines Nanda's argument concerning the responsibility of intellectuals and claims that her argument relies upon premises that are vague, problematic, and in violation of the temper of enlightenment.

II. Nanda and Enlightenment

“Generic ‘enlightenment’”, according to Nanda:

is a spirit, a temper of questioning inherited dogmas, summarized by Kant in his famous dictum, *sapere aude*—“dare to know”, take the risk of discovery, exercise the right of unfettered criticism and accept the loneliness of autonomy. (p. 18; see also p. 19)

The Enlightenment involves “a thoroughgoing secularization of the imagination” (p. 267). Modernity involves a “commitment to reflexivity”—“epitomized by modern science”—that includes (among other things) the right to criticism (p. 20). Essential to modernity is “the secularization of society and a disenchantment of nature” (p. 2). The “humanist-Enlightenment” views science as “the common heritage of all humankind, for modern science alone has broken free from time and place” (p. 162). “Modern science combines in it the power of disenchantment and universalism (p. 267).

Nanda’s enlightenment involves an essential commitment to the following tenets: (a) the universal epistemological, moral, and political progressiveness of science; (b) the universal validity of scientific method and results; (c) the truth of metaphysical atomism and falsehood of holism and organicism; (d) the truth of metaphysical dualism and falsehood of monism; (e) an atomistic conception of human beings; (f) the identification of reason with scientific reason; (g) the universal moral progressiveness of enlightenment reason; (h) the universal moral progressiveness of political liberalism; (i) the secularization of nature; (j) the elimination of values from nature i.e. the disenchantment of nature; and (k) the fact versus value distinction. Values are epistemologically and ontologically subjective, whereas facts are epistemologically and ontologically objective. Facts belong to the domain of science and the public sphere, while values are relegated to the private sphere⁵.

Enlightenment also involves an essential commitment to the following “core assumptions that constitute the self-understanding of modern science as an epistemologically progressive and universal enterprise”:

1. There is a world in which there are objects, processes, and properties that are independent of us and of our beliefs about them.
2. The aim of science is to give a reliable albeit imperfect and tentative description and explanation of these objects, processes, and properties.
3. Science has learned how to learn about nature.
4. Such methods may occasionally lead us astray. But science has made remarkable progress so far. This progressive character is manifested in the increased powers of prediction and intervention in nature.
5. These increased powers of prediction and intervention give us the right to claim that the kind of entities described in scientific research exist independently of our theorizing about them and that many of our descriptions are approximately true.
6. There is only one science. Scientific truths are true for all societies. Criteria of justification of scientific claims cut across national and cultural differences (pp. 20–1).

These constitute roughly the contemporary thesis of scientific realism⁶. Nanda apparently believes enlightenment *per se* is committed scientific realism.

Nanda's conception of enlightenment (and orthodoxy) is unacceptably narrow since it excludes far too many thinkers who are plausibly characterized as modern, enlightenment thinkers. Consider list (a)–(k). It excludes Baruch Spinoza, Gottfried Leibniz, G.W.F. Hegel, John Stuart Mill, Bertrand Russell, and A.N. Whitehead on the grounds that their two-aspect theory, theory of monads, absolute idealism, phenomenalism, neutral monism, and process metaphysics (respectively) violate tenets (c), (d), and perhaps (e). By Nanda's reasoning, their views are therefore anti-enlightenment and anti-liberalism, support Hindu fascism, have morally objectionable consequences, and must be rejected ⁷. But surely these thinkers fall within any acceptable conception of enlightenment.

Prophets maintains that any attempt to insert values into nature violates enlightenment's, modernity's, and science's essential commitment to secularizing and disenchanting nature (tenets [i], [j], and [k]). Doing so thus supports Hindu fascism and must be rejected. However, these three tenets brand as anti-enlightenment "mystagogues" (p. 267) meta-ethical naturalists such as R.B. Perry, pragmatists such as William James and John Dewey, and recent moral realists such as Richard Boyd, Peter Railton, Susan Babbitt, and Nicholas Sturgeon ⁸.

Consider Nanda's six "core assumptions". If a commitment to these is a necessary condition of enlightenment thinking, far too many intellectuals and their ideas are branded as anti-enlightenment. They exclude George Berkeley, Immanuel Kant, G.W.F. Hegel, F.H. Bradley, and A.N. Whitehead (since these philosophers deny #1 understood realistically). They exclude empiricists and non-empiricists who: are sceptical of the realist pretensions of science but not its empirical adequacy (#5); aim to rid science of metaphysics (#1, #5); deny the epistemic value of explanation; advocate irrealist semantics; deny the probative value of abductive inference (#5), or; deny that science seeks 'deep' (i.e. realist) explanations rather than successful prediction and control only (#2). Such thinkers include David Hume, Auguste Comte, John Stuart Mill, A.J. Ayer, Rudolph Carnap, Carl Hempel, Hans Reichenbach, Lawrence Sklar, Bas van Fraassen, Elizabeth Anderson, and Arthur Fine (to name only a few). Excluded, too, are pragmatists such as C. S. Peirce, William James, John Dewey, Larry Laudan, and W.V.O. Quine who they deny assumptions #1, #2, #3, and #5 (construed in realist terms). Finally, Nanda's definition also excludes scientists such as Albert Einstein, Niels Bohr, P.W. Bridgeman, David Bohm, Ernst Mach, B.F. Skinner, Erwin Schrodinger, and arguably even Isaac Newton. In sum, by Nanda's definition, the foregoing thinkers' ideas are anti-enlightenment, hence supportive of Hindu fascism, hence morally objectionable, and hence to be rejected.

With the aforementioned barred from Nanda's enlightenment club, one wonders just *who is* included? Presumably, her self-proclaimed "pro-science" allies, Alan Sokal, Noretta Koertge, Paul Gross, Norman Levitt, and Michael Ruse. But who else? In sum, I contend Nanda's definition of enlightenment is overly restrictive and thus unacceptable. Seeing as she includes none of the aforementioned apparently condemned thinkers in her official roster of "clerics", I suspect she would agree with me after more careful reflection.

Closer to home, John Dewey and Larry Laudan qualify as “clerks” by Nanda’s definition. Yet Nanda aims to fashion her own account of science upon Dewey’s and Laudan’s, going so far as to dub it “Deweyan-Buddhist”. (Was the Buddha a modern, enlightenment thinker?) She seeks to wed pragmatism and scientific realism so as to form a “moderate sceptical pragmatic realism” (p. 273, note #3). Nanda’s account remains largely inchoate and *Prophets* provides few details regarding this wedding. But the devil is in the details seeing as scientific realism and pragmatism are mutually incompatible. For example, Nanda follows Dewey, Quine, and Laudan by rejecting semantic realism (p. 263), but neglects to realize that doing so makes defending scientific realism well nigh impossible⁹. Furthermore, it is far from obvious how one weds together pragmatism and scientific realism in a fashion that remains faithful to Nanda’s notion of enlightenment. Indeed, to the extent that she incorporates Dewey’s and Laudan’s ideas into her own account, Nanda risks falling into heterodoxy and being hoisted on her own petard as a “clerk”.

Simply put, Dewey and Laudan reject many of Nanda’s “core assumptions”. They reject: (i) realist semantics (e.g., non-normative conceptions of truth such as correspondence); (ii) realist conceptions of external reality; (iii) veritistic conceptions of epistemological goodness, evidence, and justification; (iv) the intelligibility of pursuing truth *per se* and hence the intelligibility of pursuing truth *per se* as the aim of scientific inquiry; and (v) the claim that science is progressive in the sense of yielding a progressively more, approximately true picture of external reality. They maintain that science has learned how to learn but not that it has learned how to learn about nature (realistically understood). And both deny the epistemic legitimacy of abductive inference, that mode of inference commonly used in defending scientific realism (see assumption #5 above). Dewey and Laudan oppose not only scientific realism but realism of all kinds.

Dewey and Laudan also oppose essentialism of all kinds, including the claims that science and scientific method have essences and that there exists an essential demarcation between science and non-science. Finally, they reject both ontological and epistemological versions of the fact versus value distinction. On these grounds, Dewey’s moral philosophy (Laudan publicly espouses none) explicitly rejects the secularization and disenchantment of nature as well as confinement of values to the private sphere.

In closing, very little remains of orthodoxy after Dewey and Laudan get through with it, thus making it difficult to understand how Nanda intends to absorb their ideas while remaining loyal to orthodoxy.

III. Nanda’s Betrayal of Enlightenment

Nanda claims heterodoxy denies the universal correctness of enlightenment accounts of reason and science as well as modern liberalism’s conceptions of individual rights and freedoms. On this basis she rejects heterodoxy. But why think these accounts are correct in the first place? Nanda gives no argument. She simply assumes them to be true. From the truth of these the falsity of heterodoxy certainly follows. But who, one wonders, does Nanda think she has convinced other than those already converted?

Prophets, however, goes beyond simply assuming the truth of orthodoxy. It adopts what is essentially a fundamentalist attitude towards orthodoxy—viz., a dogmatic attitude towards the unerring, incorrigible, categorical, and infallible truth of the above tenets and “core assumptions”. Nanda regards these as articles of faith, shibboleths, and fundamental axioms that may in principle be reflexively self-examined but never actually questioned—no less criticized, revised, or rejected—on pain of apostasy and treason.

But Nanda’s enlightenment fundamentalism betrays her own understanding of the spirit of enlightenment, science, and naturalism. It amounts to a non-enlightenment attitude towards enlightenment and hence a betrayal of enlightenment. After all, the spirit of enlightenment would seem regard the basic tenets of enlightenment as contingent, fallible, revisable, corrigible hypotheses to be assessed *a posteriori*—not *a priori* certainties declared infallibly, unquestionably, and incorrigibly true once and for all. This spirit includes a commitment to the scientific examination of enlightenment, reason, and science, as well as a commitment to follow through with one’s conclusions, no matter how discomfiting they may be.

Prophets betrays the spirit of enlightenment in yet another way. It contends heterodox intellectuals ought to recant their ideas. Why? Because heterodox ideas support fascism. Ideas have consequences, and the consequences of heterodox ideas are morally disastrous. In other words, *Prophets* pursues a moral reading of ideas that assesses their truth or falsity in terms of their moral consequences. Since heterodox ideas have morally disastrous consequences, Nanda reasons, they must be rejected as false. She rejects “epistemological egalitarianism”, for example, on the grounds that it equates science and superstition, and in so doing supports Hindu “mystagogues”. She rejects feminism and eco-feminism because of the “snug fit” (p. 146) between their holistic metaphysics and the holistic metaphysics of Hindu fundamentalism (pp. 146, 150). She rejects metaphysical monism on grounds that it leads to the “reenchantment” of nature, which supports Hindu fundamentalism (pp. 143–4). She denies organic conceptions of nature along with holist and monist metaphysics because they undermine liberal conceptions of atomistic individualism, individual rights and liberties (p. 144). And, finally, Nanda rejects strong sociology of knowledge on grounds that its logic “cannot but lead to scepticism” and scepticism is “obviously a disabling stance” (p. 134). In brief, Nanda appears to reject any idea that is the slightest bit contrary to or critical of enlightenment, for such ideas “open the door to [the worst excesses of (p. 149)] a conservative Third Worldism that can aid and comfort *any* traditionalist regime” (p. 146, see also pp. 149ff.).

But enlightenment (according to Nanda) conceives truth realistically in terms of correspondence with reality, and the spirit of enlightenment (according to Nanda) enjoins us to assess the factual truth of ideas *epistemologically* in terms of their evidential support (e.g., scientifically in terms of empirical adequacy, explanatory power, etc., or philosophically in terms of their internal consistency). As we’ve seen, Nanda rejects ideas such scepticism on tactical grounds that they are “disabling”—not on epistemological grounds that they are logically incoherent, empirically inadequate, etc. Incidentally, if scepticism were politically enabling in other circumstances, say in Canada, Nanda would presumably deem it acceptable and hence true. But is the truth of

scepticism relative to political circumstances? More generally, does the truth of ideas hinge upon their tactical utility? This certainly doesn't look like the enlightenment Nanda sees herself defending.

In sum, Nanda's moral reading of ideas betrays her own enlightenment ideals by imposing *a priori* moral constraints upon intellectual inquiry and ideas. In the end, she suffocates enlightenment while trying to save it. Eschewing heterodoxy's nightmarish, relativistic universe that turns "all cows equally grey"¹⁰, Nanda constructs the obverse, equally nightmarish universe that turns all cows either black (fundamentalist Hindu and heterodox accomplices) or white (fundamentalist enlightenment).

IV. The Consequences of Ideas

The principal argument of *Prophets* hinges upon two key premises: (1) the factual principle, "Ideas have consequences", and (2) the moral principle, "Intellectuals have a responsibility to ensure that their ideas do no harm" (which I shall call the "No Harm Principle"). I contend Nanda's moral principle is vague, problem-ridden, and violates the temper of enlightenment. Nanda's factual principle, in turn, is insufficiently precise to bear the weight her argument requires of it.

The argument may be reconstructed as follows:

Premise (1): (Nanda's Factual Principle) "Ideas have consequences" (p. 159).

Premise (2): (Nanda's No Harm Principle) Intellectuals have a moral "responsibility to ensure that their ideas do no harm" (p. 159).

Premise (3): Heterodox ideas causally support fascism in India (and elsewhere in the third world).

Premise (4): Fascism is morally objectionable.

Conclusion #1: Therefore, heterodox ideas have morally objectionable consequences.

Conclusion #2: Therefore, heterodox intellectuals violate the No Harm Principle.

What additional conclusion(s) does Nanda draw from this? At least five conclusions are possible, and which she draws depends upon how she interprets the No Harm Principle.

Conclusion #3: Therefore, heterodox intellectuals ought morally speaking to take responsibility for the consequences of their ideas by ceasing to espouse them publicly (but not privately if doing so causes no harm).

Conclusion #4: Therefore, heterodox intellectuals ought morally speaking to take responsibility for the consequences of their ideas by ceasing to espouse them publicly and privately.

Conclusion #5: Therefore, heterodox intellectuals ought morally speaking to take responsibility for the consequences of their ideas by publicly recanting their truth.

Conclusion #6: Therefore, heterodox intellectuals ought morally speaking to take responsibility for the consequences of their ideas by publicly recanting the validity of their arguments for heterodoxy.

Conclusion #7: Therefore, heterodox intellectuals ought morally speaking to take responsibility for the consequences of their ideas by publicly espousing the contradictory of their ideas, i.e. by espousing orthodoxy.

Nanda characterizes the No Harm Principle as a “simple truth” (p. 159), and perhaps because of this neither defends nor elaborates upon it. Assuming the principle true, how “simple” is it really? What precisely does it require of intellectuals? What exactly is involved in taking responsibility for one’s ideas?

The No Harm Principle states, “Those of us who trade in ideas have a responsibility to ensure that our ideas should do no harm” (p. 159). This tells us little. Consider the case at hand. Does taking responsibility for the harm done by their ideas require that heterodox intellectuals pursue all or some of the actions stated in conclusions (3) through (7) above? I read *Prophets* as drawing conclusions (4) through (7). The exponents of heterodoxy most effectively reverse the harm wrought by heterodoxy by undertaking all four actions. Those who have been harmed by their heterodox ideas (e.g., women and *dalits*) as well as those who have benefited from their ideas (e.g., fascist elites) must learn of their change of heart and newfound orthodoxy. This requires full and open recantation.

Yet I submit these actions betray the spirit of enlightenment. Consider the requirement that one publicly recant the truth of one’s ideas upon discovering their harm. This is a far cry from the Kantian injunction, “Dare to know”. Kant’s dictum enjoins intellectuals to pursue truth for truth’s sake; to pursue truth regardless of the consequences; to doggedly and daringly pursue truth wherever it takes one, letting the chips fall where they may. Assuming epistemological notions such as justification, evidence, and knowledge are defined in terms of maximizing truth and minimizing error, Kant’s injunction defines intellectual responsibility in terms of ensuring to the best of one’s abilities that one’s cognitive processes are truth-conducive and one’s ideas, epistemologically justified. As Bernard Williams writes,

Truthfulness implies a respect for truth. This relates to...the two basic virtues of truth, which I shall call Accuracy and Sincerity: you do the best you can to acquire true beliefs, and what you say reveals what you believe. (2002, p. 11)

Nanda, however, forsakes accuracy and sincerity for political correctness. She focuses upon the moral consequences of ideas rather than the epistemological or semantic status of ideas, and accordingly amends Kant’s dictum to read: “Dare to know but only so long as your ideas cause no harm”. In short, the No Harm Principle acts as a moral litmus test for ideas.

In an ironic twist, it is precisely the unamended Kantian understanding of enlightenment to which defenders of sociobiology, eugenics, scientific racism, and the Bell Curve standardly appeal when defending their ideas against heterodox critics. Yet if these ideas have the harmful consequences their critics claim, Nanda appears committed to joining the chorus of heterodox critics calling upon these intellectuals to recant their ideas.

In order to preserve her commitment to the unamended Kantian dictum, Nanda might elect conclusion #3. It yields the dictum: “Dare to know, but do not make your findings public”. On this reading, heterodox ideas are acceptable—and hence true?—as long as they remain private and secret, i.e. as long as they remain confined to the cabal of first-world heterodox intellectuals. Intellectuals are enjoined to pursue truth privately in a manner unfettered by moral consequences. Taking responsibility for their ideas is a matter of considering whether to make their ideas public. Conclusion #3 enjoins intellectuals to keep their ideas private if publicizing them would cause moral harm. In the case at hand, Nanda’s dictum would read: “Dare to know but do not communicate that knowledge to third-world masses, intellectuals, and elites if doing so has ill moral consequences in their countries”. As Pietikainen (2004, p. 166) observes, advocating such a restriction is fully compatible with the enlightenment ideal of valuing truth. Kant himself embraced this policy¹¹.

This interpretation intuitively includes as a correlate the further injunction that first-world intellectuals espouse the “Noble Lie” of orthodoxy to third-world elites, intellectuals, and masses in order to deter Hindu fascism and bring about morally desirable consequences. I suspect, however, Nanda would object to the elitism, paternalism, and condescension involved in such a policy.

Nanda qualifies enlightenment in a third significant way. She further amends Kant’s dictum to read: “Dare to know but only so long as your ideas cannot be distorted and misinterpreted in the practical service of morally objectionable ends”. However, this injunction is wildly impracticable and thus violates Kant’s constraint, “‘Ought’ implies ‘can’”. How, after all, can one ensure that one’s ideas will not be grossly misinterpreted and misused in the service of moral wrongdoing? How can one protect one’s ideas against willful and devious misinterpretation, especially at the hands of such devilishly ingenious propagandists as the ideologues of Hindu nationalism? No matter what one says, it can be misquoted, abridged, taken out of context, distorted through simplification, etc. Hindu propagandists, Nanda tells us, even disregard logical consistency when going about their nefarious business (p. 117)! Indeed, no idea whatsoever appears safe from these propagandists, including quantum mechanics (pp. 107–8). But if so, how can heterodox intellectuals be held morally responsible for the harms committed by Hindu fascists?

Even Nanda’s own denunciations of Hindu nationalism may be turned against her in the service of Hindu nationalism. It would not take a very imaginative ideologue to argue that Nanda’s book is proof of the moral and spiritual decay consequent upon the breakdown of traditional Hindu values and gender hierarchy. What, after all, can one expect from such a rebellious woman as Nanda who has denied her heritage, turned her back on India, emigrated to the USA, etc., except irreverent calumny against the

fundamental truths of Hinduism? If Hindu nationalists were to use the publication of *Prophets* in India as justification for further oppression, would Nanda be morally responsible? Ought she recant her ideas? Are heterodox intellectuals any more responsible for the wrongdoings of fascist Hinduism than Nanda under such circumstances?

Finally, it strikes me that any idea whatsoever—no matter how noble or well intentioned, no matter how carefully crafted and qualified—can be willfully misinterpreted in the service of moral wrongdoing, and can therefore cause harm. Enlightenment ideas of reason, freedom, moral progress, science, and universal truth and knowledge have been used to emancipate as well as to oppress, enslave, and, yes, commit genocide. Would Nanda place moral responsibility for these harms upon the shoulders of Enlightenment thinkers such as Descartes, Locke, Kant, Jefferson, Wollstonecraft, and J.S. Mill?

The second key premise of Nanda's argument states, "Ideas have consequences". How shall we understand, and how shall we implement, this claim? How does one actually go about determining the (casual) consequences of one's ideas? What does it mean to say that ideas have casual consequences? *Prophets* neglects to address such questions. Nor does it instruct by example. Nanda claims heterodox ideas aid and abet Hindu fascism but offers little or no specific, concrete evidence supporting such a connection. She advances vague claims about the "snug fit" between heterodoxy and Hindu ideology. Hindu ideologues, we are told, find heterodoxy congenial to their purposes. But we are never given concrete examples of Hindu ideologues invoking the ideas of Sandra Harding, David Turnbull or other "clerks" in the course of their wrongdoings.

Are an idea's consequences a function of its essence or its concrete interpretation and implementation? Do ideas have essences or are there only interpretations? Are there any constraints upon how one's ideas may be interpreted by others and hence upon what may be said to be the moral consequences of one's ideas?

Nanda tells us that ideas lack essences (except, apparently, for the ideas of science, modernity, and enlightenment). She writes:

The essential insight of postmodernism and social constructivism is perfectly valid, viz., entities, ideas, institutions do not come with fixed timeless essences but their meanings change with the context and culturally condoned usage. (p. 263)

But if ideas lack "fixed, timeless essences" and their meanings "change with the context and culturally condoned usage", then assessing the consequences of ideas and assigning moral responsibility for those consequences becomes much dicier than Nanda acknowledges.

For starters, there is no fact of the matter about what ideas mean independently of social context and condoned usage, and no context-independent distinction between (correct) interpretation and misinterpretation of ideas. As a result, one can no longer shield enlightenment ideas (and enlightenment thinkers) and scientific ideas (and scientific thinkers) from their apparent harmful consequences by arguing that such harm results only when the ideas are misinterpreted but not when they are correctly interpreted.

Secondly, if ideas lack "fixed, timeless essences" and their meanings "change with the context and culturally condoned usage", then the meanings of heterodox ideas change

upon their incorporation within the social context and socially condoned usage of Hindu fundamentalism. Heterodox ideas come to mean whatever Hindu fundamentalists define (or redefine) them to mean. But when this happens, we are no longer speaking about the same ideas. Ideas are defined by their meanings, and two ideas are identical if and only if they share identical meaning. But if the meanings of heterodox ideas change within the framework of Hindu nationalism, then these two sets of ideas are no longer identical. Heterodox ideas defined within the context of the first-world academy are not logically equivalent with heterodox ideas redefined within the context of Hindu nationalism. Although the words, phrases, and sentences may remain the same, their meanings do not. But if Hinduized heterodox ideas are not identical with first-world heterodox ideas, how can we reasonably hold first-world heterodox intellectuals morally responsible for the harmful consequences of the Hinduized redefinition of their ideas? How can we hold heterodox intellectuals responsible for the consequences of ideas that are not *their* ideas but someone else's? And how can we require any intellectual to prevent this from happening? Indeed, how could one possibly prevent this from happening?

Thirdly, if ideas lack essences, then we must attribute the consequences of ideas to their specific interpretation and concrete implementation by human beings—not to the ideas themselves. But, if so, how can heterodox intellectuals be held responsible for what happens to their ideas in the hands of Hindu propagandists? After all, it is the actions of Hindu policy-makers and storm troopers that bring about harmful consequences. They are the relevant actors, not first-world intellectuals. If an enlightenment zealot becomes agitated about the decline of Western civilization upon reading *Prophets* and sets about murdering heterodox intellectuals, is Nanda morally responsible?

Fourthly, individual ideas do not have causal consequences in isolation. An important lesson of twentieth-century philosophy of science is the thesis that individual theories do not have (deductive or predictive) empirical consequences in isolation. Rather, they only have consequences in clusters and perhaps only holistically. This lesson applies to Nanda's "Ideas have consequences", rendering it impossible to attribute causal consequences to and hence assign moral responsibility for individual ideas (e.g., metaphysical monism, scepticism, or epistemological relativism) in isolation. It is not monism, for example, which has harmful consequences in the Indian context, but rather monism in conjunction with large chunks of fascist Hindu ideology. But if so, how can we hold first-world intellectuals responsible? Hindu fascists rely upon a host of scientific truths in carrying out their wrongdoings. Are their wrongdoings a consequence of the relevant scientific ideas? Presumably not, but why not?

One final matter. The cogency of *Prophets* is weakened by its deafening silence regarding the consequences of scientific ideas. Yet this matter lies at the heart of "science wars". Can scientific ideas do harm or is this impossible because science is *ex hypothesi* morally progressive or at least morally neutral? If scientific ideas can cause harm, is the scientific method responsible? Are individual scientists? Is there a distinction to be drawn between scientific method, on the one hand, and the activities of individual scientists, on the other? If individual scientists are responsible, are they bound by the No Harm Principle? Must they recant their ideas and perhaps their methods?

When politicians invoke scientific ideas when implementing policies of racism, sexism, eugenics, imperialism, or ethnic cleansing, are the relevant scientific ideas and scientists responsible? Finally, how does Nanda respond to the fact that the vast majority of twentieth-century scientists work for government, military, and corporate institutions that are governed by interests other than truth for its own sake?¹²

The few remarks Nanda makes concerning these issues offer little guidance. She declares science to be universally morally progressive, on the one hand, yet acknowledges the “contradictory, Janus-face of science” (p. 21), on the other. Yet these assertions appear contradictory. If science possesses a “contradictory, Janus-face”, that is, if it has two faces, “good” and “bad”, then it cannot be universally morally progressive. It can be progressive only some of the time. Nanda accuses “clerks” of failing to appreciate the “contradictory, Janus-face of science” (p. 21) as well as making “the mistake of conflating the content and method of science with the political-economic power of the West” (p. 199). Yet she never details how orthodoxy explains the “contradictory, Janus-face of science” or justifies the distinction between content and method of science, on the one hand, and political-economic power, on the other.

A standard orthodox means of addressing this matter invokes the distinctions between context of discovery versus context of justification, form versus content, and use versus abuse. It treats these as *a priori*, conceptually necessary, and in principle distinctions. It claims that although twentieth-century scientists are implicated in government, military, and corporate institutions, this fact concerns the context of discovery, not the context of justification; the content of science, not the form (or method) of science. When scientific ideas have harmful consequences, these are not properly attributed to the context of justification or to scientific method. Like a weapon, science *per se* is a morally neutral instrument, and it may be used for good and abused for bad purposes—hence its “Janus-face”. Harmful consequences are properly attributed to scientists *qua* military advisors, profit-seekers, etc., but not to scientists *qua* scientists.

Unfortunately, this mode of argument does not appear available to Nanda. First, these distinctions have taken a severe drubbing in the twentieth century, and one can no longer casually help oneself to them. If Nanda intends to use them, she needs to justify them. Second, Nanda’s self-avowed naturalism and Deweyan pragmatism reject these as *a priori*, conceptually necessary, in principle distinctions¹³.

True to his (heterodox?) Hegelian roots, Dewey (1948, 1960) argues that the form (method or context of justification) of science interacts dialectically with both the content of science and context of discovery. Form shapes content, content then shapes form, which shapes content, and so on in dialectical, spiral-like fashion. Furthermore, form and content both interact dialectically with context of discovery, i.e. the kinds of problems placed before science and the interests motivating the selection of those problems. Scientists construct scientific method in the course of trying to solve specific problems. The kinds of question they ask and the kinds of answer they find interesting (context of discovery) play a determining role not only in shaping the content of science but also the historical construction, development, and form of scientific method (the context of justification). Dewey’s instrumentalism would have us view

science as an instrument (like a hammer, awl, or computer) whose present design and form reflect the kinds of problems it has been asked to solve and the kinds of interests that motivated its construction. Science has become the kind of instrument it has as a result of the uses (both “uses” and “abuses”) to which it has historically been put. Because of this, Dewey denies there is any principled way of separating its form (method or context of justification) from its historical uses and projects (context of discovery) ¹⁴.

V. Conclusion

Prophets Facing Backward raises extremely important issues concerning the nature, significance, and consequences of enlightenment and science, the nature of intellectual responsibility, and the role of ideas in the world. What’s more, it does so in a time of ascending reactionary modernism not only India but also in the world’s sole super-power: George W. Bush’s Christian fundamentalist USA. Yet writing shortly after Hiroshima and Nagasaki (and long before Bruno Latour), Dewey observed that the West has *never* been modern. Modern science and technology have always been at the behest of hegemonic political and economic elites who deem their values beyond naturalistic scrutiny ¹⁵. These same elites are currently annihilating humankind, poisoning the biosphere, and cooking the planet. For Dewey and many heterodox thinkers, but apparently not Nanda, the way out requires the naturalization of values as well as further democratization of science. And this, for Dewey and many heterodox thinkers, but apparently not Nanda, requires epistemological pluralism rather than epistemological “monoculture” ¹⁶.

Acknowledgments

This paper has benefited from conversations with Julie Greene, Martha Gimenez, Jane Kneller, and Michael Losonsky.

Notes

- [1] All page numbers refer to Nanda (2003).
- [2] Following Jeffrey Herf, Nanda defines “reactionary modernism” as “modernity without liberalism” and the embracing of modern technology but rejection of Enlightenment reason (p. 7).
- [3] I remain unconvinced that the exponents of these views may be uniformly characterized as “anti-science”, “anti-enlightenment”, etc. Certainly not all feminists are. Nanda rides roughshod over the very substantive differences between Sandra Harding, Evelyn Fox Keller, Helen Longino, Elizabeth Anderson, Elizabeth Lloyd, Lynn Hankinson Nelson, Sally Haslanger, and Alison Wylie (to name only a few). She also rides roughshod over the historical development and changes in these feminists’ views.
- [4] I borrow this phrase from Pietikainen (2004) who employs it in a slightly different sense.
- [5] See pp. 6, 18–22, 49–50, 68–69, 80–83, 96, 143–150, 181–186, 267.
- [6] Klee (1997) and Boyd (1984) contain concise statements of scientific realism.
- [7] Nanda’s error here seems to be mistakenly thinking that holism and organicism are *ex hypothesi* hierarchical and hence contrary to liberalism and congenial to fascism.

- [8] Nanda's error here seems to be mistakenly equating a pragmatist, naturalist, or realist attitude towards the ontology of value with re-enchanting and de-secularizing nature, and thus with mysticism, anti-science, etc.
- [9] See Boyd (1984) and Devitt (1984).
- [10] Nanda (p. 263) borrows this expression from Ernest Gellner.
- [11] J. Kivivuori traces this argument from Sartre through Kant, Rousseau, Hobbes, and Machiavelli to Plato (see Pietikainen, 2004, p. 166).
- [12] See, e.g., Weingart (1997), Nader (ed) (1996), Jasonoff, *et al.* (1995).
- [13] See, e.g., Kitcher (1992), Maffie (1993, 1999), Quine (1960), and Railton (1984).
- [14] See also Hook (1927) and Railton (1984). Laudan's (1984) "reticulation model of scientific rationality" nicely reiterates Dewey's thesis. Methods (form), values (goals, interests), and theories (content) are continually assessed and reassessed in terms of one another. The three simultaneously co-evolve in dialogical interaction one another in the historical practice of doing science. They are all hypothetical, fallible, revisable, and corrigible.
- [15] Dewey writes (p. xxxv) in his "Introduction: Reconstruction after Twenty-five Years" to the 1948 republication of *Reconstruction in Philosophy*, "what is called 'modern' is yet unformed, inchoate... The genuinely modern has still yet to be brought into existence".
- [16] I borrow this expression from Shiva (2001).

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