

We Need Progress in Ideas about how to achieve Progress

Steven Pinker: *Enlightenment NOW: the case for reason, science, humanism and progress.* UK, Allen Lane, 2018, 556 pp., £25.

Metascience

Nicholas Maxwell

This is in many ways a terrific book, from which I have learnt much. But it is also deeply flawed. Science and reason are at the heart of the book, but the conceptions that Steven Pinker defends are damagingly irrational. And these defective conceptions of science and reason, as a result of being associated with the Enlightenment Programme for the past two or three centuries, have been responsible, in part, for the genesis of the global problems we now suffer from, and our current inability to deal with them properly. There is not a glimmering of an awareness of any of this in Pinker's book. This flaw in *Enlightenment NOW* is serious indeed.

The book gives a detailed and eloquent account of the multifaceted progress in human wellbeing achieved by the Enlightenment – a combination of science, technology, reason and humanism. Part I begins with a sketch of these basic elements of the Enlightenment, and then discusses three ideas important for progress that the Enlightenment knew nothing of: entropy, evolution and information. We then have a savage criticism of the counter-Enlightenment, from the Romantic movement to anti-science and anti-rationalist movements of today.

Part II begins with a discussion of those who hate progress, or are convinced the very opposite is happening. There is then a detailed account of the fantastic progress in many aspects of human wellbeing that has been achieved since the 18th century Enlightenment: life-expectancy, health, sustenance, wealth, equality, the environment, safety, peace, democracy, human rights, education, IQ, quality of life, happiness. A basic theme of the book is that disaster is newsworthy and so gets lots of attention, whereas progress takes time and lacks newsworthiness, and so gets overlooked.

However, so anxious is Pinker to annihilate the gloom and doom view of things that he sometimes goes to the opposite extreme, and commits the intellectual sin of denying the existence of real problems. He acknowledges that climate change and the threat of nuclear war are problems, but denies the seriousness of mass extinctions, environmental degradation, population growth, inequality, and pollution.

Part III discusses in turn reason, science and humanism. Pinker depicts the widespread flouting of reason, in politics and even in academia; he suggests why this may be so, indicates its damaging consequences, and considers what can be done about it. As for science, despite its magnificent achievements, there is much hostility towards it, from some academics, cultural critics, politicians and members of the public. Pinker proposes some remedies. Finally, there is an exposition and defence of humanism, for Pinker a crucial ingredient of the Enlightenment package.

What, then, is the flaw in *Enlightenment NOW* with which I began, and why is it so serious? A basic idea of the Enlightenment is that we can learn from scientific progress how to achieve social progress towards an enlightened world. In order to put this magnificent idea properly into practice, it is essential to get the following three steps right.

1. The progress-achieving methods of science need to be correctly identified.
2. These methods need to be correctly generalized so that they become fruitfully applicable, potentially, to all worthwhile, problematic endeavours.

3. The generalized methods then need to be got into other social endeavours and institutions besides science.

Pinker would agree so far. He writes: “If we keep track of how our laws and manners are doing, think up ways to improve them, try them out, and keep the ones that make people better off, we can gradually make the world a better place. Science itself creeps forward through this cycle of theory and experiment, and....shows how progress is possible” (11): see also (377-84) and (403).

The 18th century Enlightenment got all three steps wrong, and Pinker gets all three wrong too! First, scientific method: Pinker considers two options, Popper and Bayesianism, and favours the latter, but neither is tenable. Physics persistently accepts *unified* theories only, which means it makes a highly problematic metaphysical assumption to the effect that there is some kind of underlying unity in nature. Precisely because this assumption, in the specific form it is implicitly accepted by physics at any stage of its development, is all too likely to be false, it is essential that it is made explicit within physics, and subjected to sustained critical scrutiny. In order to do this, we need to construe physics, and so natural science, as making a hierarchy of increasingly insubstantial metaphysical assumptions concerning the comprehensibility and knowability of the universe, thus providing a framework within which the most problematic assumptions, low down in the hierarchy, can be improved as scientific knowledge improves: see Maxwell (1974; 1984, chs. 5 and 9; 1998; 2004; 2017). Because the basic aim of science of seeking truth presupposed to be unified or explanatory is profoundly problematic, science needs to represent this aim in the form of a hierarchy of aims to facilitate improvement of aims most problematic, low down in the hierarchy. This hierarchical view is required for scientific rigour, and in order to solve basic philosophical problems about science: induction, theory unity, verisimilitude, and scientific discovery: see Maxwell (1984, ch. 9; 1998; 2004; 2017).

It is this hierarchical conception of scientific method that we need to generalize and apply to all our other worthwhile, problematic social endeavours: government, industry, agriculture, the law, the media, and so on. For it is not just science that has problematic aims; in life too, personal, social and institutional, aims are often profoundly problematic. Insofar as step 3 of the Enlightenment programme is to be undertaken by social inquiry, its basic task is to help humanity build the hierarchical, aims-improving meta-methodology, generalized from science, into social life. Thus social inquiry needs to be developed, not primarily as social *science*, but rather as social *methodology* or social *philosophy*. The primary task is not to improve knowledge of social phenomena; it is rather to help the social world implement progress-achieving *methods* generalized from those of science. Knowledge is needed to facilitate what really matters – *rational social action*: see Maxwell (1984; 2004; 2014).

The Enlightenment failed to get hierarchical, aims-improving methods of science into focus; and it failed even to begin the task of applying these methods, appropriately generalized, to social life. Furthermore, these ancient blunders remain uncorrected down to today. And they are echoed in *Enlightenment NOW*. (Pinker does hold, admittedly, that science assumes that the world is *intelligible* (392) – a step towards the hierarchical conception of science indicated above, but very far from being equivalent to it, and not a viable alternative to it.)

Does it matter? It does. Our current global problems are, in part, the outcome. Modern science and technology have brought us immense benefits, as Pinker stresses. But, as a result of making possible the development of modern industry, agriculture, hygiene, medicine and armaments, they have also led to population growth, habitat destruction, species extinctions, lethal modern war, the threat of nuclear weapons, pollution of earth, sea and air, and climate change. These global problems have come about as undesirable consequences of new social

endeavours we have pursued, made possible by science and technology. (Our problems are by-products of our successes.) We have failed to anticipate these undesirable consequences of our actions, or have failed to heed anticipations when they have been made, and take appropriate action. We have failed, in short, to build into our institutions, social endeavours and culture the hierarchical, aim-improving conception of rationality, indicated above, generalized from the progress-achieving methods of science. Even though it has long been argued that this needs to be done – see Maxwell (1984; 2004; 2014) – Steven Pinker, evidently, knows nothing about it. All conceptions of reason that do not include methods designed to help improve aims will lead us systematically astray (whenever aims have undesirable consequences, as they often do) and thus cannot constitute authentic reason. In his penultimate chapter, Pinker argues we need to bring together science and the humanities, C.P. Snow’s two cultures, Rationalism and Romanticism; but to do this properly it is essential to adopt and implement the rigorous aim-improving conceptions of science and reason that Pinker ignores: see Maxwell (1984, ch. 5; 2014, 12-15 and 30-44). Pinker laments the dangerous irrationality of politics, but is blind to the failures of the traditional Enlightenment which forestall efforts to put matters right. We urgently need progress in our ideas about how to achieve progress. It is this that Pinker fails to provide, taking for granted, as he does, traditional irrational conceptions of science and reason.

References

- Maxwell, N. 1974. [The rationality of scientific discovery](#) . *Philosophy of Science* 41:123-53.
- _____. 1984. [From Knowledge to Wisdom](#) . Oxford: Blackwell 2nd ed Pentire Press, 2007
- _____. 1998. [The Comprehensibility of the Universe](#). Oxford: Clarendon Press.
- _____. 2004. [Is Science Neurotic?](#) London: World Scientific Europe.
- _____. 2014. [How Universities Can Help Create a Wiser World: The Urgent Need for an Academic Revolution](#) . Exeter: Imprint Academic.
- _____. 2017. [Understanding Scientific Progress: Aim-Oriented Empiricism](#) St. Paul: Paragon House.