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Robots construct cars at a Mercedes-Benz plant in Finland.

▶ and weaken the safety nets that (as Pinker identifies) helped to alleviate inequality after the 2008 financial crisis.

Second, he does not give enough weight to the plight of the jobless — and, in the United States, its association with the growing problem of opioid misuse — or the threat that robots and artificial intelligence (AI) pose to jobs. Growing inequality within countries is undermining social cohesion and promoting extremist political views, and this is likely to be compounded by technological change.

If most tasks that are repetitive and do not demand dexterity are automated — which is possible, according to research at the Oxford Martin School — what is the model of future employment in administrative back offices, call centres or manufacturing? Pinker is too sanguine about such immediate threats (although he argues cogently in favour of minimizing the expenditure of intellectual and political capital on remote risks, such as the existential threat posed by AI). He also underestimates the threats that Mike Mariathasan and I set out in our 2015 book *The Butterfly Defect* (Princeton University Press): interconnected systems raise interdependence, complexity and systemic risk. With globalization, as connectivity, incomes and consumption grow, so risks become multidimensional and transnational — witness pandemics, cascading financial crises and cyberattacks. New technologies

turbocharge these risks and give new powers to individuals and small groups.

Pinker looks in some depth at the rise in scepticism about science, in society and in parts of academia such as the humanities. He gives shorter shrift to the erosion of faith in expertise elsewhere, even though this is justified in some notable instances. The financial sector, for example, is home to the biggest and most powerful global expert system, from banks and treasuries to the International Monetary Fund. The 2008 financial crisis highlighted the inadequacy of that system, whose primary mission is financial stability. Similarly, accounting firms have given clean bills of health to corrupt or collapsing enterprises. The denial of evidence is irrational, but it is not necessarily irrational to challenge experts and authorities.

Pinker highlights the importance of ideas in human advances, but claims that “intellectuals hate progress” — a surprising generalization in a case for evidence and reason. And herein lies both the strength and weakness of this book. It provides copious reasons for optimism. It claims to be a scientific, evidence-based account; but that is undermined by its scant attention to the mounting evidence on

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new risks. I share Pinker’s optimism that this could be our best century, in which poverty and many of the challenges humanity has historically confronted are addressed. Yet there is also a real potential for dystopian outcomes as sea levels, strife, temperatures and resistant infections rise, and biodiversity, democratic institutions, social ties, mental health and resource security are eroded. We need to face up to these and other daunting challenges while nurturing the positivity required to tackle them.

*Enlightenment Now* is not a balanced account of the present or future. But for the many overwhelmed by gloom, it is a welcome antidote. ■

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#### CORRECTION

The Books & Arts article ‘Epiphanies of the edgelands’ (*Nature* **554**, 166–167; 2018) incorrectly referred to East Greenland instead of West Greenland.