We can work it out

I don't understand why R.E.M.'s "Finest Worksong" doesn't feature more prominently in protest marches. The song begins with Peter Buck playing a howling guitar riff that sounds very much like an alarm, and the first line has Michael Stipe wailing, "The time to rise has been engaged." That alone should resonate with anyone out on a picket line. At 177 beats per minute,[1] it is also fast enough to get the blood pumping.

I mention that song for two reasons. The first is simply a proposal to make protests a bit more enjoyable for fans of 80s alternative rock. The second is that the third and fourth stanzas of the song provide a pretty good summary of the takeaway message of this book. The lyrics are not particularly complex but fitting. Let me explain why.

Take your instinct by the reins

As I have argued, the Open Society has come under attack from a number of directions, both the left (e.g., no-platforming) and the right (e.g., closed borders). Underlying these attacks, in many cases, are aspects of human psychology that are deeply hardwired and that short-circuit appeals to reason and evidence. Why do people turn to strong, powerful authoritarian leaders during times of fear and uncertainty? It's not because those individuals are more likely to make correct decisions but because those personalities reassure the more basic, animal parts of our brains. Fear is a powerful determinant of human behaviour, even when it isn't rational. If you can make people afraid of immigrants coming to take their jobs, threaten their security, and change their society, you've already done a lot to make people suspicious about the cosmopolitan conception of the Open Society before you make an argument.

In addition, most people need social approval and a sense of connection. Social media companies use this to attract us to their platforms and then use our brain's reward system to make their platforms addictive. More attention from users generates more revenue for social media companies. But that attention also generates, for us, pressure to conform, especially given the scale, severity, and ease with which judgement is delivered via the internet. In these

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cases, our behaviour is shaped by non-rational impulses. Sometimes a person is aware of that happening, for example, when they are on the receiving end of a Two Minutes Hate but sometimes they aren't, for example, when exposure to images over time shifts one's conception of what is normal.

I don't mean to suggest that letting human instincts influence our behaviour is *necessarily* bad. There is a large literature (e.g., Gigerenzer 2008) which looks at how "gut feelings" influence decisions. Sometimes our instincts lead us to make good decisions when we do not have enough information to be able to articulate what, exactly, we are thinking. Humans are phenomenal pattern-recognition devices, and yet, sometimes, we cannot describe the patterns to which we are responding.[2] But because human instincts *can* lead us astray, we need to be aware of that possibility, know when they are activated, and think about what to do when that happens. There are three ways to respond to human instincts: let them rip, try to accommodate them, or try to resist them.

Cases where human instinct helps us to make good decisions are examples of when we should let them rip, as are some cases of romantic love.[3] Sometimes a better response is to accommodate our instinctive reactions. In Part III, I've argued that is the appropriate response in the case of trigger warnings and safe spaces. The controversy surrounding those issues is, I've argued, much ado about nothing.[4] With regards to the issue of no-platforming speakers, the appropriate response is more nuanced: sometimes no-platforming is entirely appropriate, but sometimes we need to *resist* our instinctive response and let the speaker talk.

Another case where we need to resist our instincts was found in Part IV. Heterogeneous communities can prompt a tribal response with inter-group conflict, but this needs to be reined in. Why? Because respect for the freedom of individuals requires respecting peoples' freedom of association. But any time a group forms, we create new conditions of possibility for ingroup-outgroup bias. Those instincts, deeply rooted in human nature, are potential causes of violence and harm and thus should be resisted.

So we see the relevance of the title of this section. One underlying reason the Open Society has been seen as an enemy is that we have been encouraged to let our instincts rip for too long in too many cases. The reasons behind this are many: the profit motive of international tech companies, the venal interests of politicians who benefit from sowing division, media companies who deliberately misrepresent groups to drive the attention economy, and our own human nature, which makes us want to be a valued member of a group doing something we believe in. But those instinctive responses threaten to overwhelm and undermine many of the good aspects of the Open Society which we should value and try to realise. Taking our instinct by the reins puts us humans, as rational animals, back in the driver's seat. That's not to say that we should all strive to be passionless, robotic decision-makers, but we should be aware of when and how we let our passions influence our behaviour, exercising control when it is needed.

That observation provides a transition to the next line of the R.E.M. song and the next stage in the summary of the overarching argument of this book. If our human instincts have been triggered in ways that led many to see the Open Society as an enemy, we need to stop that from happening. That is, assuming you agree with my assessment that the Open Society is worth defending. A defence of the Open Society means doing things differently on a crowded planet home to eight billion people, living unsustainably. What that entails requires collective discussion and thinking about the kind of world we want to create and live in and how to get there from here. And that, I argue, requires thinking about social engineering from a multifaceted, holistic perspective. But before broaching that subject, we must engage with Popper's argument *against* large-scale social engineering, first to see why he thought it was a bad idea and second to see why he was mistaken.

You're better, best, to rearrange

In *The Open Society and Its Enemies*, Karl Popper argued for what he called "piecemeal social engineering" rather than the "Utopian or holistic methods of social engineering" that he saw in the views of Plato, Marx, and others. Here is the starting assumption: all rational action has an end it tries to bring about. If we are to take effective action towards that end, we need to specify a "blueprint" for the kind of society we want to create.[5] If we can't do that, we run the risk of acting irrationally. We might not choose the best means to the end, or we might choose incompatible means over time, thus thwarting our plans.

So what's wrong with Utopian social engineering? Popper argues that it will likely lead to dictatorships or, at the very least, undemocratic institutions. Why? Because "the reconstruction of society is a big undertaking which must cause considerable inconvenience to many and for a considerable span of time" (Popper 1945a, p. 141). Since the Utopian social engineer won't be able to realise the blueprint with people complaining about their house being knocked down or the local mill being closed, they will need considerable power to Make Stuff Happen, forcing people to do things they don't want to do. That's bad.

Furthermore, the amount of time required for the Utopian social engineer to realise the blueprint will be considerable. Consider the recently opened Elizabeth Line in London. That rail line is based on ideas first floated in 1919 (London Transport Museum 2024). The decision to start building the railway received Parliamentary permission in 2008. The work didn't actually begin until 2011. The Elizabeth Line finally opened at the end of 2022. That's the amount of time it took to plan, muster up the political will, and then build a *single 42km railway line* in an advanced economy.[6] Rebuilding society, by comparison, would take *generations*. Therein lies the second problem: we know an authoritarian leader will be required, and control will have to pass from one authoritarian leader to another. What guarantee is there that Great Leader 2 will think Great Leader 1's blueprint was the right one? If they disagree, we'll

potentially end up in a cycle of authoritarian leaders knocking down things built by their predecessors, without really making progress.[7] That's also bad.

A third criticism Popper provides involves the limits of human knowledge:

> What I criticize under the name Utopian engineering recommends the reconstruction of society as a whole, i.e. very sweeping changes whose practical consequences are hard to calculate, owing to our limited experiences. It claims to plan rationally for the whole of society, although we do not possess anything like the factual knowledge which would be necessary to make good such an ambitious claim. We cannot possess such knowledge since we have insufficient practical experience in this kind of planning, and knowledge of facts must be based upon experience. At present, the sociological knowledge necessary for large-scale engineering is simply non-existent. (Popper 1945a, p. 142)

There is an interesting tension in Popper's remarks. He says the Utopian social engineer wrongly claims to have a rational plan for society because "we do not possess" the necessary factual knowledge. But do we not possess that knowledge because such knowledge is *unobtainable* or because we *haven't looked hard enough*? Popper makes what sounds like a modal claim about the impossibility of such knowledge, writing "We *cannot* possess such knowledge" (italics mine). Yet the reason he gives immediately undermines the modal interpretation, for he says that "we have insufficient practical experience in this kind of planning" and all knowledge is based on experience. If knowledge of X is based on experience of Y, and we never seek experience of Y, we cannot have knowledge of X. But the claim that we cannot have knowledge of X is not counterfactually robust: what would happen if we *tried* to seek experience of Y? What if we tried to gain sufficient practical experience in the kind of planning needed for Utopian social engineering? We might find that, much to our surprise, we could in fact possess such knowledge.

If it *were* possible to obtain the relevant knowledge for Utopian social engineering, that would undermine Popper's argument. Instead of showing that Utopian social engineering was impossible, Popper would simply have shown that the success of Utopian social engineering depends on the simultaneous satisfaction of three contingent requirements: (i) Does the society have a sufficiently benevolent and politically skilled leader to keep all competing interests of the parties in check and persuade everyone to make the necessary sacrifices? (ii) Will that level of benevolence and skill be preserved as power transitions from one generation to the next, and will successive generations of leaders remain committed to the same plan? (iii) Do we know enough about what society wants and needs, both now and in the future, to be able to make appropriate plans for the present and future needs of society?

Furthermore, it is really the *third* contingent requirement – the epistemological one – which does the lion's share of the work in driving a sceptical

conclusion. All societies need to worry about requirements (i) and (ii). All societies engage in projects that inconvenience some and benefit others. The competing interests between groups in society require politically skilled leaders who strike compromises and identify solutions to problems that benefit enough people, enough of the time, to command assent from most parties. Few societies have a large enough army to force everyone to comply with a policy if all the citizens resisted. And no democratic society could survive if the leaders tried continuously to force through policies that all the citizens fiercely disagreed with.

The greatest problem, in practice, for a Utopian social engineer is the epistemological problem. I suggest we have good reason to believe that Popper's suspicion was correct – that we *cannot* possess the relevant knowledge – even if the reason he gave was faulty. The reason we cannot have such knowledge is because a number of people have tried, repeatedly, to obtain the practical experience needed, and failed. Perhaps the greatest example of such a natural experiment is that carried out by the Soviet Union, which attempted to create a centralised, planned economy at an incredible level of prescriptive detail.

Some elements of the Soviet experience in centralised planning can be found in episode one of the BBC documentary series, *Pandora's Box*, which aired in 1992. You get a sense of the underlying ideology less than two minutes into the programme. A middle-aged bureaucrat, filmed in the grainy, beige-tinted footage from another era, looks out of a window at a crowd on the street below and says: "Each of those people down there is unique, yet each is part of some cluster or group in society. And each group is governed by a set of iron laws, as unchanging as the laws of nature, physics and the mechanical sciences." By trying to identify and wield those "iron laws", the Soviet-era social planners sought to make Utopian social engineering a reality.[8]

Despite enormous efforts, the Soviet project didn't turn out the way people had hoped. This is partially due to political paranoia on behalf of the leaders, whose decisions impaired the country's ability to develop.[9] It is also partially due to the Soviet social planners attempting to do things that are better left to decentralised markets, where distributed local knowledge and the incentive generated by competition yield a better distributive outcome. The first issue – problems caused by political paranoia – nicely illustrates Popper's concern about how political power could be wielded by the Utopian social engineers.[10] The second issue – the epistemic problem – provides some evidence that Popper's claim, "we cannot possess such knowledge", is counterfactually robust.[11]

There are two humorous examples in the *Pandora's Box* series that illustrate some of the epistemic problems that the Soviet economy encountered. The first example illustrates one difficulty with a fully planned economy: you need to specify under what conditions deviation from the plan is permissible. When each part of the plan depends on other parts of the plan, sometimes things end up being done for no real reason. Over time, the Soviet Union became increasingly rigid in its adherence to the plan. KGB agents were even instructed each

year on how many arrests they should make and to which prisons those arrested should be sent.[12] Funeral directors were told that, based on theoretical predictions about how many people die in a given year, they should manufacture a certain number of coffins. But the manufacturing of coffins wasn't driven by demand. If it turned out that in a given year only 800 people in a certain area died, but the plan called for 1,000 coffins to be manufactured, the extra 200 had to be made anyway.[13] Choosing when to deviate from the plan would require local judgement because the contingencies requiring deviation could not be anticipated in advance by central planning. Given that, redeployment of the freed-up resources would also require local judgement because it would take too much time to communicate the differential demand back to central planning and then calculate where to put the freed-up resources. The second example highlights how when a top-down *plan* determines economic growth rather than bottom-up *demand*, absurdities can result from the misalignment of incentives. In 1957, Nikita Khrushchev lashed out at the planning organisations for using the wrong metrics to determine whether the plan succeeded. Why, he asked, were sofas getting bigger and chandeliers heavier, to the point where the chandeliers posed a danger of ripping out of their ceiling fixtures and falling to the floor? Because of the metrics used to evaluate the plan: the more raw materials that were used, the more successful the plan was judged to be.[14] The easiest way to use more raw materials was for the workers to make everything bigger. Khrushchev's proposed solution was to attach prices to things. The prices, though, were to be determined by central planning. I'll let you guess how well that turned out.

The alternative approach to Utopian social engineering is Popper's preferred approach: *piecemeal social engineering*. Because planning the perfect society is impossible, "the piecemeal engineer will, accordingly, adopt the method of searching for, and fighting against, the greatest and most urgent evils of society, rather than searching for, and fighting for, its greatest ultimate good" (Popper 1945a, p. 139). Instead of the *master* blueprint required by the Utopian social engineer, the piecemeal social engineer will need only *modest* blueprints: "blueprints for single institutions, for health and unemployment insurance, for instance, or arbitration courts, or anti-depression budgeting or educational reform" (Popper 1945a, p. 140). Attempts to realise these modest blueprints are much less risky. If we make a mistake, we won't have ripped up the entire social fabric. And if we agree on what the "most urgent evils" are, we can make progress democratically.

Piecemeal social engineering works, according to Popper, by engaging in myriad small-scale social experiments, learning from what works and what does not. As he noted, we engage in small-scale social experiments all the time. For example, when new forms of insurance are sold or new taxes introduced (Popper 1945a, p. 143). According to Popper, these experiments help us learn about what works by a trial-and-error process. Piecemeal social engineering is the rational attitude given the limits of human understanding and knowledge. Fundamentally, the real problem with Utopian social engineering is that "*it*

is not reasonable to assume that a complete reconstruction of our social world would lead at once to a workable system" (Popper 1945a, p. 147). Those italics were in the original text.

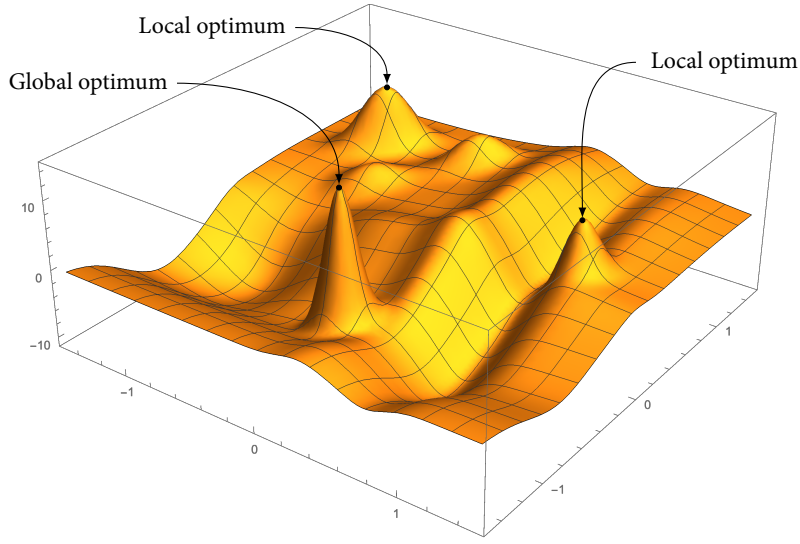
At this point, I hope the above reconstruction of Popper's argument makes a pretty persuasive case for piecemeal social engineering. What I want to do now is persuade you that Popper's argument for piecemeal social engineering is, in fact, mistaken on the grounds that it presents us with a false dichotomy and that there is a third way.

The false dichotomy becomes apparent once we see that according to Popper, the only alternative to piecemeal social engineering is attempting a "complete reconstruction of our social world." That is, we can *either* tackle individual problems *or* we can attempt a complete reconstruction of our social world. But that sharp either-or dichotomy excludes the possibility of identifying a *set of intertwined problems*, where attempts to solve one problem from the set creates externalities (both positive and negative) for the other problems in the set. When faced with a set of intertwined problems, it would be entirely rational for a social engineer to think about the set as a *whole*, exploring various ways of rejigging the package in order to find an optimal solution.[15] Let us call this approach *multifaceted social engineering*.

Once we identify multifaceted social engineering as a possibility, we see that many of the problems the world faces have that character. One of the motivations for writing this book was that the value inversion of the four different senses of the Open Society are interconnected in ways that suggest we need to think about how to tackle those problems *at the same time*. Tackling multifaceted problems of social engineering is not the same thing as attempting to completely reconstruct the social world: it only recognises that we live in a complex world where not all problems are decomposable into independent sub-problems, solvable in isolation.[16] It requires adopting a new perspective for thinking about social problems and looking for connections between issues. And that requires that we think globally – or, to use one of Popper's most disliked adjectives – *holistically*. Yet it is important to stress that holistic, multifaceted social engineering is not the same thing as a complete reconstruction of our social world. It's more like surveying all the ingredients in a supermarket in order to select a subset for making a tasty dish.

A useful metaphor for the benefits of multifaceted social engineering, and why it is better than piecemeal social engineering, can be found in the idea of a *fitness landscape* from evolutionary theory. In 1932, the evolutionary biologist Sewall Wright proposed thinking of the set of all possible genotypes for a given species, as an abstract space where each "point" in the space represented one possible genotype and the "height" at that point was the fitness of the genotype. Since different genotypes have different fitnesses, the "landscape" will resemble a mountain range.[17] A genotype with a greater fitness than others that are close[18] to it will be a peak, and a genotype which is less fit than others close to it will be a valley. The "survival of the fittest" process generated by natural selection can be thought of as random efforts to climb the hill towards a peak.

Figure 29.1: A slightly rugged fitness landscape



Source: author.
Notes: the x- and y-axes represent possible values of two different genes, traits (under the societal interpretation), policies. Particular values of x and y then yield a concrete realisation of the organism (or society), with a given "fitness", represented as height on the z-axis. (Not all local optimums are labelled.)

One of the conceptual benefits of thinking about evolution and social engineering in terms of fitness landscapes is that it explains why both biological systems and societies get stuck at suboptimal solutions. Finding an improvement on an existing specification, whether that is a biological structure like a wing or a social structure like a welfare scheme, is hard. In biological organisms, there are many genetic interdependencies that exist; sometimes, making an adjustment that improves the system in one respect may harm it in another respect.[19] The same thing is true of societies: changing policy in one area can have multiple knock-on effects that influence people's behaviour in other areas. Sometimes a policy that sounds reasonable can have the opposite effect when embedded in the wider social context, given how people will respond.

Now let us ask whether piecemeal social engineering suffices for constructing the kind of society we want. Presented with the current state of society, piecemeal social engineering, narrowly construed, leads to questions of the following kind: with respect to *this particular problem of interest*, what is the best policy to adopt? (Or, failing that, what is a reasonable policy to adopt?) A more generous interpretation of piecemeal social engineering, one which may go beyond Popper's understanding of the term, asks: given the *current*

state of society, what modest readjustment of current policies would lead to an improvement? If we think of social engineering as manoeuvres on fitness landscapes, we can see that the best one could hope for usually involves finding a *local* optimum.

Under the more generous interpretation of piecemeal social engineering, we are considering modifications along *both* axes at the same time. That corresponds to policy decisions that tweak several issues at once but in a conservative way that ensures a net overall improvement. In terms of the fitness landscape, it means that given the current state of society, the piecemeal social engineer would move in the direction that has the steepest upward slope. (In the language of fitness landscapes, this is referred to as *following the gradient*.) While that sounds like an improvement over the narrowly construed understanding of piecemeal social engineering, because we are making improvements without people having to suffer in the short term, it doesn't yield significantly better results. Most of the time, such adjustments end up converging to a local optimum which is far below the global optimum.

And so we see how multifaceted social engineering provides a net improvement over Popper's piecemeal approach. Targeting a set of intertwined problems recognises the complex, interconnected nature of society and, as such, does not suggest that we should expect steady, incremental improvement as we make progress towards our goal. The attitude of multifaceted social engineering recognises that there may be periods of decreasing "fitness" along the way, but this is warranted by the expected benefit at the end. More importantly, targeting multiple problems at the same time means that we are not restricting ourselves to a lexicographical maximisation process, where we maximise first along one dimension and then along another. Trying to solve multiple problems at the same time amounts to moving across the fitness landscape in a direction that may not appear rational when each problem is considered in isolation. And that method of moving across the fitness landscape, which isn't restricted to simply following the gradient, increases the chances of us finding the global optimum.

Examples of multifaceted social engineering can be found in the past. They are often associated with periods of great social upheaval, where so much disruption and disorder has occurred that it becomes possible for politicians to consider change on a scale that would not normally be feasible because of the protectionist instincts of vested interests. In the US, Franklin D. Roosevelt's New Deal, enacted in the middle of the Great Depression, is one. In the UK, the social reform enacted by Clement Attlee's government after the destruction of World War II is another. Both cases involved a vision of the kind of society they wished to create, but not in the Utopian social engineering sense where every detail was planned. Neither Roosevelt nor Attlee attempted to reconstruct all of society at once (although Attlee's nationalisation of utilities and major industries went a good deal further than what Roosevelt attempted). The key is to construct an agenda that strikes the right balance of ambition and

feasibility. It must be ambitious enough to move to a part of the fitness landscape that would be inaccessible if we only considered individual, independent policy improvements yet remaining feasible enough to be accomplished in a time and at a cost that people are willing to bear.

Multifaceted social engineering differs in both aim and intent from the thesis described by Naomi Klein in *The Shock Doctrine*. In that book, Klein argues that crises and natural disasters provide cover for opportunistic neoliberal free marketeers to push through broad, sweeping (and generally unwanted) changes at a time when the general population is too distracted to resist. The examples given of multifaceted social engineering in this paragraph *do* involve rebuilding society after periods of extended crisis, but that is not because politicians are forcing unwanted changes on a population. Instead, it is that the crisis has changed the cost-benefit calculation of the proposed changes for the population to such an extent that they are now willing to back the proposal. There was, after all, enthusiastic support for the New Deal and the Attlee government's social reform. Multifaceted social engineering does not require a crisis to be successful, but it will be more difficult in good times to persuade people that sweeping change is needed.

And so we arrive back at the second line of the R.E.M. stanza: "You're better, best, to rearrange." In this section, I have concentrated on what kind of *rearranging* we are talking about. We have seen the need for holistic, multifaceted social engineering if we want to increase the chance of realising transformative change that will move society towards a global optimum. Yet that leaves the following question unanswered: which aspects of society need to be targeted by the multifaceted social engineer in order to undo the value inversion that has led to the Open Society being seen as an enemy? It is that topic to which I now turn.

What we want and what we need

In 1943, Abraham Maslow published a theory of human motivation that eventually became known as "Maslow's hierarchy of needs". It has the dubious distinction of being a widely known psychological theory, generally believed to be true, and taught in many introductory courses despite having limited evidential support. A little more than 30 years after Maslow's theory was introduced, Wahba and Bridwell (1976) began their article reviewing the evidence for it with the wry remark, "Maslow's need hierarchy theory (1943, 1954, 1970) presents the student of work motivation with an interesting paradox: The theory is widely accepted, but there is little research evidence to support it." Maslow was aware of the lack of evidence at the time he introduced his theory, noting that there was a "very serious lack of sound data in this area" (Maslow 1943, p. 371). However, he thought that the lack of data was due to the lack of a good *theory*, since you often need to have a theory to test before you go about collecting data.

One of the reasons Maslow's theory is so widely accepted, despite the limited empirical support, is that it seems so eminently *sensible*. According to Maslow, human needs are hierarchically ordered, with later needs not usually appearing until earlier needs are satisfied: "the appearance of one need usually rests on the prior satisfaction of another, more pre-potent need." What are the needs? Maslow begins with the "physiological" needs, really basic ones that are required to maintain the normal state of the bloodstream, like food and oxygen. The next level concerns the "safety needs", like a stable home environment and familiar stimuli for children, and a job, some savings, and insurance for adults.[20] After that are the "love needs": love, affection, and belongingness.[21] The "esteem needs" appear next. Esteem, here, not only means self-esteem but also the esteem of others, like respect from your peers. The final level of the hierarchy is the "need for self-actualization", a slightly hippy notion Maslow uses to capture the idea that, once all the other needs are met, a person must do what they are meant to do (italics in the original):

> Even if all these needs [the lower ones in the hierarchy] are satisfied, we may still often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for. A musician must make music, an artist must paint, a poet must write if he is to be ultimately happy. What a man *can* be, he *must* be. (Maslow 1943, p. 382)

I don't think that Maslow's characterisation of self-actualisation is correct, for reasons covered in the discussion of existentialism in Chapter 4. Not only is there no human essence but there are simply *too many* things a person *could* be. But set those concerns aside and interpret "self-actualisation" according to your preferred theory.

Despite the sensible nature of the theory, the evidence for Maslow's hierarchy is mixed. Part of the reason for this is that it is a difficult theory to *test*. How do you operationalize the various categories of need? That's relatively unproblematic for the first level, as it is based on physiological matters, but as you move up the hierarchy it becomes increasingly challenging, especially when you start trying to measure self-actualisation. How do you find a metric that captures both Elon Musk and the Dude?[22] Second, even assuming a reasonable operationalisation of the categories, how could you conduct controlled experiments without running foul of an Ethics Board? You can't really put someone's safety into jeopardy and then ask how their study of Proust is going.

Nevertheless, people have tried. In their comprehensive review of the empirical literature at the time, Wahba and Bridwell found limited support for even the *existence* of Maslow's five basic categories of needs. Only one out of six studies found five categories of needs (the others found three or four), and that study only agreed with Maslow's proposed rank-ordering on three of the

categories. Of those studies which investigated Maslow's claim that the appearance of a need further up in the hierarchy would only appear after lower needs were satisfied, little support was found. In their considered judgement, Wahba and Bridwell (1976, p. 233) conclude that "[s]ome of Maslow's propositions are totaly [sic] rejected, while others receive mixed and questionable support at best." That pattern continued with later research. Betz (1984) found "modest support" for Maslow's theory but with some qualifications.[23] Haymes and Green (1982) also find some support for Maslow's theory, but their study narrowly focuses on the categories of *safety* and *belongingness* in the development of children. A later paper, which examines the proposition that greater need deprivation leads to greater domination in the search for satisfying that need, concludes that "it is too soon to conclude that the proposition (or Maslow's theory in general) has been refuted by research" (Wicker *et al.* 1993, p. 131).

It appears that, 80 years after Maslow's original publication, the verdict regarding its refutation is best stated using the unusual third category available in Scottish criminal trials: not proven.[24] Regardless, for my purposes, I can assume that even if Maslow's hierarchy of needs is not precisely correct, an alternative theory with a number of structural similarities is likely to be. For example, Kenrick *et al.* (2010) develop an updated hierarchy which retains the basic pyramid structure of Maslow's theory, but with a number of modifications based on recent work in evolutionary biology, anthropology, and psychology. One of their more radical proposals is to remove *self-actualisation* as a separate need, subsuming it into other categories in their hierarchy.[25] But perhaps the most important revision to Maslow's theory – made by Kenrick *et al.* and others – involves rejecting the notion that needs are *strictly* hierarchically ordered. Needs are *generally* hierarchically ordered but not exclusively so.[26] We do need oxygen, food, clothing, and security, but even if we don't have security, we can still satisfy social needs and respect needs. People in a war zone can experience a sense of belonging, camaraderie, respect earned from others, and indeed even aspects of self-actualisation if they truly believe the values they are fighting for are values worth dying for. In any event, in what follows, I shall often refer to Maslow's hierarchy *as if* that theory were correct. This is purely for convenience since Maslow's hierarchy is so widely known. Nothing that I say below will depend critically on this convention.

It is important to talk about needs because a need is more than something we want very much. A *need* is something which, if not satisfied, interferes with our ability to function as a human being. But not all ways of satisfying needs are equal. With respect to a number of physical needs, such as food and water, there are ways of satisfying them which are more or less beneficial for the person. The need for food can be satisfied by a healthy salad or by junk food. Which one of the two we choose depends on what we *want* at the time, and what we want is susceptible to social influence. Our need for water can be satisfied by, well, *water*, or by carbonated sugary beverages containing caffeine. Which of the two we choose depends upon what we want. Much effort was spent making us want fancy bottled water as well as sugar-rich beverages of

negligible health benefits, both of which generate high profits for the manufacturers. Clothing needs can be satisfied by manufacturers employing sweatshop labour using environmentally damaging materials to make products designed to be worn only a few times because they either fall apart or fall out of fashion.

The way in which a *need* is satisfied depends on the *wants* of the person, and the wants of a person are sensitive to social practices and the deliberate construction of wants by companies, organisations, and other individuals. And the construction of wants matters because of the power that grants a third party capable of fulfilling the want over the person who had that want inculcated. Given the multiple ways in which a real human *need* can be satisfied through wants, we must realise that there are ways of satisfying individual human needs that are better or worse for the individual,[27] or other people, or society as a whole.

The iconoclastic economist John Kenneth Galbraith talked about the process of want construction and want fulfilment in his essay "The Dependence Effect" from his 1958 book, *The Affluent Society*. Galbraith distinguished between those wants that originate within the person themselves, and those that are contrived by something outside the person. Much of what we want doesn't fit neatly into one or the other category, but there are fun examples of purely contrived wants. In 1975, the advertising executive Gary Dahl started selling a novelty item intended to be the lowest-maintenance pet ever: the pet rock. Dahl wrote up an instruction booklet titled "The Care and Training of Your Pet Rock" and included copies of it in a specially constructed cardboard box filled with straw, a rock, and some "breathing" holes. Dahl sold enough pet rocks to become a millionaire.

Although the pet rock illustrates a purely contrived want, Galbraith's concern had a slightly different focus – that the *process* of satisfying the want itself *creates* more wants of that type. The pet rock doesn't illustrate this further feature of Galbraith's concern, because the very process of satisfying the contrived want for pet rocks soon caused the market for pet rocks to collapse. It turns out that the market for novelty items often closes down when the item ceases to be a novelty.[28] But for other products like fast fashion, the process of satisfying the want creates more wants of that type. This is the case that worried Galbraith because it is far from clear that such want-fulfilment does anything to better the human condition. Instead, it creates a cycle of want-creation and want-fulfilment. Galbraith describes the situation as follows: "the individual who urges the importance of production to satisfy these wants is precisely in the position of the onlooker who applauds the efforts of the squirrel to keep abreast of the wheel that is propelled by his own efforts" (Galbraith 2001, p. 33).

Galbraith's primary focus was on wants satisfied by material items. In his essay, his examples include silk shirts, orange squash, breakfast cereals, and detergents. But the cycle of want-creation and want-fulfilment can *also* hold for wants satisfied by *immaterial* items. Think about wants related to those social needs featuring at higher levels in Maslow's hierarchy: a sense of belongingness, friendship, esteem, respect from your peers, and perhaps even

self-actualisation if we understand that as pursuing a project which one sees as mattering deeply to oneself. We *need* to have a sense of belonging, and we *need* to be respected by our friends and peers. But how do people go about attempting to fulfil those needs? It's worth thinking about that question because *a sense of belonging* can be fulfilled in many different ways; given that, what particular *wants* do people attempt to satisfy?

Now think about the multiple means companies and organisations in contemporary society create wants and then provide ways of satisfying those wants on the pretence of fulfilling fundamental human needs. Consider the need for esteem and respect from our peers. Social media provides peculiar and artificial operationalisations of those concepts, beginning with what counts as a *peer*. How many "friends" do you have whom you have never, or only rarely, met in real life? Now turn to measures of esteem and respect: likes, re-tweets, and posts going viral (in a good way) provide the dopamine hit that is interpreted as esteem and respect. They are both fleeting (how long does the warm glow of a "like" last?) and yet capable of scaling up far beyond what we would experience in real life, such as when a post is shared or liked or re-tweeted thousands of times. When the need for esteem is met by satisfying a want for multiple likes or re-tweets, ask yourself: is that like when the need for food is satisfied by a healthy meal, or is it like a junk food sugar rush? I suggest the latter. If I am correct, it is worth considering how many of our mental needs – those appearing in higher levels of Maslow's hierarchy – we attempt to fulfil by satisfying *created* wants, wants which only certain companies can satisfy (because they created them), which are less-than-ideal ways of meeting our mental needs.

As a society we are familiar with the fact that attempts to create certain classes of wants in people through advertising and marketing need to be regulated. That's one reason why, in the UK, television advertisements for junk food are banned before a certain time of the evening. It's also why cigarette manufacturers are banned from advertising on television, in magazines, or in public spaces. But we are less attuned to thinking about how those emotional, cognitive, and social needs appearing at higher levels of Maslow's hierarchy can be targeted by the creation of wants – even though advertisers have been trying to do this for ages, too. But a crucial difference exists between how wants were created in the past and how wants are created in the present. In the past, advertising would appeal to our need to belong, to be respected, to be loved, to attain self-actualisation, and so on, in order to sell *material products* or a *service*. But what we find in contemporary society is the construction of wants which provide entirely new conceptualisations of how we understand the very *processes* of belonging, of being respected, of being esteemed, etc. And with these new processes come entirely different ways of measuring whether we do, in fact, belong or whether we are, in fact, being esteemed. To return to my previous question: are these new conceptualisations of how to satisfy our emotional, cognitive, and social needs more like a healthy meal when hungry, or are they more like junk food? Would you rather have 500 likes on social

media, or five colleagues whom you know well independently thank you for doing a good job?

That question provides a transition to the next line of the R.E.M. song and the next stage in the summary about how the Open Society has come to be seen as an enemy by so many people. There is, I argue, a broad set of needs which are common to all people, but we as a society have become confused as to how to best meet those needs. Many wants that people have are merely wants that have been created primarily to advance other ends and provide, at best, a substandard way of meeting those needs. Sometimes those wants have been created to advance the profits of a company. Sometimes those wants have been created to advance the political aims of an organisation, institution, or person. And sometimes those wants have been created by us as a way of responding to a world that seems overwhelming and threatening. It is this confusion of wants and needs that has led to the Open Society being seen as an enemy. Correcting this incorrect perception requires (i) understanding the nature of this confusion and (ii) seeing how multifaceted social engineering is necessary to correct the problem. Let us now turn to what has happened.

Has been confused, been confused

Let us proceed through the various parts of this book, in order. We began with the cosmopolitan conception of the Open Society. People have the following economic and social needs: job security, a stable economy, a place to live, and a sense of belonging where they live. In a civilised society people also need, I suggest, the moral peace that comes with trying to rectify as many injustices of the natural lottery as possible. Many populist politicians argue that the way to meet those economic and social needs is by closing borders and restricting immigration to net-zero policies: one-out, one-in. Many politicians also seem to accept that our moral obligations, if they do not actually cease to exist for non-citizens beyond our borders, are at least sufficiently attenuated so as to not prevent the implementation of closed-borders policies. Those are the wants that are created, and they are the wants which cause the cosmopolitan conception of the Open Society to be seen as a threat.

Yet, I have argued that it is mistaken to think that satisfying the want of a closed border is the best way of meeting our economic, social, and moral needs. Open borders – at least borders much more open than we presently allow – have the potential to generate great economic growth. The economic and population growth associated with migration will create the demand for more jobs and yield windfalls for government through additional tax revenue. If properly managed,[29] the growing pie generated by an open-border policy will meet our economic needs better than a closed-border policy. And, as I argued, the belief that keeping a sense of belonging and pride of place (the Nowhere, Man objection) requires closed borders is also exaggerated. Finally, the moral need to correct the natural injustice resulting from the birthright

lottery is perhaps the most powerful argument for opening borders, even if it is the least likely to induce action.

On the other hand, populist politicians create wants for closed borders because those wants resonate with peoples' fears, tapping into misunderstandings of how economies work. People without economic training find the "lump of labour fallacy" persuasive, and it's more politically expedient for politicians to utilise that fallacy for political gain than to correct peoples' understanding of economics. Insisting that the border must be closed requires more powers for authorities, with additional resources for border control, enforcement, and policing. If borders were open, the resulting economic benefits would be generated and, to a large extent, distributed through the operation of the decentralised free market. It would be difficult for any single politician to point to an outcome and take credit for having achieved that. In contrast, if borders are closed, a populist politician can easily take credit for the increased policing and enforcement.

And so we see how the created wants for closed borders and restricted immigration lead to the cosmopolitan conception of the Open Society being seen as an enemy. But, I suggest, what we want and what we need have, in this case, been confused: our needs are better met by satisfying different wants. When we step back, we can see that the wants that undermine the Open Society have been inculcated in order to serve an end that is not for the betterment of humanity. Open borders respect individual freedom and create economic and social opportunities for all. Closed borders give greater power to authorities and create the need for additional security apparatus; whereas Eisenhower warned against the power of the military-industrial complex, calls for closed borders are yet another way for the *security*-industrial complex to exercise more power.

Let us turn now to the conception of the Open Society as transparency. Of the many things people require, transparency features in a number of political and economic needs. The political needs which transparency helps with are many: to provide oversight of governmental processes, both local and national, to ward against cronyism and corruption; to help spot unjust or immoral policies or practices; and to help ensure that decision-making is evidence-based, properly informed, and based on the appropriate mix of democratic and expert judgement. The economic needs which transparency aids in providing are similar in structure: to provide oversight of business processes so as to ensure compliance with laws and regulations; to help spot unjust or immoral policies or practices, and to try to identify those practices which are unjust or immoral but which do not yet fall under current laws or regulations; lastly, transparency helps to ensure pay equity, so that people with the same abilities who do the same job get the same pay, regardless of their sex, gender, ethnicity, religion, and so on.

Unlike the case with the cosmopolitan conception of the Open Society, in this case I think that, with respect to the political and economic needs mentioned above, the wants of people generally align with those needs. Few people would say, at least openly, that they *want* government to be more corrupt

and prone to cronyism. People have been campaigning and working to realise transparency in government and business practices for decades. Yet the situation in which we find ourselves is one where transparency of government, businesses, and other organisations still falls short of the ideal, but the activities of our *private lives* are verging on being maximally transparent to a handful of organisations. Although laws exist to provide some protection against the misuse of all of this information, we live in a world where we are little more than one software update away from a surveillance society whose reach would exceed the Orwellian dystopia of *1984*. Here, the threat posed by the transparent conception of the Open Society is very real and very nearly realised.

With respect to the transparent conception of the Open Society, the confusion between wants and needs, which has brought about this situation, is as follows: we have been taught to *want* a lot of conveniences which we don't really *need*. The smartphone was an incredible invention that has transformed society. Although it has created entirely new markets for apps and services, it has exacerbated old problems, and created new ones. Many of us *like* the convenience provided by a cashless economy. Many of us *want* the security provided by CCTV or video doorbells. (The list of goods and services can easily be expanded.) As Galbraith observed, the production of goods and services which satisfy those wants continually generates more wants for more goods and services. However, our desire for these goods and services has not been accompanied by a comparable desire to protect our privacy and to prevent the potential misuse of the information collected by these devices. Although we might express a belief in the importance of a right to privacy and restricted access to our personal information, our *revealed preferences* as consumers speak to a very different set of preferences.

This is a dangerous situation, because free and democratic societies are easily undermined by a surveillance state. Spy agencies like the KGB and its successor organisations, the FSB and the SVR, routinely collected *kompromat* on individuals in order to control them. The surveillance possibilities latently present in modern technology would make it very easy to collect *kompromat* on anybody. In addition, given the number of laws on the books which are seldom enforced but still exist, widespread surveillance would make selective policing of specific individuals very easy to achieve. Or, perhaps more chillingly, they could simply erase your digital existence, leaving you to navigate the contemporary world without any of the conveniences we have integrated deeply into our lives.[30] Individual freedoms have always relied on state benevolence, but we have created a society where the potential violations of individual freedom by an authoritarian state are virtually limitless. *This* realisation of the transparent conception of the Open Society is, I believe, rightly seen as an enemy. However, it is also a very different conception of that version of the Open Society than what we had originally intended. Here, the confusion of wants and needs has resulted in substituting a nefarious version of the transparent conception of the Open Society in place of one which would be truly valuable.

Now let us turn to the Enlightenment conception of the Open Society, involving the free exchange of ideas and the willingness to keep an open mind. This sense of the Open Society relates to needs found in the higher levels of Maslow's hierarchy, which are principally related to self-actualisation but also involve the ability to exercise one's autonomy. Having a correct understanding of the world and an awareness of the diversity of thought that exists helps one to make the most of their individual abilities and freedoms. The Enlightenment conception of the Open Society has been seen by some as an enemy when they seek to realise misguided wants related to another level of Maslow's hierarchy – the safety needs. A misguided effort to secure one's personal safety (based on, I suggest, an incorrect understanding of what "safety" involves) can lead one to block ideas that question or challenge one's beliefs or values.

Fundamentally, the confusion between what we want and what we need at play here is the following: there are ways of attempting to meet the safety needs of Maslow's hierarchy that are compatible with the need for self-actualisation, and there are ways of attempting to meet the safety needs which are not. If we never come into contact with any ideas which challenge our most deeply held beliefs and values, in a sense we will be "safe" because we will never have the disturbing, unsettling experience of realising that we may have been wrong all this time. If that disturbing, unsettling experience is defined as a *harm*, and what it means to be safe is to not be at risk of being harmed, then meeting the safety needs would preclude being exposed to any such challenging ideas. That would preclude our ability to meet the need for self-actualisation unless we accidentally happen to have all of the right beliefs, given our values, from the very beginning. In short, the only way to achieve self-actualisation, given that extreme construal of what it means to meet the safety needs, would be if we *start out* in a state of self-actualisation at the beginning.

Given a correct understanding of what it means to meet the safety needs, it becomes clear that the Enlightenment conception of the Open Society is not an enemy. The free exchange of ideas is necessary for any diverse, civilised society that seeks to develop, grow, and get better – provided that, of course, the exchange of ideas is done in the right way. But it is important to note that this defence of the free exchange of ideas is not the same thing as a defence of unrestricted freedom of speech. As I argued, central to the concept of the free exchange of ideas is that people are acting in good faith, with the intention of arriving at an improved understanding of the issues based on argument and reason. Assuming that people act in good faith, the free exchange of ideas, while serving to make some people feel uncomfortable some of the time, is nevertheless compatible with meeting both the safety needs and the need for self-actualisation.

Finally, let us turn to the communitarian conception of the Open Society. This conception, as you will recall from Part IV, envisions, as the ideal, a diverse, heterogeneous community of many different types of people living together in peaceful coexistence. A society like this would seem to be one natural

way of meeting the social needs of Maslow's hierarchy. Yet polarisation, division, and inter-group strife are so present in so many Western democracies that it seems as though the West is intent on tearing itself apart. Why is this the case?

The social need to *belong* is what underlies most of our choices to associate with people "like us", where the relevant dimension of being "like us" can vary over time and context. The sense of belonging that we feel when part of a group depends on how the group identity is formed – and there are several ways in which a group's identity can be formed. Some methods of forming a group identity are positive and healthy, and some methods are negative, drawing upon antisocial tendencies. Positive formation of group identity draws attention to the commonalities shared amongst the members, encouraging relations of friendship. It has members who work together through cooperation and reciprocity. And members are involved in a joint project where all need to contribute for the project to succeed. The negative formation of group identity defines it as opposition to an Other, rejecting those who are not members. Whereas the positive methods of forming a group identity call attention to similarities between members or acts of cooperation and reciprocity, the negative methods of forming a group identity require little more than the old adage "the enemy of my enemy is my friend". But, on that last point, the adage should really be phrased as *the enemy of my enemy is my 'friend'* (notice the scare quotes) because there need be nothing more in common than the perception of a shared enemy whom both want to defeat. Shared enemies can lead to strange bedfellows.

One reason I suggest the communitarian conception of the Open Society has been seen as an enemy is due to the increased tendency to construct modern tribes using negation or exclusion of the Other. This is, of course, not a strict binary distinction, for we can imagine a continuum: some groups having an identity defined mostly by what they are For, other groups with an identity defined mostly by what they are Against, and others with a blend of For and Against. But the point is this: we have a need to *belong*, to be a meaningful part of a group. But how do we understand the identity of the groups to which we belong? Do we think of it purely in positive terms, of *what* we are For, or purely in negative terms, of *who* we are Against? Or, to put the point more bluntly, how much of the group's identity is built on detailed policies and plans grounded in a robust vision of the future, and how much is built on the transient experience of a Two Minutes Hate?

The Two Minutes Hate is a highly effective method for forming a group's identity because it calls attention to the lower-level safety needs, suggesting that group membership meets the safety needs *in addition to* the need to belong. In an age of anonymous, online communication, it is relatively cheap. Furthermore, it is easy to do, whereas constructing policies and plans for a joint project is hard because you need to get everyone to agree on the details. In contrast, the Two-Minute Hate is fast and effective and requires little more than identifying the Other as a threat.

Thus, we see how the four conceptions of the Open Society have come to be seen as an enemy through a confusion of wants and needs. Many of those wants, I suggest, we have adopted as a result of relying on human instincts when making decisions: tendencies to favour the in-group and demonise the out-group, the fundamental attribution error, the human tendency to see meaning in coincidences, and many other cognitive biases. If it is time to take our instincts by the reins and fix this confusion of wants and needs by rearranging society, what is it that we need to do? It is that topic to which I now turn.

The finest hour

As we've seen throughout this book, the reasons why the four different conceptions of the Open Society are seen as an enemy are not independent. Here are some of the connections I have identified in this book. People were encouraged to reject the cosmopolitan conception by populist politicians utilising social media and modern tribal alliances, where the desire for a safe space against challenging ideas provided an echo chamber reinforcing the same basic message: close the border. People use social media because it has become the default medium by which many people communicate and organise. Instead of looking for a local town hall for an activist meeting, you search for them on the social media site *de jour*. But the addictive nature of social media and the lack of real alternatives draw people in, creating an information asymmetry that leads to an imbalance of transparency and the resulting imbalance of power. The anonymous nature of online communication reinforces modern tribes by encouraging stereotypes and the fundamental attribution error. As communication between modern tribes became increasingly poisonous, and bad faith more common in discussion and debate, it was understandable that people might increasingly look towards safe spaces and show less willingness to engage with those outside their own group. The growth of modern tribes was enabled by the internet, as people of whatever backgrounds and interests could find each other more easily. Those modern tribes flourished with the advent of social media and the breakdown of older, more traditional, forms of political organisation. But the concomitant coarsening of social discourse, facilitated by the anonymous nature of online communication, led to a natural tendency to circle the wagons and create a safe space where people tended to listen to their own experts, creating echo chambers that facilitated the demonisation of out-group members.

Multifaceted social engineering is needed here because the interlocking reasons behind why the four different conceptions of the Open Society that have undergone value-inversion make it such that trying to address any one aspect in isolation will not suffice. It would be akin to playing a game of Whac-A-Mole in an arcade: solving one aspect of the problem corresponds to whacking one of the moles back into the cabinet, only for it to resurface somewhere

else in a different guise. All of the problems need to be tackled simultaneously in order to make an appreciable difference. Let me explain why.

The communicative nature of online interactions facilitated by social media is, as we have seen, an important contributor to the problems the Open Society faces. But it strains credulity to think that, for example, simply removing the bots from social media and trying to enforce a better, consistent policy regarding hate speech and fake news would make much of a difference. Digital platforms can emerge, evolve, and innovate at such speed that regulations will always lag behind. You *could* try to lock down and police the entire internet available to your population – China has tried – but even China's success is imperfect, and it's hard to imagine any democratic society would be willing to tolerate such draconian measures.

Since the problem is larger than any *single* social media company, perhaps the solution is to pass legislation establishing a regulatory scheme that applies to all social media companies? The difficulty with this proposal is that, as long as extreme polarisation exists between modern tribes, people from one tribe *will find a way* to talk to themselves, engaging in communicative activity which serves to reinforce and propagate the polarisation. There will be pressure from individuals for a medium that lets them express their beliefs and values, organise, critique their opponents, etc., in the way they see fit. The problem isn't so much the communication channel current social media provides, but what people have been *socially conditioned to view as acceptable and permissible forms of speech* on it. Even if governments passed sweeping regulations targeting social media companies, that alone would be insufficient for three reasons.

The first reason is that there will always be ways found to circumvent whatever restrictions regulations impose. On 16 September 2022, it was reported that anti-vaccination groups were using the carrot emoji to circumvent the automated moderation tools on Facebook groups (Kleinman 2022). How? If you squint, the carrot emoji looks a little bit like a syringe. And while the ability to detect such methods will admittedly improve as AI technology develops, the situation is akin to that described by Douglas Adams in *So Long and Thanks for All the Fish* regarding the use of the Electronic Thumb to open the doors of spacecraft, which "half the electronic engineers in the Galaxy are constantly trying to find fresh ways of jamming, while the other half are constantly trying to find fresh ways of jamming the jamming signals."

The second reason is the ever-present problem of ensuring compliance with regulations. If fines and penalties for non-compliance are set too low, penalties for noncompliance will simply be priced into the business model. But the third and most important reason is that what has changed over time are the social norms influencing how people behave in the online environment. According to multifaceted social engineering, it's not enough just to have stricter regulations in place regarding the social media companies we also need to change the social attitudes regarding acceptable and permissible forms of behaviour in the online space. We need to be tough on online abuse (i.e., targeting the

social media companies who distribute the stuff) and tough on the *causes* of online abuse (i.e., targeting the attitudes and environments that lead people to think that is a permissible way to behave online in the first place).

This chicken-and-egg problem creates externalities for one of the other senses of the Open Society we have considered. As long as extreme polarisation exists in society, exacerbated by the nature of online communication, there will be a natural desire for the construction of safe spaces. Few people will want to encounter constant vitriolic criticism from strangers, online or in person, especially if it specifically targets the person at the receiving end. We all know of cases of people leaving social media because they cannot or do not want to cope with online abuse. That search for safety is natural, but existence within a safe space increases the chance that one will live inside an echo chamber, primarily encountering the ideas one already agrees with. Perhaps even more harmful is that, inside an echo chamber, the representations of competing ideas will not be given their most charitable and sympathetic expression. A competing idea will be caricatured, improperly justified and stripped of all nuance, appearing substandard and inadequate, and not a worthy competitor for one's preferred beliefs. That effect of safe spaces reinforces polarisation and reduces the chances of deploying one of the known methods for combating stereotypes and reducing hostility between groups, namely, the contact hypothesis, which I discussed at some length in Part IV. Trying to reduce the polarisation of modern society will require encouraging people to step out of their safe spaces and engage in good faith with people from different tribes. So even if we somehow managed to (i) prevent online abuse through some magic technology and (ii) stop the regular Two-Minute Hate of the Other, we still wouldn't resolve the problem of polarisation until people stepped out of their safe spaces and started engaging with the Other in good faith.

My discussion of safe spaces in Part III primarily focused on the Enlightenment conception of the Open Society, but the rejection of the cosmopolitan conception of the Open Society, from Part I, can also be seen as a desire for safe spaces fuelled by people's national tribal identity. The economic and cultural protectionism encouraged by populist leaders not only doubles down on those disadvantaged by the natural lottery of birth, but it also reduces the number of opportunities for the type of contact needed (according to the contact hypothesis) to quash hostilities between groups. Consider the following: after the 9/11 terrorist attack in America, Islamophobia grew in the US, along with increased suspicion towards people from the Middle East, broadly construed. Yet given the small number of Muslims in the US[31] and the small number of Arab-Americans,[32] opportunities to mitigate these tendencies were few and far between, since many Americans didn't actually know any Muslims or Arab-Americans. Since fear and distrust thrive in ignorance, the rejection of the cosmopolitan conception of the Open Society only serves to reinforce the conditions which fuel the demand for safe spaces. It's not surprising that the rejection of the cosmopolitan conception of the Open Society is correlated with the rejection of the communitarian conception of the Open Society.

And so we can see why rehabilitating the Open Society requires multi-faceted social engineering. The four different conceptions are intertwined in numerous complex ways, where stresses on one create stresses on the other. Only by stepping back and thinking more generally about the kind of society we want to have can we think about the package of interventions that need to be made to get there. Given the current level of suspicion the Open Society is viewed with nowadays, its rehabilitation will not be easy. But I suggest, for all the reasons covered in this book, that it is worth doing. Here's why.

In 1947, members of the *Bulletin of the Atomic Scientists* introduced what became known as the "Doomsday Clock". It is a metaphor used to represent how close humanity is to a global catastrophe, with the clock hands set to a certain number of minutes away from midnight. The closer the hands are to midnight, the greater the threat of a global catastrophe. It is a fitting metaphor because it suggests that unless *something* is done, the inexorable passage of time will inevitably bring about the catastrophe. Originally intended to reflect the threat of global thermonuclear war, the use of the clock has since expanded to include threats from climate change, bioterrorism, cyber-warfare, and artificial intelligence in one aggregate symbol (Reynolds 2018).

When the clock was first introduced, the hands were set at seven minutes to midnight, reflecting the threat to humanity from the invention of nuclear weapons. After the Soviet Union conducted its first nuclear test in 1949, the clock hands were moved forward to three minutes to midnight. The clock hands have not always moved forward, though: when the Nuclear Test Ban Treaty[33] was signed in 1963 by the US, the UK, and the Soviet Union, the Doomsday clock was set back to 12 minutes to midnight. When the Cold War ended in 1991, the clock was set back further to 17 minutes to midnight. Unfortunately, as I noted in the introduction to this book, a lot has changed since then. Over the past decades, the Doomsday clock has steadily moved forward until, at the time of writing, the Doomsday clock stands at 90 seconds to midnight.

Humanity faces a number of unprecedented challenges and existential risks that threaten us all. The greatest risk is climate change, which will render parts of the planet uninhabitable for human beings and cause mass migration as people move to new areas in search of security, in addition to threatening supplies of water and food. The second greatest risk involves sustainability, for we are stripping the world's natural resources and polluting the environment in ways which were simply not conceivable only a 100 years ago. We are causing the greatest mass extinction since the end of the Cretaceous Period when the dinosaurs went extinct. In order to bring about the economic, political, and social change required to solve these problems, we need to stop fighting amongst ourselves. And that is why we need to stop seeing the Open Society as an enemy.

If we push the Doomsday clock metaphor to its limit, we might say that when *homo sapiens* first evolved the clock hands were more than 11 *hours* away from midnight. The emergence of a new species of African primate wasn't

much of a threat to anything, even if it did have an unusual capacity to cooperate and to use objects for tools. As humanity progressed, the clock hands would occasionally move, but not by much. Even the great land and sea battles between empires of the ancient world only had local effects whose capacity for damage fell far short of a hurricane or a volcanic eruption. The ability of humanity to precipitate a global catastrophe only became possible after the Industrial Revolution and the scientific and technological advances which followed. The most sizeable movement in the Doomsday clock over the entire history of humanity has occurred in the last century when we found ourselves with less than 60 minutes to midnight. If we manage to reverse the damage we have caused, that would truly be humanity's finest hour.

It all comes down to this

If multifaceted social engineering is required in order to rehabilitate our understanding of the Open Society, for all the reasons discussed, what are some practical policy recommendations for making progress?

That's a perfectly reasonable question, but I fear that this section will necessarily disappoint. It has taken a whole book, moving at quite some pace, just to identify the problem, given its complexity. Practical policy recommendations will require people far more knowledgeable and capable than I am to determine the appropriate social levers to pull. Nevertheless, here are some suggestions that provide a starting point for reflection on where to begin based on what we have discussed over these pages.

Let us begin with acts of political reform. If part of the problem lies with extremist politicians pushing a populist agenda to get elected (because it sounds good), even though that agenda will actually make matters worse, then we need to reform politics to reduce the chance that extremists can get elected in numbers which don't reflect the level of support in their community. I have three suggestions.

The first suggestion is to eliminate "safe seats" for single parties to the extent it is possible. The reason why this is a reasonable item to target is that when an election for a representative can generally be predicted to go in favour of one party or another (because of a clear preponderance of voters favouring that party), then the real determinant of the winning candidate is not the *election* but rather the process that determines which candidate will stand for the favoured party. And if that process is one like a US primary where only party members can vote, what tends to happen is candidates run on platforms that cater towards the more extreme members of the party. A primary election tends, more often than not, to function as an ideological purity contest where the most extreme candidates get selected.

In contrast, elections in non-safe seats have the general election to serve as a reality check on the primaries. A candidate may move towards an extremal position in the *primary* in order to be selected to represent the party, but since

the majority of voters are not members of the party (that's the definition of a non-safe seat), the candidate will need to move back towards the political centre in order to appeal to enough voters to win. An election in a non-safe seat thus limits the extent to which maintaining an extremal position is a viable election strategy.

Whether a seat counts as "safe" or not depends on a number of factors. Sometimes a political district naturally becomes, for historical reasons, predominately populated by voters favouring a political party. If a seat is safe for this reason, it simply reflects the will of people, and there's no reason to shake things up. This would be an example of a self-organised community forming out of each individual exercising their freedom of association. But sometimes a political district favours a political party not because of citizens naturally exercising their freedom of association, but rather because a politician decided to *redraw* the boundaries of the political district in such a way as to favour one party over another.

Political districts are supposed to represent local areas so that the elected politicians can rightly represent the interests of their constituents. All political boundaries are, to some extent, artificial because there is seldom an overwhelming reason why the boundary line has to be drawn *precisely* where it is, rather than along some other adjacent path. But this arbitrariness gives politicians the ability to draw political boundary lines in ways that favour one party over another. Redrawing political boundaries in order to expressly favour one party is known as *gerrymandering*, which takes its name from the American politician Elbridge Gerry. In 1812, when he was the Governor of Massachusetts, Gerry redrew the boundaries of a district in Boston in order to favour the Democratic-Republican party.[34] Newspaper columnists commented on the unusual shape of the district, and a cartoon was published depicting the district as a mythological beast resembling a salamander. The technique quickly became known by a portmanteau of its inventor's name and the shape of its first district.

Gerrymandering flies in the face of democracy by reducing the voting power of certain individuals and by creating safe seats. As I've argued, safe seats tend to favour more extremist candidates. Electing more extremist candidates makes it difficult to achieve mutually beneficial political compromise while, at the same time, allowing modern tribal identities to become more salient through the political fighting that results. In addition to preventing gerrymandering, we should also move towards a system of *proportional representation*, where people vote for a *party*, and then after the election representatives of the party are chosen in order to populate the government with a distribution of party members satisfying the distribution of voters. That can be done in a number of ways.

Proportional representation has a bit of a bad reputation due to fears that it makes it easier for extremist political parties to get into office. That worry is certainly justified, but what I want to call attention to is that when safe seats are allowed to proliferate we also can end up with extremist candidates in office –

just via a different method. What we need is to ensure that the *silent majority of the centre* is not under-represented in political systems. At the moment, ask yourself which is the greater threat: that extremist political parties might end up with some small representation in government, or that serious candidates reflecting the concerns of the silent majority – on climate change, on creating a sustainable future for our children and grandchildren, on creating a fairer society with a more equitable distribution of wealth, etc., – do not have a larger role in government?

The second suggestion for political reform is to hold politicians *actually* accountable for their campaign promises. While politicians are masters of the art of saying nothing (recall the discussion of Rorschach concepts), they do still make promises to the electorate on occasion. Yet, oddly, there is no mechanism – other than another election – for holding a politician accountable for whether or not they deliver on a campaign promise, or whether or not they misled the electorate. When you think of it, that's rather remarkable because almost all forms of business are required to comply with truth-in-advertising laws.

Yet no such accountability exists for politicians, who can promise the moon and then blame external contingencies for their inability to deliver. Now, politicians will undoubtedly argue that it is unfair to hold them accountable if their inability to deliver was due to factors beyond their control. My response to this argument is the carefully nuanced view best expressed as follows: tough. How many businesses go bankrupt as a result of factors beyond their control? How many people are members of the precariat due to factors beyond their control? If someone is unable to pay the rent on the home they've lived in for the last thirty years as a result of a physical illness beyond their control, and they weren't able to afford unemployment insurance, will they be cut any slack for their inability to deliver? No. My response to politicians who complain that holding them accountable for failing to deliver on promises due to factors beyond their control is this: be careful about what you promise, and make sure those promises are feasible and evidence-based.

The third suggestion regarding political reform is more ambitious than the previous two: find a way of reforming the decision-making process to reduce *short-termism* in political decision-making, forcing politicians to take a longer view. One great difficulty with regular election cycles is that it creates little or no incentive for politicians to introduce projects where all of the costs and pain are front-loaded and all the benefit occurs when the project is completed, i.e., on someone else's watch. This is one of many reasons why we are struggling to combat climate change. Large structural reform of the economy to move rapidly towards a carbon-neutral environment cannot be done without greatly inconveniencing many people, many of whom vote. When political leaders are weak and unwilling to persuade people of the necessity of action, when those whose interests are misaligned with the greater interests of society actively work to muddy the waters of understanding (see Oreskes and Conway 2011), the path of least resistance is to kick the can down the road and hope

that the decision-making environment or technology will change sufficiently so as to make possible a less costly, less painful social intervention which will bring about the necessary benefits faster. That's worked well regarding climate change, hasn't it?

Now let us turn to acts of reform concerning media, forms of communication, and the use of personal information. If one of the drivers of social polarisation is social media encouraging and facilitating forms of communication that cater to some of our worst unconscious biases regarding in-group and out-group effects, then what we need to do is establish regulations with teeth that makes it undoubtedly clear that facilitating certain kinds of interaction simply cannot be allowed. But such regulations must be backed by strong disincentives for failures to comply.

All too often, punitive damages for regulatory violations cease to provide an effective business deterrent and can instead simply be priced into the business model, because those damages are flat-rate fines based on the absolute value of the damage caused.[35] A better model is that used in Scandinavian countries, which set fines as a *proportion* of a person's income. One particular case which was widely reported concerned the Finnish businessman Reima Kuisla, who was caught driving 65 mph in a 50 mph zone (Pinsker 2015). Since Finland sets fines based on income, Mr Kuisla's 15 mph indulgence cost him €54,000. Someone on a normal salary might find that excessive, but it makes sense once you realise that Mr Kuisla earned €6.5 million the previous year (BBC News 2015). If Mr Kuisla was charged a modest fine of €100 for his 15 mph overshoot, would that really deter him from doing it again? Of course not. Flat-rate fines which are a deterrent to normal people on an average income are, to the wealthy, nothing more than the price to pay for flouting the rules. A $100 fine for a single person driving in the car-pool lane is nothing to a wealthy person who wants to get home a little earlier to spend time with their family (especially once you factor in the low chance of getting caught). By similar reasoning, if we want to provide effective incentives to companies, we need to use a big enough stick.

Putting effective regulations in place for social media companies is a crucial piece of the puzzle for rehabilitating the Open Society. In less than two decades, those companies have effectively re-written many of the rules regarding social interaction, re-shaping communication norms in the process. Their business model leverages psychological biases and cognitive weaknesses of individuals, creating products which are, by design, addictive and which create a perfect environment for sparking inter-group conflict. Just as we regulate other businesses which profit by catering to people's potential vulnerabilities, such as tobacco companies, alcohol distributors, and food manufacturers, we should regulate the creation and distribution of products that take advantage of people's psychology.

In this respect, social media provides us with an interesting analogy and disanalogy with tobacco companies. Tobacco companies sell products known to be harmful that are physically addictive to users. No one is born needing

to use tobacco products, but people become addicted to them as a result of social engineering by the tobacco companies through marketing. By analogy, social media companies provide products that are, in some cases, harmful and psychologically addictive to users. No one is born needing to use social media, but people become addicted to its services as a result of social engineering. The disanalogy is that people are born with certain social needs that can be partially satisfied through the use of social media.

I suspect that, in the future, we will view social media companies much as how we view companies trading in fossil fuels. They have become necessary for the operation of society as we have constructed it, but at the same time they result in serious, real harms that those very companies have endeavoured to hide from their users. Whereas now we realise that fossil fuels are responsible for climate change and numerous physical harms due to pollution, some people are already viewing some social media companies as being responsible for causing serious, real harms to the mental health of some of their users. Not all users, of course – but, then, not all cigarette smokers get lung cancer.

Why has social media not been subject to greater regulatory scrutiny in recent years? I think there are probably several factors at work. The first is surely the financial incentive created by the explosive growth of social media enterprises. So much wealth has been generated that there is a reluctance to kill the goose that lays the golden eggs. The second is that the amount of information about the public that is collected and generated by unregulated social media is undoubtedly of phenomenal interest to advertisers (and, I hasten to add, government security services[36]). The third is that, given the second reason, it is probably quite risky for a member of the government to mount an effective challenge to the power and scope of social media; if a politician or governmental official were to propose a serious clampdown, they would probably find themselves running against a well-funded challenger with nicely targeted ads in the next election. After all, fossil fuel companies have fought against effective legislation regarding climate change for decades, and the political lobbying and funding of candidates by the National Rifle Association is one of the reasons why the US has the gun laws it does.

Another type of media reform which would help is restricting the use of anonymous accounts. By this I mean not simply requiring people to register their actual identity with a media company before posting a comment below the line using a pseudonym, but actually requiring people to post under their actual name, for example. Having one's actual identity linked to one's online speech would certainly help ensure that discourse remained civil. Some companies are doing this already, but the policy could be rolled out more widely. At the same time, it would also be necessary to increase protection for individuals regarding the possible consequences of online speech. It would be important to ensure, for example, that people could not be fired simply for expressing a view which ran counter to the beliefs or values of their employer.

I want to stress that I am not suggesting that we eliminate all use of anonymous accounts. There is certainly a place for anonymous speech online, such

as with whistleblowing and other cases in the public interest. There is real value in being able to publish works under a pseudonym. But these cases of anonymous speech are typically vetted by named editors or organisations who take a reputational risk in publishing anonymous speech. They are, in effect, putting *their* name on *someone else's* speech, saying "this is worth putting out into public discourse." That reputational risk provides, to some extent, an effective check on toxic speech. As we have seen, truly anonymous, unaccountable speech quickly transforms the river of public discourse into an open sewer.

In addition, I think it's important to restrict greatly the collection, storage, and use of people's personal information. As I argued in Part II, it's not enough simply to *anonymise* the information, because given enough information the identity of an individual can still be established even if there are no unique identifiers stored. In rehabilitating the conception of the Open Society as transparency, we have to return to the original goal: that of holding the government, institutions, organisations, and the powerful in check. The Open Society wasn't supposed to provide a window into the soul of the people, allowing their information to be weaponised and used against them.

Another media reform which will help to rehabilitate the Open Society will be to put in place regulations regarding the reporting of news. The striving to be seen as fair and balanced often results in some views being given greater prominence than they deserve, given the evidence. For example, reporting on climate change has often resulted in climate sceptics being given a disproportionately loud voice, given the paucity of evidence for their position. Views regarding factual matters should generally be reported in a manner *proportionate to the evidence*. From this, it follows that, with respect to social views, the reporting should be balanced *with respect to the distribution of social opinion*. In order to prevent people from falling into echo chambers, news organisations should be required to maintain neutrality. Because there are no alternative facts, news should not be treated as a propaganda arm of any political party.

All of these proposed media reforms will be difficult to implement because of the financial incentives to prevent them. Great wealth confers great power, either because you can pay people to do what you want or because you can persuade people to do what you want. This leads me to the final informational reform I propose: provide greater transparency of wealth and cash flow so that it is easy to follow the money and identify who owns what. At present, shell corporations make it far too easy for wealthy individuals to hide their assets, which in turn makes it far too easy for those individuals to wield influence and power without due accountability. We need to know, for example, if the alleged "grassroots" efforts protesting some proposed social change truly reflects a self-organised movement based on the endogenously formed beliefs of members of society or if it is funded by some organisation or individual who stands to benefit.

Some might argue that such transparency would violate the right to privacy of wealthy individuals. Although it is true that the degree of privacy accorded

to the wealthy would be different from that accorded to the ordinary citizen, this difference is arguably necessary in order to ensure the proper governance of society and to prevent the abuse or subversion of institutions and organisations on which we all rely. The reason why it would be permissible to grant a different degree of privacy to the wealthy is as follows: no one has a natural right to be wealthy or is naturally entitled to be wealthy. We, as a society, allow individuals to be wealthy because we believe that it is right that people benefit from the fruits of their labour, on the grounds that it provides people with an incentive to work, on the grounds that when people work it is to the benefit of society. We allow levels of wealth *inequality* on the grounds that such inequality is necessary in order to make the worst off as well off as possible. Wealthy individuals occupy a privileged position in society and we, as citizens, have a right to know that they are not abusing that privilege. As such, I suggest that it should be seen as part of the implicit social contract that wealthy individuals have an obligation to make their wealth known as well as how it is used. This will be very hard to achieve, especially when technology such as Bitcoin makes anonymous transfers so easy, but it is worth trying.

Now let us turn to acts regarding social reform. Restoring faith in the communitarian conception of the Open Society requires that we no longer see the Other as a threat but rather as people simply choosing to go their own way and who do things differently from us. As noted, according to the contact hypothesis, one way of achieving this is to socially engineer greater contact between groups. This is a large project and one which will, of necessity, never be completed: social contact between groups will need to be re-created for each successive generation. But increased social contact between groups works to ease inter-group tensions. In the US, for example, the integration of public schools, originally undertaken in order to correct the racial inequity created by segregated schools, had the side effect of generating increased social contact between racial groups.[37] One measure of the effect this might have had on improving relations between racial groups is to look at the number of interracial marriages. According to a report by Livingston and Brown (2017), the frequency of interracial marriage in the US increased from 3% in 1967 to 17% by 2015. In metropolitan areas, the frequency increased to nearly one in five.

One way of increasing contact between groups would be for national governments to begin slowly opening borders, allowing more migration. The migration should be managed with policies in place to help immigrants embed themselves in local communities rather than simply leaving them to sort things out for themselves. In opening up borders, it would be important, from the point of view of correcting the natural injustice of the birth lottery, to not restrict the migration to only the most skilled migrants. If the economic models are correct, increased rates of migration will generally be expected to contribute towards economic growth. Economic growth, combined with reasonable redistribution policies, will then contribute to overall levels of well-being to increase in those countries. Greater levels of well-being, along

with increased contact with the migrant workers who helped contribute to that economic growth, will, over time, help to mitigate the fear of the Other.

Another social reform which I believe is required is to change how experts are represented in the public domain. As I mentioned in the introduction to this book, experts have had a bad rap, especially in the US and the UK. First it was the climate scientists warning that the world wasn't doing enough to combat climate change (which is true), which a lot of vested interests didn't want to hear. Then it was the economists, who failed to predict the financial crisis of 2008, which cost a lot of people a lot of money, with many people losing their jobs. In 2016, in Britain, it was the economists again who were predicting the economic upheaval Brexit was going to cause (which was also true), which some politicians beating the populist drum didn't want to hear. And then, with the pandemic, it was the epidemiologists whose advice on how to combat COVID-19 and save lives seemed to some people to be a recipe for economic disaster and a means of ushering in a totalitarian state on the sly.

It's true that experts don't always get it right, but we need to keep things in perspective. When experts make a correct prediction or judgement, they are rarely praised as loudly as they are criticised when they make a mistake. There is a reason for this: it's assumed that an expert will generally be correct because that's the whole *reason* for consulting an expert in the first place. But we need to remember that prediction concerning social events isn't an exact science, and even the best experts will get things wrong from time to time. Discounting expert advice or choosing your expert based on your ideological commitments is a recipe for disaster. It might not always turn out badly, but it certainly will one day.[38] Encouraging the public to distrust objective rather than partisan, scientific, evidence-based expert advice is a deliberate attempt to mislead and manipulate the public by encouraging them to put their faith in whatever snake oil salesman is attempting to persuade them of something.

Why is restoring trust in experts relevant for rehabilitating the Open Society? There are two reasons. The first reason is that we need to reject the idea of "alternate facts" and return, instead, to the Enlightenment ideal of a common understanding of the world accessible to all. That's important if we are to solve the most serious problems which present an existential threat to our societies. It also helps to bring about the communitarian conception of the Open Society, where different groups, each following a different way of life, nevertheless operate within a shared world. Although social conventions, norms, traditions, and values can vary considerably across communities, we all share the same physical reality. The second reason is that experts provide a way of resisting the politicisation of knowledge. When knowledge is politicised, groups can use "their" knowledge (provided by their "experts") as a tool for excluding the Other who do not share their understanding of the world. But that politicisation of knowledge is dangerous. When it comes to questions of health, the climate, the economy, and so on, it doesn't matter if your "expert's" analysis aligns with your ideology; what matters is if the analysis is

correct. In the words of Daniel Patrick Moynihan, a former US Ambassador to the UN: "Everyone is entitled to his own opinion, but not to his own facts."

Moynihan is a little more generous than I am regarding people's right to an opinion. (In what follows, I will use *belief* as synonymous with *opinion* so as to be consistent with the terminology used elsewhere in the book.) I would say that, of course, everyone can have a belief,[39] but the extent to which a person is *entitled* to do so depends on their reasons. And whether a person's belief is *justified* depends on how good their reasons are. I suspect it's possible that someone can *have* a belief even if they don't have any reasons for doing so,[40] but I wouldn't say that, in that case, the person is entitled to have that belief.[41]

The reason I am more strict than Moynihan when it comes to people's right to have a belief is that beliefs are rarely *inert*. Beliefs cause people to do things that change the world and sometimes affect other people, either in the immediate term or in the future. Your beliefs are thus directly or indirectly involved in generating positive and negative externalities for others. If you have acquired a false belief, use that false belief when determining how to act, and then harm someone as a result, you might be morally culpable. This shows that the barrier between matters of epistemology and matters of morality is permeable. The failure to acquire knowledge can be a moral failing, as well.[42]

The moral risks of knowledge acquisition go beyond the process of forming beliefs; they also pertain to how we modify and update our beliefs in the light of new information. There's an enormous philosophical literature on what are rational methods of belief revision that I do not want to enter into here (I have touched upon some of the issues in Part IV), except to say that discussion and debate play a crucial role in how we acquire new information for modifying our beliefs. At the end of the day, perhaps the most important reform required for rehabilitating the Open Society concerns how disagreement and public debate are conducted, as there are better or worse ways of handling disagreement in society.

Whereas the Enlightenment conception of the Open Society celebrates rational, reasoned debate of issues, much public discourse falls far short of that ideal. Listen to any politician being interviewed and often what you will hear is little more than the repetition of set talking points with no actual engagement with the question being asked. What passes for *debate* in much contemporary media often features more of the same, along with uncharitable attributions of positions and rhetorical tricks as each speaker tries to make themselves look good at the expense of the other participants. What matters in these exercises is not the attempt to arrive at some common understanding of the truth but rather winning the exchange. Who cares what you say as long as your side comes out on top?

This poor state of public debate is made even worse by a perception that altering one's beliefs is a sign of weakness. Where did this attitude come from? I'll leave it to a cultural anthropologist to write the definitive history of that trend, but here's my guess at one possible origin of resistance to revising one's beliefs. There's no doubt there's a long history of "*never surrender*" when it

comes to public discourse. From Winston Churchill's famous wartime speech to the House of Commons on the 4th of June, 1940, to Margaret Thatcher's famous speech in which she said, "The lady is not for turning," politicians and organisers of all stripes love showing backbone and commitment. And although the *never surrender* trope generally concerns a course of action, there is a close connection between actions, beliefs, and values. If we know what someone believes and values, we can be pretty confident about how they are going to act. Why? Because if the person is rational, a particular act only makes sense as an attempt to realise some end; that is, to achieve some outcome that a person *values*. The particular way an action unfolds will be determined by what the person *believes* is the best method of realising the outcome that they value.

From this, it follows that if someone previously committed to a certain course of action changes what they are doing, then that person either changed their beliefs or changed their values. Since most people assume that their values cannot (or should not) change, that leaves a change in belief as the only possibility. And so, if someone has *sworn* that they will *never surrender* to a certain course of action, and we know that their values aren't going to change, then that rules out the possibility of their beliefs changing to any significant extent, as well. (The only possibility would be those changes in belief that, given the same values, would still yield the same course of action.) And so we see how the *never surrender* trope leads to a general recalcitrance to changing one's beliefs or changing one's values because surrendering is showing weakness, and showing weakness is bad.

The problem with such recalcitrance is that, in light of new information, rationality can require us to revise both our beliefs and our values. Because it is relatively straightforward to see how new information can lead to belief revision, let us consider how new information can lead to value revision. It's true that values do not respond to new information in the same way that beliefs do – we don't look out a window and realise that we need to change a value in the same way we realise we need to change our belief that it is raining when we see the sun shine. The process of value revision is different because a value can only be dropped or revised when it becomes apparent that this value conflicts with or thwarts the realisation of other values that one cares about more.[43] If one receives new information concerning the existence of such a conflict, then one might be motivated to revise the values involved. For example, suppose someone values individual freedom and initially thinks that individual freedom is so valuable there should be no constraints upon it whatsoever. It might then be pointed out that such a premium placed upon individual freedom is reasonable if we all lived in isolation, like Robinson Crusoe, but in the presence of other people, including those who are potential threats to our well-being, unrestricted individual freedom is not an indefeasible good. As social contract theorists argue, a person should be willing to accept limits to their individual freedom because those restrictions, when part of a larger society featuring protective institutions, serve to keep individuals safe and provide them with greater opportunities than they would have had otherwise. This

new information may then cause the person to revise the value of individual freedom.

If I'm right, one irony about the prevalence of the *never surrender* trope and how it urges people to be recalcitrant in their beliefs and values is that *never surrender* is not only called for during times of *resistance* (which fits with the reluctance to change) but during times of *revolution* as well. Revolutionary periods are times of great social change, where the intention is to subject the current system to creative destruction in order to produce something different, something better, something good.

In the post-war era, the Open Society was seen as something good because, in contrast with the fascist regimes of World War II and the totalitarianism of Soviet and Chinese communism, it was seen as a protector of individual liberty. The four conceptions of the Open Society we have considered in this book – cosmopolitan, transparent, Enlightenment, and communitarian – all have, I argued, their place in helping individuals utilise their individual freedoms of self-determination and association so as to create a life worth living, according to each person's own subjective worldview. Since the end of the Cold War, these four conceptions of the Open Society have undergone a process of value inversion, in that the good-making features of the Open Society came to be seen, by many, as a threat. This, I have argued, is mistaken. We need to rehabilitate our understanding of the Open Society.

Is this a call for *resistance* or *revolution*? I think both. It is a call for resistance because the Open Society, a thing of value, has been subject to an uncoordinated attack along multiple fronts. We should protect what we have left from being eroded further. Yet it is also a call for revolution because the way the Open Society has advanced in the immediate post-World War II era is not progressive enough. At that time, segregation was still legal in the United States, homosexuality was illegal in both the US and the UK and the second wave of the women's movement hadn't even begun. Concerns over economic inequality and distributional issues in the West had largely been set aside during the war years. Concerns about sustainability and climate change were still decades in the future. In rehabilitating the concept of the Open Society, there is an opportunity to re-think the kind of society we want to create and how to ensure it is compatible and sustainable with this small, finite world in which we live.

What kind of revolution is this? This is not a call for a revolution of guns and ammunition. This is not a call for violence. This is a call for a revolution against the social discord created by modern tribes fighting with each other, using technology that strips away each side's humanity, encouraging them to never surrender, to retreat inside a safe space, and to tell the Other to not come around here no more. This is a call for a revolution of the type expressed by the American spoken-word poet Gil Scott-Heron in his 1970 work, "The Revolution Will Not Be Televised." In what way? There are many indicators sprinkled throughout the poem. "*The revolution will not be brought to you by Xerox in four parts without commercial interruptions. There will be no highlights on the*

eleven o'clock news […] The theme song will not be written by Jim Webb or Francis Scott Keys, nor sung by Glen Campbell, Tom Jones, or Johnny Cash […] The revolution will not go better with Coke. The revolution will put you in the driver's seat."

What kind of revolution is this? When asked about the meaning of the poem, Scott-Heron explained:

> The first revolution is when you change your mind about how you look at things, and see that there might be another way to look at it that you have not been shown.[44]

And there it is.

Notes to "We can work it out"

[1] At least according to https://getsongbpm.com.

[2] One famous experiment illustrating this fact was conducted by psychologists Richard Lazarus and Robert McCleary in the late 1940s (see Lazarus and McCleary 1951; McCleary and Lazarus 1949). In it, they showed subjects a bunch of nonsense words on a screen and, occasionally, gave the subjects an electric shock after showing some of the nonsense words. Subjects were also hooked up to a device to measure their galvanic skin response (GSR), a common indicator of emotional arousal in humans. (When humans experience emotional arousal, sweat glands on their palms exude some perspiration, which increases the electrical conductivity of the skin's surface. Measuring how much the electrical conductivity increases gives an indication of just how excited/nervous/agitated/frightened/etc. the person is.) What Lazarus and McCleary found was that, after a period of conditioning, the subjects *anticipated* the occurrence of an electric shock after the indicator words (as measured by their GSR) but were *unable* to articulate the rule which determined when the electric shock was given. Their suggested interpretation of this result was that, subconsciously, people were able to determine the underlying pattern, which determined when electric shocks were given, but they were not consciously aware of the rule. This form of perception without awareness they called *subception*.

[3] But it can also be a bad thing (e.g., *Wuthering Heights*).

[4] A recent meta-analysis found that trigger warnings had no effect on educational outcomes (Bridgland *et al.* 2023). It was also found that trigger warnings could serve to increase engagement with material in certain cases.

[5] Popper allows for the blueprint to be imprecisely specified: "Only when this ultimate aim is determined, in rough outlines at least, only when we are in the possession of something like a blueprint of the society at which we aim, only then can we begin to consider the best ways and means of its realization, and to draw up a plan for practical action" (Popper 1945a, p. 138).

[6] The UK might be unusually sclerotic in this respect. Starting on 17 March 1930, the Empire State Building was built in 1 year and 45 days.

[7] One of the reasons Popper attacked Plato was because Platonists have a solution to the disagreement problem. According to Plato, there is an ideal form for a city-state which is timeless and perfect. If the authoritarian leaders are an endless succession of philosopher-kings, they will all agree on the ideal form of the city-state.

[8] Marx did little to help the Soviets in their task. As Popper noted, Marx was primarily concerned with identifying laws of social development, not "economic laws which would be useful to the social technologist" (Popper 1945b, p. 187). After the 1917 revolution, when faced with numerous economic challenges, Lenin admitted in a speech "We knew, when we took power into our

hands, that there were no ready forms of concrete reorganisation of the capitalist system into a socialist one […] I do not know of any socialist who has dealt with these problems" (Webb and Webb 1947, p. 497). Popper remarks further that "there is hardly a word on the economics of socialism to be found in Marx's work — apart from such useless slogans as 'from each according to his ability, to each according to his needs'" (Popper 1945b, p. 79). This is because, perhaps somewhat paradoxically, Marx was not a believer in Utopian social engineering. (This is one key difference between Lenin and Marx: Lenin thought it was possible to accelerate history, turning Russia into a communist utopia directly from an economic backwater by leapfrogging the intermediary stage of advanced capitalism.)

[9] Lenin initiated ambitious programmes of industrial development, but in doing so had to rely on expert "bourgeois engineers" who had been educated before the revolution and whose loyalty he did not entirely trust. Lenin's untimely death handed power to Stalin, who made a push for even greater industrialisation but in doing so had to rely all the more on the bourgeois engineers. Stalin became concerned about the growing power of the engineers, and in 1930 arranged to have 2,000 arrested and charged with anti-Soviet activities. Concerns that the technological expertise required for Soviet industrialisation would fall into the wrong hands led Stalin to insist that the revolution needed its own engineers, who were ideologically loyal and could be trusted. This led to the rapid growth of engineering schools, and soon the Soviet Union had more engineers than any other country in the world. Yet the ideological purity required meant that engineering knowledge became politicised, with a resulting rigidity of thought and a reluctance to question fundamental assumptions regarding approach and method.

[10] At least regarding his point about the threats posed by authoritarian leaders. Popper's concern about shifting targets when a transition occurs between authoritarian leaders is illustrated by different historical events. For example, did Gorbachev inadvertently *cause* the collapse of the Soviet Union by introducing his policies of *perestroika* (reconstruction) and *glasnost* (openness) too quickly? Or did he merely bring forward in time something which was inevitable? And how do the radical changes introduced by Deng Xiaoping in China fit into the Popperian analysis? Xiaoping oversaw the rehabilitation and repair of China after the chaos caused by Mao's Cultural Revolution, which led to a great break from past policies. Yet, at the same time, Xiaoping continued with the opening up of the Chinese economy to the West, which was initiated by Nixon's meeting with Mao in 1972.

[11] At least given our limited human capacity to discover and know things. If we believe an all-knowing Laplacean demon would be able to solve the social planning problem, then it starts to look like the fundamental problem involves the measurement, collection and analysis of data. If so, then artificial intelligence combined with the Internet of Things might do a lot better than the Soviet social planners, at least under normal conditions. Soviet planners were

operating under constraints involving the measurement, collection and analysis of data that we might be able to handle to a far greater degree. However, the existence of uncertainty regarding unpredictable events means that even the best efforts of technologically-informed artificial intelligence might only result in modest incremental advances towards a more resilient economy, rather than an actual solution to the social planning problem.

[12] *Pandora's Box*, episode 1, interview with Vitalii Semyonovich Lelchuk (USSR Academy of Sciences), at 31:35.

[13] *Pandora's Box*, episode 1, interview with an unnamed factory worker, 32:55.

[14] *Pandora's Box*, episode 1, 36:45.

[15] Some might argue that this amounts to nothing more than a terminological dispute regarding what we mean by a "problem". I don't think that's right, as we'll see when we revisit the concerns faced by the Open Society later. In any case, if the concept of a "problem" has to be radically enlarged in order to preserve the idea of piecemeal social engineering in light of what I said, it still means that my observation was essentially correct.

[16] This observation is not new; the Nobel-laureate Herbert Simon recognised this more than 60 years ago in his book, *The Architecture of Complexity* which discussed non-decomposable problems. On this point, see also Gaus (2021).

[17] Taking the metaphor too seriously can quickly lead to problems. For example, no genotype has an "absolute" fitness value since its fitness depends on (i) the environment, (ii) how that genotype is expressed as a phenotype during development, and (iii) the presence of other genotypes in the population. The importance of (i) is that changes in the environment can quickly alter the fitness value of a genotype. The dodo bird was doing absolutely fine on the island of Mauritius until it was discovered by Dutch sailors in 1598; but a little over 60 years later, it became extinct. The importance of (ii) can be seen in that even identical twins have physical differences, and if something goes awry in development, then the differences could be very great indeed. The importance of (iii) is that scarcity can itself be fitness-enhancing because the environment includes other members of the same species. None of these three factors are represented in the landscape metaphor.

[18] How is distance measured in a fitness landscape? One natural measure would be to consider the number of point mutations required to convert one genotype to another.

[19] One famous example from biology concerns sickle-cell anaemia, an inherited genetic condition in which some of a person's red blood cells take on a crescent moon shape. The condition is painful and can affect a person's vision, cause delays in puberty, and result in frequent infections. Why would such a trait persist in a population? Because sickle-cell anaemia only results if a person has *two* copies of the gene: one from their mother and one from their father. If a person has only a *single* copy of the gene, they are unlikely to have

any symptoms, but they have also conferred some natural resistance against malaria (Rozenbaum 2019). Selection for a malaria-protection trait then increases the chances that some of one's offspring will have a disadvantageous genetic condition.

[20] One criticism of Maslow's hierarchy is its exclusive focus on developed economies. That's pretty obvious given his statement (emphasis added) that "we can perceive the expression of safety needs *only* in such phenomena as, for instance, the common preference for a job with tenure and protection, the desire for a savings account, and for insurance of various kinds (medical, dental, unemployment, disability, old age)" (Maslow 1943, p. 379). That 'only' is doing a lot of unnecessary work. I'm sure the aboriginal people of Papua New Guinea, as discussed by Diamond (1999, 2012), have a rather different conception of what it takes to meet their safety needs.

[21] There is some discussion about where sex falls in the hierarchy. Maslow is a little cagey on this point, noting that "sex may be studied as a purely physiological need."

[22] The Coen brothers' film *The Big Lebowski* stars Jeff Bridges as the title character, also known as "The Dude". The Dude is the ultimate Los Angeles slacker, with an inner peace and contentment that arguably counts as self-actualisation for someone with really modest goals. If all you want to do is bowl, get stoned, drink White Russians, and talk philosophy, and you *do* that, shouldn't that count?

[23] Although statistically significant negative correlations were found for the relationship between need importance and need deficiency in four of the five categories, Betz (1984, p. 213) points out that "the coefficients are quite small and may therefore have little practical meaning, reaching significance only because of the large sample size."

[24] Under Scottish law, a criminal trial may arrive at one of three verdicts: guilty, not proven, and not guilty. Although the latter two verdicts are both acquittals, there are important differences in their connotations. Essentially, the "not proven" option allows a jury to determine insufficient evidence of both guilt and innocence has been produced without needing to declare a mistrial with its inevitable connotation of procedural errors.

[25] The Kenrick *et al.* model is not without its controversial elements. Although the first few levels of their revised hierarchy are similar to Maslow's – immediate physiological needs, self-protection, affiliation, and status/esteem – the next three levels are mate acquisition, mate retention, and parenting. Recent trends with declined birth rates in a number of countries, particularly Japan, raise the question of whether "parenting" deserves such pride of place.

[26] This point is corroborated in later a study not specifically focused on Maslow. Tay and Diener look at the association between need fulfilment and subjective assessments of personal well-being in people from 123 countries. What they

find is that there is some evidence of the existence of universal needs and that, although "needs tend be [sic] achieved in a certain order but that the order in which they are achieved does not strongly influence their effects on [subjective well-being]" (Tay and Diener 2011, p. 364). Another interesting finding is that there was variation between need satisfaction and the affective attitudes of individuals: "basic needs are important for life evaluations, whereas social and respect needs are important for positive feelings" (Tay and Diener 2011, p. 364).

[27] This is true even if one does not accept an objective theory of well-being. Even according to a purely subjectivist theory of well-being, there are better or worse ways of fulfilling a person's needs, according to their own method of assessment. And it is part of human rationality that, all-too-often, people will experience lapses of judgement which lead them to choose something which, in the cold light of day, they would admit is not in their best interest. This is one reason the entire public policy programme around Nudges has been developed, for better or worse (see Thaler and Sunstein 2009).

[28] Some might remember the craze in the early 2000s for the Big Mouth Billy Bass, a robotic fish mounted on a wooden plaque which would lip-sync the song "Take Me To the River" when a button was pressed. This market also cratered.

[29] That is a big *if*, admittedly, but realise that it applies equally well to *all political decisions*. A closed-border policy could be economically and socially disastrous as well: are you sure you'll be able to meet all the demand for doctors, nurses, carers, teachers, etc.?

[30] Some will argue that this is envisioning the worst-possible scenario. There is some truth to that objection, but I would simply note that numerous examples already exist of this happening to people — although admittedly for non-nefarious reasons. The rise of two-factor authentication connected to your mobile phones makes recovering control of all your accounts extremely difficult if your mobile phone is stolen and is orders of magnitude worse if your phone is hacked when it is stolen. (Thieves have been known to demand a user's passcode at knife-point when stealing the phone so they can unlock it and change the passcode so as to have full use of the device.) Some people have found that photos of their naked child, which they took to send to a doctor for remote diagnosis, have caused them to be flagged as paedophiles by Google, and access to their Google account subsequently suspended.

[31] Approximately 3.45 million, in 2017, or around 1.1% of the population (Mohamed 2018).

[32] According to an April 2021 US State Department note, there are approximately three million Arab-Americans living in the US (Stephan 2021).

[33] The name is slightly misleading as the treaty only banned atmospheric nuclear testing. Underground nuclear testing continued to be permitted until the

Comprehensive Nuclear Test Ban Treaty, which was adopted by the United Nations General Assembly in 1996. Since 1996, only three countries have tested nuclear weapons: India, Pakistan and North Korea.

[34] The name of the party will sound bizarre to Americans. It was a political party founded in the early 1790s by Thomas Jefferson and James Madison. It eventually became the modern Democratic party.

[35] Consider the following example. In 1989, the Exxon Valdez oil tanker struck Bligh Reef in Prince William Sound, spilling over 10 million gallons of crude oil. The damage to wildlife, fish, and the environment was considerable. A later class action lawsuit awarded $5 billion in punitive damages to those affected by the spill. Exxon appealed the decision and, in 2002, the damages were reduced to $4 billion. After several more rounds of appeals, in 2006 the punitive damages were reduced to $2.5 billion. Exxon appealed that decision, and in 2008 the Supreme Court reduced the punitive damages to $507.5 million. In 1989, Exxon made $3.8 billion in profit; in 2008, Exxon made $45.2 billion in profit. Exxon's "fine" for the second largest oil spill in US history was a little more than 1% of their *profit* in 2008. That's not a deterrent; that's just part of the cost of doing business.

[36] In the UK, the British Intelligence agency GCHQ is known to have accessed the records of millions of social media users without a warrant (Kwan 2021). It strains credulity to think this hasn't happened elsewhere.

[37] The US military also played an important role in increasing contact between racial groups. Harry Truman signed Executive Order 9981 in 1948, which ordered the military to integrate.

[38] A common Hollywood trope is that of the hero who relies on instinct, rather than expert advice, to see them through. Think of Han Solo who, when advised by C-3PO about the likelihood of successfully navigating through an asteroid field says, "Never tell me the odds!" Or the scene at the end of the film *The Abyss* where Bud Brigman needs to clip the correct wire to disarm the nuclear warhead, but the colour-coded wires appear identical in the light from his underwater flare. Bud takes a guess and, of course, clips the correct wire. Just once I'd like to see a film where the main character faces such a circumstance and goes with their gut, only to smash into an asteroid or blow themselves up, and then have the film immediately end.

[39] Just try to stop someone! Technology hasn't yet gotten to the point where "thought police" is anything other than an expression. But god forbid that neuroscience should ever advance to the point where implants which provide exactly that level of monitoring and control are possible.

[40] That is, I think it is physically possible for a person to hold a belief without having any reasons for it. But this is an unstable cognitive state: the moment a person becomes consciously aware of having that belief, it would only take a little metacognition for cognitive dissonance to arise. Why? A constitutive

feature of having a belief is that one considers the belief to be *true*. How could one be in a position to consider a belief to be true without having reasons for it?

[41] There is an interesting question as to how *faith* fits into this picture. By definition, a belief based on faith is a belief not based on evidence in the ordinary empirical sense of the term. Some have attempted to blur the line between faith-based beliefs and evidence-based beliefs by treating personal mystical experiences that lead to a spiritual conviction as a form of empirical evidence (e.g., Alston 1991; Plantinga 2000; Swinburne 1979), but there are difficulties with pushing this analogy too far, given differences in testability, reproducibility, and other properties taken to hold of ordinary empirical beliefs. On the question of why and whether we should allow a special place in society for beliefs based on faith rather than evidence, see Leiter (2013).

[42] It is possible to reconcile this view with the position of Moynihan as follows: everyone is entitled to an opinion, but not all opinions are permissible. I don't think this is a helpful way to frame the issue because what happens if someone forms an impermissible opinion for mistaken reasons, but the person is not culpable for forming the opinion because realising that the opinion is impermissible would require an act of cognition that either (i) exceeds the capabilities of the person, or (ii) is so laborious that it falls within the category of supererogatory acts? Such a situation would correspond, in my scheme, to someone having an entitled opinion (because they have reasons) but not a justified opinion (because the reasons are mistaken). So the two approaches identify the same categories of opinions but describe them in different ways. I prefer my scheme because it's simpler.

[43] Recall the discussion of sedimentation, from Chapter 4.

[44] This quote is from an interview Scott Heron gave in 1982, see: https://www.youtube.com/watch?v=Y8vYyuW4EYg

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