

Chapter Fourteen

Hope for Material Progress in the Age of the Anthropocene

Darrel Moellendorf

Growth in our capacity to produce has resulted in prosperity unimaginable to earlier generations.¹ But such prosperity is hardly generalized. Poverty still afflicts billions of people. And although that suggests that dismantling serious injustice requires egalitarian political movements, the pursuit of generalized prosperity could not be achieved merely by redistributing the fruits of production. The current global gross domestic product (GDP) per capita is approximately \$11,000 (World Bank 2019). So, even if equalizing at current levels of production would create gains for many people worldwide, it certainly would not result in prosperity for everyone. Justice may be best served by much more equality, but massive productive growth is still needed if prosperity is to be generalized across the globe. So, we have good reason to promote growth in productive capacity in order to overcome the scourge of poverty and to provide the material basis for generalized prosperity or so it seems. Such growth could fundamentally transform our lives for the better. As productive capacity grows, human labor power could be transformed from a means for the production of the goods that sustain our lives, often now realized by various means of compulsion, into a capacity for free expression. Accounts of such progress are the foundation of materialist accounts of history in many Marxist writings, and hope for future abundance under communism is a central theme in Ernst Bloch's writings (Bloch 1986). I am not, however, going to assume the traditional Marxist path of exit out of capitalism into socialism and from there into communism. I don't think we know enough to be confident about how such generalized prosperity might come about, and in particular whether socialism would be needed to achieve it, as Marx thought. My concern here is with a source of anxiety about the path

toward abundance. Growth in productive capacity in the era of capitalism has been the source of very significant environmental destruction, ushering into existence a new epoch in the history of the planet, the *Anthropocene*. Environmental damage now threatens to cross planetary boundaries and to disrupt the stability of planetary systems that made human civilization possible during the *Holocene*. Hope for human prosperity may be crowded out by anxiety about environmental destruction.

In this paper I shall argue that it remains rational to hope for generalized human prosperity. The features of our makeup, our intelligence and rationality, guided us in the pursuit of unrivaled prosperity, and for some, it might also help to find a way to avoid the worst aspects of environmental destruction and to secure the abundance. I begin with hope.

1. HOPE

I am not going to discuss what kind of psychological state hope is. I intend my discussion to be neutral between two kinds of accounts. The first, dominant in most contemporary discussions, are those that could be called “compound accounts.” These accounts see hope as consisting in a belief about the possibility of the object of hope and a pro-attitude about the attainment of that object (Moellendorf 2006, 415). Since despair or anxiety might also consist in a nonconfident belief about X and a desire for X, compound accounts need to also identify a third element that differentiates hope from despair. The difference between these accounts concerns the character of that third, additional feature, of hope that would serve to distinguish hope from despair (Meirav 2009). The other accounts might be called “simple accounts” (Moellendorf 2006, 417). These accounts take hope to be a simple state or concept, neither a belief nor a desire (Segal and Textor 2015; Blöser 2019), but perhaps some sort of *besire*, both cognitive and motivational (Atham 1986, 284–85; Blackburn 1988, 97–100). Although most current accounts of hope opt for the former understanding, I don’t see a knockdown argument in favor of it. Elsewhere I have appealed to psychological parsimony in its favor. The idea is that if hope can be explained by a desire and a belief plus something else, there is no reason to add another state, hope, to our psychology (Moellendorf 2006, 415–16). But that’s not an especially weighty reason in favor of a compound account. Any defense of an explanation on grounds that it has fewer parts in the *explanans* has no answer to the charge that reality simply might not be as elegant as the theory. A more parsimonious explanation might also distort reality by shoehorning it into a narrow fitting theoretical space, rather than capturing its complicated fullness. Moreover, the case for parsimony can also, in a different way, be appealed to in defense of the simple state view insofar as it does with one attitude what the com-

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pound accounts do with two or three. In short, I no longer see a reason to favor compound accounts on grounds of parsimony.

Hopes seem to exist within the space of reasons. They are attitudes that we endorse or criticize in ourselves and others based on reasons. Regarding reasons *for* attitudes, there are at least two kinds. Some reasons serve as permissions, others as requirements. Take belief. Given sufficient evidence, argument, or explanation and lack of compelling counterevidence, argument, and explanation we might be *permitted* to believe a claim. And given even more of the evidence, argument, and explanation, we might be *required* to believe the claim. In the case of intentions to act, there may be some that are *permitted* but not required given the circumstances, such as to make great personal sacrifices to help another in need, and others that are *required*, all else being equal, such as to honor a promise. With respect to hoping, it seems clear that reasons sometimes *permit* justified hoping. Insofar as that is the case, reasons could also then rule out unjustified hoping. Whether hoping is ever *required* by reasons is less clear to me. But that is not my concern in this paper. Instead, I focus on what might provide permission for hoping for a specific kind of material progress.

Hope has both an epistemic and an evaluative character. First a word about the epistemic character. Hope includes a belief or a belief-like aspect about the possibility of the object of hope. One way in which particular hopes might be criticized has to do with the extreme unlikelihood of the object coming to pass. In the shared space of reasons for assessing the possibility of an outcome or event, the evidence for the belief counts, rather than facts beyond evidential warrant, since only evidence is available to us. We have access to the evidence that points to the fact or the possible fact that we can assess, share, and dispute. The space of reasons in which hope comes under scrutiny, then, is evidence-relative (Parfit 2011, 150–51). One question is, whether in relation to the evidence, hope is rational? That question suggests an evidence-relative threshold of improbability for the object of hope, at the limit the object's impossibility, beyond which hope is unjustified. Hope, however, does not tightly parallel belief. Justified hope is far more tolerant of doubt than is belief (Moellendorf 2006, 417). Hope naturally arises when an event or outcome is uncertain, because either it has not yet occurred or if it has occurred its occurrence is not known. Doubt is a typical part of such an experience. As the credence in the occurrence increases, hope seems to get squeezed out by confident belief.

Regarding its evaluative character, hope includes either desire or a desire-like aspect for the event or outcome. In the space of reasons, we may endorse or criticize our hopes in this regard as well. Hope, whether our own or another's, for that which is wrong or bad, is itself wrong or objectionable. Such a standard applied to hope seems simply to rely on a justified axiological or normative understanding. If it is wrong to act in some way, or if an

outcome would be bad, then hoping for the success of the act or the existence of the outcome also seems wrong. This second basis for evaluating hope seems to tightly parallel the assessment of actions and outcomes.

The space of reasons is shared. To the extent that there are reasons for evaluating the permissibility of hoping, these must be, in principle, intelligible to others. If hoping is constrained by both a threshold of evidence of probability and an axiological or normative evaluation of the object, then a person has some basic responsibility to modify her hopes in light of the reasons that can be marshalled for or against them. In the shared space of reasons, we appeal to the evidence accessible to each of us for the facts and to accounts that seem to explain the evidence, as well as to the values and norms that evaluate outcomes and actions. Evidence and their explanations serve as reasons that permit beliefs. Such evidence and explanation might be called "belief-makers," and with respect to hope, we might call them "hope-makers." Given sufficient hope-makers, hope is permissible. This idea features in the following discussion of hope for prosperity in the *Anthropocene*.

Attitudes that are sensitive to reasons seem to involve a complicated dispositional structure. That structure is central in evaluating the permissibility of attitude. T. M. Scanlon's description of the dispositional structure of beliefs and intentions is instructive:

[A] person who believes that P will tend to have feelings of conviction about P when the question arises, will normally be prepared to affirm P and to use it as a premise in further reasoning, will tend to think of P as a piece of counterevidence when claims incompatible with it are advanced, and so on. Similarly, a person who intends to do A will not only feel favorably disposed, on balance, to that course of action, but will also tend to look out for ways of carrying on out this intention . . . and will think of this intention as a *prima facie* objection when incompatible courses are proposed. (Scanlon 1998, 21)

The dispositional structure that Scanlon identifies for both beliefs and actions includes the following: (1) pro-feelings, (2) readiness to act, and (3) preparedness to object in the face possible attitudes that are incompatible. These dispositions are justified, if they are, considering evidence and explanation of putative facts, in light of attitude-makers.

Now suppose that hope-makers are sufficiently present to make hope for H permissible. Scanlon's account of the dispositional structure of attitudes applied to this case would have it that the following is the case. A person would be permitted (1) to enjoy the anticipation of H; (2) to act positively in some way, either by contributing to H or in positive planning for the occurrence of H; and (3) to reject attitudes, such as anxiety about H or demoralization in regards to H, that are incompatible with hoping that H. Notice then that hoping for H involves some personal commitment to H. If one hopes for the success of a political campaign, it would be irrational to fear its success,

to knowingly act to undermine its success. Some feelings, actions, or attitudes about an outcome or action. If there were no reasons for hoping were completely idle, then there would be little reason to assess its permissibility. The possession of certain dispositions is not the other ones, and therefore also not the other hopes to the contrary.

The active or psychic commitment to H has costs. Some feelings, actions, or attitudes with hoping, and it may distinguish hoping for the success of a campaign from a psychic commitment to its success of a rival campaign. The reasons relevant to assessing the strength of these opportunity costs are different reasons, and the justification for hoping appeals to evidence and explanation of the permissibility of one's hope. The permissibility of others hoping for H is also provided by reasons who are similarly situated. Some evidence and explanation, reasons, and the justification to give these because they differ. Consider how Rawls's theory of reasonable disagreement and the relevance of the evidence for the permissibility of a multitude of life experiences. Finally, the inability to realize a framework (Rawls 1993) of different assessments among different assessments among different evidence for the existence of H. If this is broadly correct, then the shared space of reasons is more demanding than a person's particularly to cast doubt on the permissibility of hoping. Some threshold of evidence for the permission to hope. The lowest possible threshold of evidence in a minimal position as follows about my hopes, and if t

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hoping were completely idle, this would not be the case and there would be
little reason to assess its permissibility. But insofar as hoping for H involves
the possession of certain dispositions, it rules out the possession of certain
other ones, and therefore also other attitudes to the contrary, among them
other hopes to the contrary.

The active or psychic commitments of attitudes entail personal opportu-
nity costs. Some feelings, actions, and attitudes are ruled out. This is the case
with hoping, and it may distinguish hoping from idle wishing. Because my
hoping for the success of a campaign normally involves some active or
psychic commitment to its success, I cannot simultaneously hope for the
success of a rival campaign. That hope has personal opportunity costs is
relevant to assessing the strength of possible hope-makers. For the acquisi-
tion of these opportunity costs requires justification in the shared space of
reasons, and the justification is made by appeal to hope-makers. When one
appeals to evidence and explanations in the shared space of reasons to justify
the permissibility of one's hope, one is also by implication justifying the
permissibility of others hoping similarly in similar circumstances. The li-
cense provided by reasons is not issued only to one person. It is held by all
who are similarly situated. Still, even if hope-makers are constituted by evi-
dence and explanation, reasonable persons may disagree about how much
credence to give these because one's epistemic access to hope-makers may
differ. Consider how Rawls talks about the burdens of judgment, the source
of reasonable disagreement about beliefs. He cites six categories of sources
of reasonable disagreement, including the complexity of determining the
relevance of the evidence for claims, disagreement about how to weigh the
relevant evidence, conceptual vagueness, differing perspectives produced by
a multitude of life experiences, competing normative considerations, and
finally the inability to realize all moral and political values in any institution-
al framework (Rawls 1993, 55). Taken together these factors might produce
different assessments among reasonable people examining the same set of
evidence for the existence of reasons to believe and to affirm political values.
If this is broadly correct, then the claim that hopes require justification in the
shared space of reasons does not entail that agreement will yield a verdict
more demanding than a permission to hope. The burdens of judgment seem
particularly to cast doubt on a requirement to hope.

Some threshold of evidence and explanation is required to make sense of
the permission to hope. Immanuel Kant is well known for adopting the
lowest possible threshold. In his "Theory and Practice" essay he asserts this
minimal position as follows: "History may well give rise to endless doubts
about my hopes, and if these doubts could be proved, they might persuade

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follow without exception given the cause. Appealing to causal mechanisms is far less robust than appealing to a causal law. Because no conditions are set out, the invoking of a causal mechanism does not entail that the effect follows with strict necessity (Elster 1986, 10). When a mechanism is invoked to explain in general the tendency of productive forces to grow, an explanation is offered, but appealing to the mechanism is only weakly predictive for two reasons. One is that the tendency can be defeated, and the other is that conditions for the operation of the mechanism are vague.

Cohen accounts for the tendency of productive forces to grow by appealing to three alleged facts about human nature and our historical circumstances:

1. The historical situation of humanity is one of scarcity. I call this "the fact of scarcity."
2. Humans possess sufficient intelligence to enable them to make improvements on their situations. I call this "the fact of intelligence."
3. Humans are sufficiently rational to seize the means to make improvements. I call this "the fact of rationality."

Taken together these three claims comprise a mechanism of the kind that Elster discusses. These alleged facts would explain a historical tendency toward replacing less productive forces by more productive ones roughly as follows: insofar as it is the case that existing productive forces are insufficient to satisfy their needs (the fact of scarcity), humans will set about discovering and testing the means to improve upon existing productive forces (that fact of intelligence), and once appropriate means of improvement are found, humans arrange things and themselves to employ the means (the fact of rationality). As the previous sentence suggests, I take the fact of rationality to include collective rationality. The tendency so understood entails that serious collective action problems are, with sufficient time, resolved. A shorthand statement of this mechanism is the following: the facts of human intelligence and rationality tend to produce changes in productive forces when doing so responds to human needs.

So stated, however, the mechanism is clearly implausible. Human prehistory during the *Pleistocene* suggests this. If the three facts to which Cohen appealed sufficed to explain growth of productive forces, we should expect periods of stagnation or decline to be the exception. Appealing to a tendency toward growth allows setbacks, but it would be remarkable if the mechanism were mostly defeated. In fact that seems to be the case. So far as we understand the evidence, *Homo Sapiens* and archaic humans used stone tools, with little development for over two million years. And during roughly the first 190,000 years of their existence, anatomically modern humans were unable

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cannot persist. Development occurs when the application of human powers to the natural environment yields gains and both the gains and the increased powers are passed down.

The most recent period of the *Holocene* had produced rapid growth in productive capacity under capitalist property relations. The Industrial Revolution constituted a major advance in material progress. The economist Thomas Piketty reports that global economic growth per capita from 1700 to 2012 was on average 0.8 percent annually, which amounts to more than a 1,000-percent increase over the entire period. According to Piketty, "Average global per capita income is currently around 760 euros per month; in 1700 it was less than 70" (Piketty 2014, 86). This growth has brought many benefits. Increased longevity is one. In the United Kingdom at the dawn of the Industrial Revolution, life expectancy at birth was about forty years. It is now about eighty years. Longevity has increased even in many poorer parts of the world. For example, at the turn of the twentieth century, life expectancy in India was about twenty-four years, and it's now about sixty-five years (Roser 2013a). Better education is another benefit. At the time of the Industrial Revolution, over 80 percent of the global population was illiterate; now it is less than 15 percent (Roser and Ortiz-Ospina 2016). And increased leisure time is a third benefit. Retirement has only recently been possible on a wide scale. In 1850, the majority of the male population sixty-five and older living in the United States was still working. Today, less than a quarter of that population is working (Roser 2013b). Freedom from toil has long been a Utopian dream of those who must spend at good portion of their day engaged in work that is not valuable for its own sake. As technological developments improved productivity, working-class movements were able to struggle for a shortened working day and for old-age pension schemes.

Even the revised mechanism comprising the four claims stated above can offer no insurance against exogenous shocks. War, pestilence, and famine remained threats throughout the *Holocene*. But insofar as the general explanation for growth employs a plausible mechanism, there is reason to hope for continued growth in productive capacity. The sufficient conditions may be lacking, or exogenous shocks may still occur. So, no confident prediction of developmental growth is possible.

The mechanism, in its revised version, is a hope-maker. It establishes reason to hope that productive capacity will continue to grow as long as humans are compelled to ingenuity as a result of scarcity. Why is it not instead sufficient reason to believe in such growth? Why is it not in other words a belief-maker? The ever-present possibility of exogenous shocks raises doubts about the future continuance of growth. Pandemics and gigantic meteor strikes cannot be ruled out. But for the present discussion a more important source of grave doubt is due the problems that growth causes. The industrial, chemical, and technological means by which prosperity is pro-

duced have created unintended consequences that could undermine the environmental basis of prosperity by eroding the fact of climatic favorability.

4. ANTHROPOCENIC THREATS

The environmental costs of much of the recent remarkable growth in productive capacity have been high. So high in fact, that many natural scientists argue that the Earth has been fundamentally altered by human activity and that it has entered a new geologic epoch, the *Anthropocene* (Crutzen and Stoermer 2000; Waters et al. 2016). Recent industrial, agricultural, commercial, and military activities have so profoundly affected basic planetary systems that scientists have begun to warn that we risk crossing planetary boundaries that could place the planetary stability of the *Holocene* in doubt (Rockström et al. 2009). This suggests that the mechanism for continued growth and prosperity appealed to in the previous section could be undermined. The *Anthropocene*, brought into existence by tremendous technological advances causing rapid growth in productive capacity, could undermine the very environmental basis of that capacity. Rather than ushering into existence generalized prosperity, continued productive growth by could be courting disaster.

In the previous section I discussed the mechanism that, according to Cohen, produces growth in productive capacity. That mechanism is the application of human intelligence and rationality to a natural environment that is inhospitable enough to require work but not so inhospitable that the fruits of labor cannot persist. I suggested the mechanism could be thought of as a hope-maker. The threats of the *Anthropocene* suggest that the mechanism may invite anxiety instead. One plausible way to think about this is that the mechanism is in an important sense self-defeating. The growth that the mechanism explains has produced conditions that may undermine continued material progress by degrading an aspect of the mechanism itself, the fact of climatic favorability. Put that way, it is far from obvious that the mechanism is a hope-maker. It instead issues an invitation to anxiety.

If, however, the facts of intelligence and rationality are taken seriously, permission to hope may still be warranted. The anxiety is that production and consumption is undermining the environmental conditions for the pursuit of material progress. But the mechanism is constituted by, among other things, the facts of intelligence and rationality applied to productive problems. The hope, then, is that these can be marshalled to solve the problem of environmental destruction, which is itself becoming a productive problem. Even if we are not confident that catastrophic environmental destruction can be avoided, and indeed it seems very hard to have such confidence, taking the facts of intelligence and rationality seriously, which one must do to rely on

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the mechanism in historical explanation, provides the basis for hope. Insofar as the tools for defeating the threats posed by the unintended consequences of productive growth are our own motivated intelligence and rationality, which have been so successful in solving productive problems in the past, hope seems permissible.

It doesn't follow from the analysis above that the problem of pursuing generalized prosperity while avoiding environmental destruction is merely a matter of hoping. Hope is not the solution, even if hope may play an important role in getting us there. If hope in progress is necessary for solving the problems that confront us, it surely isn't sufficient. Motivated rationality and intelligence may confront serious social obstacles. Consider an additional argument adapted from Cohen about the problems of capitalist growth (Cohen 2000, 302-7):

1. Under capitalist property relations economic competition between firms requires continual productivity gains.
2. Improvements in productivity can be used either to reduce labor while maintaining outputs or output may be increased while labor stays the same (or some combination of both).
3. Capitalist production tends to promote output production since the other threatens profits garnered from sales, and therefore loss of competitive strength.
4. Output production depletes resources and creates pollution and is a fundamental contributor to stress placed on planetary systems.
5. Therefore, capitalism tends to deplete resources, creates pollution, and contributes in a fundamental way to stress of planetary systems.

This is an argument for the existence of another tendency. This tendency consists not in features of human nature under specific environmental conditions but in capitalism's tendency to use productivity gains to promote output production. Insofar as massive increases in production tend both to deplete natural resource and pollute the environment, stresses to planetary systems are the expected results.

Insofar as productivity gains could also be used to reduce toil and approximate generalized prosperity, capitalism rather than human nature might be thought to be the source of the problem of the stress placed on planetary boundaries in the *Anthropocene*. But since growth in productive capacity is still needed, merely changing property relations to achieve more egalitarian entitlements, even if incentives to produce were not diminished, would not result in generalized prosperity. Output growth is still needed, and historically we have witnessed no better way to achieve that than by means of market competition.

Market competition has produced huge growth in human productive capacity. It has also had the unintended consequence of creating environmental destruction that threatens the very basis of that growth. It threatens to undermine that fact of climatic favorability and other fundamental planetary processes. There is the need for continued growth of the kind that market competition has been capable of producing, but there is also need for a reduction of the risks disrupting the environmental stability that makes abundance possible (Moellendorf 2019). Our reasons for hoping that the course of sustainable growth can be found rest in the facts of intelligence and rationality, our capacities to intelligently devise and to rationally pursue solutions to the problems of human production.

The Development Thesis is standardly understood, even by Cohen himself, as a claim about the engine that drives growth in productive forces. Still, if there is in fact a tendency in capitalism toward environmental destruction, perhaps the facts of intelligence and rationality can be called upon to mitigate that tendency. Whether that requires reforming capitalism and redirecting its productive capacity or replacing it but preserving the capacity for production under broader public control is unclear. In either case, the solution is beyond the standard interpretation of the Development Thesis since it involves matters of political and social policy and contestation.

5. CONCLUSION

I have argued that hope is rationally permitted given the existence of sufficient hope-makers, evidence, and explanatory theories that provide reasons to hope. The mechanism offered by Cohen that explains the tendency of productive forces to grow, amended with the addition of the fact of climatic favorability, is a hope-maker for the achievement of eventual generalized prosperity. But that mechanism risks being self-defeating as growth in consumption and production erode the fact of climatic favorability. Moreover, the very social processes that seem best suited to producing such prosperity, namely market competition, also threaten to undermine the fact of climatic favorability by depleting resources and creating pollution that threatens planetary boundaries. Hope for the creation of generalized prosperity, without disrupting the planetary stability, is directed then not only to technological advancement, but also to the solving of a serious social problem. The aim must be either to harness capitalist growth while preventing further environmental destruction or to transition to a different form of property relations with more egalitarian entitlements, a form of property relations that is capable of maintaining growth incentives but that is better able to prevent environmental destruction.

1. An earlier version of this paper was *History: A Defence, 40 Years On*, at G. I am thankful to the participants for the feedback comments.

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NOTE

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Chap

Polit and Cooperat

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The philosophical literature on outcomes that affect them personally; kind of hope that we find in social hopes for social change (or that often deeply influence their relationships; social outcomes are typically and are therefore constitutively the cooperation of others in activities of which we can never be completely certain; of an outcome and appropriate relationship to success.

The importance of hope in the appearance of the language of inspired references to hope (for example, Lloyd 2018) provides a reflecting a situation in which we are aware of the need for the change, highly uncertain. The rhetoric in situations where public trust in makers is in decline and we must effect the change they hope in Barack Obama's 2009 post-crisis European economic (Ferrara 2013; Principe 2011).