

Economic inequality and the long-term future

Politics, Philosophy & Economics

1–33

© The Author(s) 2023



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/1470594X231178502

journals.sagepub.com/home/ppe**Andreas T. Schmidt** *Faculty of Philosophy, University of Groningen,
Groningen, The Netherlands***Daan Juijn***Dutch Ministry of Economic Affairs and Climate
Policy, The Hague, The Netherlands*

Abstract

Why, if at all, should we object to economic inequality? Some central arguments – the argument from decreasing marginal utility for example – invoke instrumental reasons and object to inequality because of its effects. Such instrumental arguments, however, often concern only the static effects of inequality and neglect its intertemporal consequences. In this article, we address this striking gap and investigate income inequality's intertemporal consequences, including its potential effects on humanity's (very) long-term future. Following recent arguments around future generations and so-called longtermism, those effects might arguably matter more than inequality's short-term consequences. We assess whether we have instrumental reason to reduce economic inequality based on its intertemporal effects in the short, medium, and the very long term. We find a good short and medium-term instrumental case for lower economic inequality. We then argue, somewhat speculatively, that we have instrumental reasons for inequality reduction from a longtermist perspective too, primarily because greater inequality could increase existential risk. We thus have instrumental reasons to reduce inequality, regardless of which time-horizon we take. We then argue that from most consequentialist perspectives, this *pro tanto* reason also gives us all-things-considered reason. And even across most non-consequentialist views in philosophy, this argument gives us either an all-things-considered or at least weighty *pro tanto* reason against inequality.

Corresponding author:

Andreas T. Schmidt, Faculty of Philosophy, University of Groningen, Oude Boteringstraat 52, 9712 GL Groningen, The Netherlands.

Email: a.t.schmidt@rug.nl

Keywords

inequality, equality, egalitarianism, future generations, growth, intergenerational justice, utilitarianism, longtermism, existential risk

Introduction

After a steady decline until the 1970s, income inequality has been on the rise in nearly all wealthy countries in recent decades. What, if anything, is objectionable about such inequality? Political philosophers here supply us with a wealth of *non-instrumental* arguments, focusing on questions such as fairness, justice, equality of opportunity, and relational inequality.¹ Instead, we here focus on *instrumental* concerns, zooming in on the external benefits economic equality might produce. For example, one classic instrumental argument is utilitarian: aggregate wellbeing will be higher with less economic inequality, because of the diminishing marginal utility of income.

However, such instrumental arguments typically focus on the *static* properties of income inequality, that is, on the effects inequality would produce during a somewhat limited time slice. Yet income (in)equality likely has *intertemporal* consequences too. And it is far from clear whether such consequences will be good or bad. For instance, Tyler Cowen has recently argued that high economic growth should take priority: with a long enough timeframe, the exponential nature of growth ensures that future benefits will outweigh all other considerations (Cowen, 2018). Moreover, if equality lowers longer-term growth rates – as some have argued – the dynamic instrumental case would speak against reducing inequality. In response, one might contest that there is a growth-equality trade-off. Or one could argue that equality comes with its own long-term benefits, such as better political institutions.

Such intertemporal arguments would typically focus on effects within the next hundreds to, maybe, thousands of years. But we could go further and include inequality's effects on *all* future well-being. Doing so moves us into the realm of *longtermism*, an influential idea in the Effective Altruism community. In its strong version, longtermism holds that, since the future holds the vast majority of potential value, positively influencing the expected value of the long-term future should be the key moral priority (Greaves and MacAskill, 2023). 'Weak longtermism' holds that positively influencing the expected value of the long-term future should be *among* our key priorities in at least some decision contexts (MacAskill, 2022: 1). Suppose reducing income inequality has non-negligible expected consequences for our far-future descendants. Longtermism would then imply that whether we should reduce economic inequality or not is determined (primarily or at least partly) by such long-term effects.

So, we can assess the instrumental character of income inequality in three different ways: we can focus on effects in the short term, the medium term (hundreds to thousands of years), or – adopting longtermism – all its future effects. It is not obvious that these three approaches converge. The lack of work on these questions constitutes a surprisingly large and important gap in the literature. This article makes a start filling this gap. To assess the instrumental benefits of equality/inequality, we use an instrumentalist framework under different timeframes. We do not look for an optimal level of inequality.

Instead, we consider how, at the margin, reducing or increasing economic inequality in today's richer countries (roughly, OECD countries) would impact expected aggregate human wellbeing, other things equal. We consider three timeframes, short, medium, and long-term. We find a good short and medium-term instrumental case for lower economic inequality. We then argue – somewhat speculatively – that we have instrumental reasons for inequality reduction from a longtermist perspective too, primarily because greater inequality could increase existential risk. We thus have instrumental reasons for reducing inequality, regardless of which time-horizon we take.

We then argue that this *pro tanto* argument has important implications for how philosophers should think about economic inequality. Performing a 'moral sensitivity analysis', we argue that for most consequentialist views, the *pro tanto* argument also provides all-things-considered reason to reduce inequality. And even across most non-consequentialist views, the argument either provides an all-things-considered or at least a weighty *pro tanto* reason to reduce inequality.

Our results matter for discussions around our obligations towards future people. First, most people believe we have duties towards future generations. Accordingly, when assessing policies that affect inequality, their impact on future generations should be a relevant dimension (when assessing proposals to reduce inequality, for example Atkinson, 2015). Second, in philosophy, there has been increasing interest in longtermism and existential risk but no work yet that connects this to economic inequality. Our article makes a start filling this gap.

Our results also matter for discussions around egalitarianism and equality. We here provide a new intertemporal and instrumental argument against inequality. Philosophical discussions around inequality often focus on the non-instrumental disvalue of inequality. In What follows? we show how our instrumental arguments matter across many non-utilitarian and non-consequentialist views, including those that attach non-instrumental disvalue to inequality. But there are also good general reasons to probe inequality's *instrumental* disvalue. First, philosophers themselves put forth instrumental arguments, and such arguments have a long tradition in economics too, both theoretical (Lerner, 1978) and more empirical (discussed below).² If we want to answer the question 'what, if anything, is wrong with economic inequality?' comprehensively, an analysis of its potential *instrumental* disvalue should be included. Second, an attractive feature of instrumental arguments is that they can also appeal to those who do not start with egalitarian premises. For example, even if you dispute that inequality is bad in itself, you might still be moved if an argument shows that inequality reduces aggregate wellbeing or increases existential risk. Finally, there is much empirical work on the effects of economic inequality, including on (prima facie) important variables like wellbeing, health, democracy, growth and more. To get a fuller picture of the value of equality, we think philosophical theorising should be in conversation with this rich empirical literature.

We proceed as follows. In Framework, we describe our framework. In short-term effects and medium-term effects, we respectively analyse the short and medium-term effects of income inequality. In Longtermism and existential risk and Long-term effects, we analyse the instrumentalist longtermist case for more equality. In Longtermism and existential risk, we first introduce longtermism and its relation to existential risk. In Long-term effects, we present arguments to the effect that higher income

inequality can reduce the expected value of the long-term future. In what follows?, we perform our ‘moral sensitivity analysis’ and conclude in Conclusions.

Framework

Do we have instrumental reason to reduce within-country economic inequality when we extend the time horizon from the short to the medium to the long-term future? Our question has three components: (i) our evaluand (‘economic inequality’), (ii) normative framework (‘instrumental reason’) and (iii) time horizon (‘extend the time horizon ...’). We now specify all three, starting with (i).

First, we focus on *domestic* inequality and largely ignore global inequality. Much policymaking happens at the state level, which offers routes for making domestic equality tractable. Moreover, as we will see, within-country inequalities matter in ways that do not apply to global inequalities. Finally, we also make this restriction, as there is more data and research for domestic than for global inequality and to keep our research question feasible. (Of course, none of this implies that global inequalities are unimportant. In fact, global inequality might be very important from a longtermist perspective and we briefly suggest avenues for future research in What follows?)

Second, for tractability, we mostly focus on inequalities in rich countries, roughly, member states of the OECD.

Third, we focus on *disposable income* inequality (roughly, income after taxes and transfers). We mostly do not discuss other forms of economic inequality, such as consumption or wealth inequality, to make the article tractable and because most empirical research is about income.³

Fourth, our analysis is broadly within what political philosophers call ‘non-ideal theory’ (Valentini, 2012). We consider whether reducing inequality would be instrumentally valuable for typical OECD countries as they are and not for idealised versions of them drastically better along some other dimension.

Fifth, we enquire whether, at the margin, richer countries have instrumental reason to prefer more equal distributions, other things being equal. Accordingly, we do not discuss whether countries should be ‘perfectly equal’, what the optimal level of inequality would be, or whether reducing inequality is the most effective way to improve humanity’s long-term wellbeing.

Finally, we do not specify *how* to reduce income inequality. This is a serious limitation, as different measures have different effects. One might be tempted to instead frame this discussion around a particular measure to reduce inequality, such as a change in income tax. However, we think there are two questions that should be answered separately: first, is it desirable to reduce inequality? And, second, what are the best measures to reduce inequality? We here focus only on the first question, as the second question is only worth asking if the answer to the first question is ‘yes’. Moreover, discussing all candidate policies to reduce inequality and their various combinations is unfortunately beyond our current scope.⁴

Move on to (ii). Our analysis in Short-term effects, Medium-term effects, Longtermism and existential risk will assess inequality’s effect on individual *wellbeing*. Again, we focus on wellbeing to keep things manageable. We only briefly touch upon

sources of value other than wellbeing. But this does not limit the generality of our conclusions too much. Nearly all axiological theories view wellbeing as *one* of the central sources of intrinsic value. So, if wellbeing effects are large enough, our instrumental arguments should make for a strong *pro tanto* instrumental argument across most axiologies. Moreover, out of all candidates for intrinsic axiological value, wellbeing is likely the most widely accepted. But, at any rate, in *What follows?*, we show that including goods other than wellbeing likely reinforces, rather than threatens, our argument.

Theories of wellbeing come in many different forms. Consider four types of theories: first, ‘psychological theories’ locate wellbeing in positive or negative psychological states. Hedonism holds that wellbeing is broadly equal to pleasure minus pain. Broader psychological state theories hold that wellbeing is the presence of positive psychological states and absence of negative states, where that includes pleasure and pain but also a richer range of other emotions and mental states (Haybron, 2008; Schkade and Kahneman, 1998). Second, ‘judgement-sensitive’ views locate wellbeing in the extent to which individuals judge their own lives to be good or how satisfied they are with their lives (Sumner, 1996). Third, preference-based views locate wellbeing in whether a person’s preferences (or a specified subset of their preferences, such as their autonomous life plans) are fulfilled. Fourth, objective list theories locate wellbeing in the presence of objective goods, such as knowledge, achievement, and virtue.⁵

For our purposes, we remain mostly non-committal to broaden the reach of our argument. To still reach interesting conclusions, we consider different sources of evidence. On direct evidence on wellbeing, we consider research on life satisfaction and experience wellbeing. Experience wellbeing concerns an agent’s actual, subjective and momentary well-being, such as whether they experience negative or positive emotions (Kahneman and Sugden, 2005). Experience wellbeing most directly relates to the first group of theories of wellbeing (psychological theories). Measuring life satisfaction, in contrast, people are asked questions like ‘how satisfied are you with your life on a scale from 1–10?’. Such measures are more indicative of theories in the second (‘judgement-sensitive theories’) and, arguably, the third group. Although these two measures can come apart, in the cases we consider they are either sufficiently correlated or differ in ways that do not threaten our conclusions. A second source of evidence will be to consider large-scale trends and outcomes, such as climate change or health outcomes, that likely have the same ‘valence’ (good or bad) across most views of wellbeing. Again, in *What follows?*, we consider goods other than wellbeing.

Finally, consider (iii), our timeframe. Most people and theorists agree that we ought to consider our effects on future people. But it is less clear how far into the future our obligations reach. We here operate with three different time frames: short, medium and long term.⁶

We can now define Instrumentalism. Applied to a governmental level, we take Instrumentalism to be:

Instrumentalism: Out of two policy options, one has strong *pro tanto* reason to choose the policy that in evidence-relative expectation brings about higher aggregate wellbeing of all agents within the relevant timeframe.⁷

Instrumentalism is about choosing a ‘policy’, which we understand very broadly to also include pieces of institutional design, such as setting up an electoral rule, tax code, or a healthcare system. Moreover, Instrumentalism is comparative rather than maximising.⁸ This is convenient for our non-ideal and somewhat open-ended approach: we discuss whether, *ceteris paribus*, we should reduce inequality. We do not look for the optimal level of inequality let alone optimal policy option. Finally, implicit in Instrumentalism – again assumed for tractability – is the total view of population ethics, which ranks states of the world based on aggregate individual value, in this case, wellbeing, contained therein. Instrumentalism is our normative framework for the intertemporal instrumental assessment of inequality. In Short-term effects, Medium-term effects, Longtermism and existential risk, Long-term effects, we only change the relevant timeframe. But in What follows? we show that our conclusions are robust and important across a much wider range of normative views.

Short-term effects

We now assess the direct, static effects of income inequality on aggregate wellbeing. To this end, we limit the effects we consider under Instrumentalism to the next 50 years.

So how do income and income inequality affect well-being in the short term? Drawing on recent work in economics and psychology, we can go beyond speculation (Kahneman and Krueger, 2006).

More than 40 years ago, Richard Easterlin observed a strange trend: household income predicts cross-sectional differences in life satisfaction within countries, but average national life satisfaction did not seem to rise when a country grows wealthier over time (Easterlin, 1974). Generating much debate, some have tried to explain the so-called Easterlin Paradox, for example by pointing to *relative income* and social status: because we prefer earning more relative to others, life satisfaction increases cross-sectionally but not intertemporally (Clark et al., 2008; Ferrer-i-Carbonell, 2005). However, others have challenged Easterlin on the data. With more and better data it seems more likely that there *is* a logarithmic and statistically significant relationship between life satisfaction and GDP over time (Sacks et al., 2012; Stevenson and Wolfers, 2008, 2013).⁹

For our purposes, what matters is that most authors agree that (1) the cross-person within-country relationship between life satisfaction and income is statistically significant and logarithmic and that (2) the cross-country relationship between life satisfaction and income is statistically significant and logarithmic. As we here consider the short term only, that is enough to support the *decreasing marginal utility effect*.¹⁰ Based on cross-sectional data, Stevenson and Wolfers find that a doubling of annual household income leads to an increase in life satisfaction of around 0.3 points (Stevenson and Wolfers, 2013: 14). But this holds for *any* doubling (up to a potential upper bound): increasing Alice’s income from 10,000 to 20,000 USD is expected to deliver the same increase in life satisfaction as doubling Bob’s income from 80,000 to 160,000 USD. In other words, raising Alice’s income is eight times more efficient than raising Bob’s income. Since the life satisfaction curve with respect to annual household income is concave, aggregate life satisfaction can typically be increased through more equal economic distributions.¹¹

The decreasing marginal utility effect still holds, and is likely stronger, if we focus on ‘experience wellbeing’. Experience sampling asks respondents at random times how happy they feel. In an influential study, 1000 participants were asked whether they experienced positive emotions yesterday (Kahneman and Deaton, 2010). The proportion of people that answered affirmatively again increases logarithmically with annual household income. The speed with which marginal utility diminishes is probably higher for experience utility than for life satisfaction.¹² Stevenson and Wolfers also report larger coefficients for the relationship between income and life satisfaction than for the relationship between income and experience wellbeing (Stevenson and Wolfers, 2008). Any recommendation to reduce income inequality based on decreasing marginal life satisfaction could hence be conservative.

Beyond the marginal utility effect, inequality could affect aggregate short-term wellbeing through other pathways, such as *perceived unfairness*. Several recent studies find that developed countries display a negative relationship between domestic income inequality and life satisfaction, after controlling for household income (Blanchflower and Oswald, 2003; Ferrer-i-Carbonell and Ramos, 2012; Gruen and Klasen, 2013). Oishi et al. report a ‘negative link between income inequality and the happiness of lower-income respondents [that] was explained not by lower household income, but by perceived unfairness and lack of trust’ (Oishi et al., 2011: 1).¹³

We have so far looked for *direct* evidence of how static inequality affects wellbeing. Alternatively, one could assess how inequality affects other valuable outcomes. For example, research suggests more equal societies have better somatic and mental health, higher levels of trust, better educational outcomes, and less crime (Marmot, 2005; Pickett and Wilkinson, 2015; Wilkinson and Pickett, 2010). Much has been written in social science and epidemiology debating how strong the evidence is and whether correlations might be spurious, due to a confounder or reverse causality.¹⁴ We need not settle those disputes here. Plausibly, when we combine all this research, and aggregate our respective credences, we still have reason to believe equality furthers desirable social outcomes. And we can believe so, even if not all causal effects hold up. This has two implications. First, the case for equality’s short-term instrumental value could be made using values other than wellbeing. Second, this research might also indirectly support the conclusion that, in the short term, reducing inequality increases aggregate wellbeing, as goods like health are likely conducive to wellbeing (including across different theories of wellbeing).

Overall, reducing inequality is instrumentally valuable in the short term. The rate at which marginal utility diminishes in developed countries is large. So, the positive marginal effects of reducing inequality are likely large too. Relational factors like perceived unfairness and other potential interactions, like health and social trust, further support the short-term instrumental case.

Medium-term effects

Let us now move on to the intertemporal effects of income inequality up to the medium-term future. To this end, we consider – again, somewhat arbitrarily – effects on wellbeing that happen within the next 500 to 1000 years.

Do we have instrumental reason to support economic equality in the medium term? Consider first an argument against inequality that builds on the argument in the previous section.

First, the short-term case likely extends, in some way, to the medium term. Economic inequality likely creates some path dependence such that inequality now will entrench some inequality in the future. For example, Acemoglu and Robinson argue that economic distributions will also affect distributions of political and de facto legal power which in turn further affect future economic distributions (Acemoglu and Robinson, 2008, 2013; Chong and Gradstein, 2007). Moreover, high inequality likely reduces egalitarian norms and ideals and can make a society more tolerant of inequality (Birdsall, 2001: 25–6). Finally, countries with high inequality typically have lower social mobility leading to intergenerational transmission of inequality (International Panel on Social Progress, 2018: 94–6). Therefore, high inequality today increases the chances of high inequality tomorrow. And, seeing that inequality lowers wellbeing statically, inequality now raises the chances of inequality lowering future wellbeing too.

A second argument is that, because inequality lowers short-term wellbeing, we only need to establish that it does not have adverse effects in the medium term. Absent any adverse effects, the short-term positive effect becomes the tiebreaker. However, there are several potential arguments why inequality reductions could yield *negative* intertemporal effects, potentially big enough to outweigh short-term gains. We now consider two candidates: inequality's effect on growth and climate change.

Growth

In a recent book, Cowen argues that if we seriously value future welfare, high and sustainable economic growth rates should be our main objective (Cowen, 2018). And there are good reasons to consider growth relevant from a medium-term perspective. Because of the exponential nature of economic growth, small changes in yearly growth rates might cause massive changes in welfare in the long run. For example, 'had America grown one percentage point less per year between 1870 and 1990, the America of 1990 would be no richer than the Mexico of 1990' (Cowen, 2004: 127–8). Cowen argues that economic growth increases wealth, health, life span, spare time, access to a whole range of technological resources, mobility, level of education, and more (Cowen, 2018: 19–33).

As we saw above, there is still some discussion to what extent such benefits translate into increases in well-being. For the sake of argument, assume there is a logarithmic relationship between within-country GDP growth and average life-satisfaction. Suppose for the moment that a doubling in GDP over time results in a 0.1 increase in average well-being measured on a ten-point scale and a country's growth rate is constant at 3% per year. Under such a growth rate, it takes 235 years for GDP to double 10 times, resulting in an increase in average well-being of a full point. After 500 years, GDP has doubled more than 20 times, increasing average well-being by more than 2 points (we should probably abandon the ten-point utility scale by that point). If instead, the growth rate was constant at 4% per year, GDP would double 10 times 50 years earlier. After 500 years, the difference in average well-being under the two respective growth rates approaches one whole point.

If egalitarian policies lower growth, as Cowen argues, there could hence be a strong medium-term instrumental reason against reducing inequality (Cowen, 2018). However, it is unclear whether inequality-reduction does in fact reduce growth.

Indeed, some mechanisms seem to *reduce* growth, while others seem to *increase* it. Consider, briefly, the main mechanisms suggested in the literature.¹⁵

More inequality may *decrease* economic growth: first, stark inequality might reduce institutional quality, for example, by reducing social capital, trust, and investment in public goods and by facilitating elite capture of public institutions (Alesina and La Ferrara, 2002; Alesina and Perotti, 1996; Birdsall, 2001; Chong and Gradstein, 2007; Glaeser et al., 2003; Keefer and Knack, 2002; van Bavel, 2016). Second, inequality might lead to underinvestment in human capital, especially among poor citizens (Birdsall, 2001; Ghatak and Jiang, 2002). Finally, inequality might reduce the size of the middle class, which could lead to insufficient domestic demand (Foellmi and Zweimüller, 2006; Galor and Moav, 2004; Murphy et al., 1989; Zweimüller, 2000).

Conversely, some hypothesise that more inequality may *increase* economic growth by incentivising citizens to work hard, take risks and invest in their future (Kornai, 1992; Li and Zou, 1998) and by leading to less income being spent on consumption, thereby increasing aggregate savings and investment (Kaldor, 1955).

How should we assess those suggested effects? One option would be to probe them all in detail. However, given space constraints, we instead survey attempts to determine their aggregate effect directly. Federico Cingano provides an extensive literature review (Cingano, 2014). Unfortunately, Cingano finds no consensus. Between 1994 and 2014, studies that find positive relationships between growth and inequality are about as prevalent as studies that find negative relationships. To make things more complicated, the Deininger and Squire dataset most often used in this period may be unreliable and inconsistent, and inequality data from different countries is often incomparable (Atkinson and Brandolini, 2001). Several studies might also suffer from endogeneity problems. Statistical methods usually cannot fully account for the potential of reverse causality and omitted variables.

Perhaps the most promising empirical study to date has been conducted on behalf of the OECD by Cingano (Cingano, 2014). It only includes OECD countries, which is fitting for our current purposes. Cingano also uses particularly good and comparable panel data. The OECD dataset further enables the use of multiple different inequality indicators, whereas other studies must rely on a single indicator. Cingano finds that income inequality has a sizeable *negative* effect on economic growth in OECD countries. A 1-point reduction in Gini coefficient is associated with an increase in yearly GDP growth of around 0.15%. This effect seems to be linear. As Cingano writes: ‘in practice, no [...] non-linearity was found – the effect on growth of an increase in inequality from 20 to 21 Gini points was found to be the same as the effect of increasing the Gini from 40 to 41’ (Cingano, 2014: 19). The data also suggest that the gap between low-income households and the rest of the population is of key importance. Strikingly, low-income households are defined here as those in the bottom 40% of the income distribution. Inequality caused by the very rich getting even richer is not found to hamper growth. These results suggest that solely focusing on alleviating poverty or lowering the incomes of the very rich is suboptimal. Instead, growth can be increased by addressing low incomes more broadly. Given the existence of contradicting studies, we should take Cingano’s conclusions with a grain of salt (see International Panel on Social Progress, 2018: 98). Yet we conclude that it is rational to assign a higher credence to believing income inequality reduces growth in developed countries than that it boosts it.

Climate change

The critical reader might point out that Cowen's argument in favour of growth is based on *sustainable growth*. If combating inequality leads to higher growth rates, and if growth increases greenhouse gas (GHG) emissions, more equality might increase GHG emissions and thereby decrease future wellbeing. From a medium-term perspective there is of course good reason to consider climate change. In expectation, the effects of climate change are likely net-negative on aggregate future wellbeing in the medium term. For example, the Intergovernmental Panel on Climate Change identifies several high-confidence risks for the medium term, including increased morbidity and mortality, frequent flooding and natural disasters, food insecurity, freshwater shortages, risks to livelihoods, and vast economic costs (Pörtner et al., 2022).

Many studies indeed find a positive relationship between GDP and carbon emissions, although the estimated effect sizes tend to be bigger for developing countries than for rich nations (Acaravci and Ozturk, 2010; Holtz-Eakin and Selden, 1992; Ramanathan, 2006). Unfortunately, these studies do not control for inequality. Furthermore, since aims to reduce emissions have been widely embraced by developed nations, we cannot simply extrapolate previous findings. It is hence difficult to draw immediate conclusions from the apparent link between GDP and a country's carbon footprint. We can, however, investigate the direct relationship between domestic income inequality and a country's carbon emissions after controlling for GDP. A few early studies have found a negative relationship between income inequality and national carbon emissions (Heerink et al., 2001; Ravallion et al., 2000). Later research showed a nonsignificant relationship instead (Gassebner et al., 2011). Recently, larger datasets have become available and an early consensus has emerged. In the last decades, the association between income inequality and carbon emissions in high-income countries has shifted from negative to positive, suggesting that in recent years, more income inequality increases carbon emissions. In lower-income nations, however, the relationship has stayed negative (Grunewald et al., 2012; Jorgenson et al., 2015, 2016).

Grunewald et al. provide an explanation of the negative effect found in low-income countries (Grunewald et al., 2012). In low-income countries, many poor citizens effectively live outside the carbon economy. If inequality in such countries decreases, previously poor citizens become richer and start to emit carbon (for instance, they might buy their first car). In rich countries, most citizens are part of the carbon economy already. So, this negative contribution is not observed. Conversely, multiple pathways could explain the *positive* effect recently found in wealthy nations. First, high inequality may encourage conspicuous consumption as the fight for material status increases. Moreover, average working hours tend to increase as inequality rises (Bowles and Park, 2005). In addition, longer working hours might be associated with a larger carbon footprint (Fitzgerald et al., 2015; Knight et al., 2013). Second, income inequality may also increase a nation's carbon emissions by eroding social trust. In unequal countries, citizens might be less tempted to start pro-environmental social movements or promote socially responsible behaviour (Cushing et al., 2015). Third, concentration of economic power and, with it, political power can prevent pro-environmental action and regulation (Knight et al., 2017). Which pathway is most influential, and which one

holds up empirically, does not matter much here. For empirical data and theory seem to point in the same direction: improving conditions for the bottom 40% of households might boost growth more sustainably than relying on other pro-growth mechanisms. So, if anything, a concern around climate change also supports economic equality.

Overall, we likely have medium-term instrumental reason to reduce inequality in developed countries. Inequality today is likely to cause inequalities in the future, which in turn lowers expected future wellbeing. Moreover, inequality likely increases GHG emissions and is somewhat likely to lower medium-term growth rates.

Longtermism and existential risk

We now move on to assess the effects income inequality might have on aggregate well-being in the very long term. To this end, we assign equal value to all well-being regardless of when it is experienced. That is, *all* future agents are included in Instrumentalism's timeframe. However, before we do the analysis, a short philosophical intermezzo is in order.

First, as mentioned above, longtermism has recently emerged as a research programme on future generations (Beckstead, 2013; Greaves and MacAskill, 2023; MacAskill, 2022; Ord, 2020; Schmidt and Barrett, 2023). The first longtermist claim is that, in expectation, most ethical value lies in the long-term future, where this encompasses the entire future of human-originating civilisation, including millions or even billions of years from now. Across the entire future of humanity, future people could outnumber today's people by many orders of magnitude. The second claim is that some of our actions affect the expected value of the long-term future. Accordingly, the ethical value of at least some actions will then primarily be determined by their expected long-term future effects. In our case, longtermism would imply that if we find that equality has such long-term effects in expectation, those could trump the short-term instrumental value that is more commonly the subject of discussions around inequality.¹⁶

Now, an obvious worry about longtermism is epistemic: can we ever make any meaningful predictions about effects in the very long-term future? The worry is not that we do not impact the long-term future but that we cannot rationally predict how.¹⁷ Longtermists respond by giving examples of actions where, in expectation, it seems irrational to remain indifferent regarding their effects on the long-term future. There are broadly two types of interventions: (i) existential risk interventions seek to extend the length of human existence by reducing the risk of humanity or 'Earth-originating intelligent life' going extinct; (ii) trajectory change interventions seek to increase the probability that, conditional on existing, humanity sets out on valuable rather than disvaluable long-term trajectories.

Starting with existential risk, it seems plausible that some policies change overall existential risk. When devising a nuclear defence strategy, for example, it would be irrational to ignore its potential impact on existential risk. Focusing so much on existential risk might seem esoteric or unusually gloomy. But, from a longtermist perspective, extinction is supremely bad in expectation, as it would destroy a potentially very long and valuable future.¹⁸ Moreover, while of course highly uncertain, expert analysis and informal polls among experts suggest an existential catastrophe might be higher than commonly believed, with estimates of 10%–20% by the end of the century not being uncommon (Ord, 2020; Sandberg and Bostrom, 2008).¹⁹ Moreover, the bulk of such

percentages stem from *human-induced* existential risks such as nuclear war, bio-engineered pandemics, and misaligned artificial intelligence. This being so, it seems likely we can affect these probabilities by a non-negligible amount.

Beyond existential risk, it also seems plausible that some actions and policies might affect the probabilities of long-term trajectory change. Long-term trajectories are paths human civilisation takes into the long-term future (Baum et al., 2019). Those trajectories might be highly positive. For example, technological and social progress might enable great improvements in human wellbeing. Or humanity might successfully expand into space and vastly increase the number of flourishing lives. In a less rosy future, humanity might get stuck in a civilisational state of much lower value than the status quo or alternative feasible trajectories. In a longtermist analysis, we thus need to see whether policies would affect the probabilities of long-term trajectory change. For example, extreme climate change might require costly responses for a very long time. And some catastrophic events, like a nuclear war or a bioengineered pandemic, might not lead to full extinction but be so devastating that humanity never fully recovers its civilisational potential. MacAskill also argues that what moral and social values we have can be quite persistent across time. Yet what values societies adopt is more contingent than we often think (MacAskill, 2022: 3). ‘Moral change interventions’ might thus be valuable from a longtermist perspective. Conversely, adopting the wrong values is highly negative in expectation, particularly given potential risks that such values could be locked in for a long time (MacAskill, 2022: 4). One risk hereby revolves around artificial general intelligence (AGI): if the goals AGI pursues are badly misaligned or if AGI would be used by authoritarian governments to fortify their power, the wrong values could be locked in for a long time.

So, a longtermist analysis of inequality will get off the ground, if we find considerations why inequality could affect overall existential risk or the probability of long-term trajectory-change. Of course, such considerations will be far more speculative than is common in academic research. Methodologically, our assessment of the evidence is broadly ‘Bayesian’ in spirit. One way to proceed would be to include only the most rigorous studies with highly reliable results and exclude all others. However, for longtermist assessments we cannot afford this luxury. Research that empirically tests human extinction is unlikely to get ethics approval. Yet the paucity of rigorous evidence and our epistemic uncertainty does not justify *ignoring* the long-term future. Rather, we include empirical considerations even when our credence in them should be low (and maybe imprecise). However, when analysed, and when we aggregate our credences (informally), such considerations still justify updating our credence on whether less inequality is more likely to have good or bad long-term effects.

Long-term effects

To assess the long-term effects of domestic income inequality in developed countries, we assume that all future wellbeing matters equally, even value experienced thousands of years into the future. Our contention is that inequality reduction makes a positive marginal difference to the expected value of the long-term future, primarily because it is more likely to decrease rather than increase existential risk. Our somewhat preliminary conclusion is thus that longtermists should favour inequality reduction.

We discuss several reasons for why inequality might have negative effects and one reason why it might have positive effects. The negative effects we discuss are climate change, the effect of inequality on public institutions, conflict and polarisation, and differential progress. The potential positive effect we discuss is that if inequality lowers growth rates, and if growth increases existential risk, then inequality could lower existential risk.

Climate change

As we learned in Short-term effects, inequality increases a wealthy country's carbon footprint. This is a problem. Climate change, as mentioned above, not only reduces wellbeing in the medium term, there are also longtermist reasons against it.

First, climate change itself is an existential risk, particularly given uncertainty around its tail-end risks (Ord, 2020: 4; 6). (Although, it is likely not the greatest existential risk (Ord, 2020: 5)).

Second, climate change is likely what Ord calls a 'risk factor': increasing or reducing climate change will likely affect the total existential risk, even beyond the probability that climate change itself will cause an existential catastrophe (Ord, 2020: 152). For example, increasing temperatures and more extreme weather imply that the fight for scarce resources such as sweet water will increase over the next decades (Global Peace Index 2019: Measuring Peace in a Complex World, 2019). Furthermore, deteriorating living conditions might lead to climate refugees who, in part, will flee to developed countries, which could lead to institutional destabilisation and conflict.

Finally, beyond extinction risk, climate change could put us on a suboptimal (non-extinction) trajectory: run-away climate change, for example, might put us on a path we cannot easily leave and which necessitates continuous costly adjustments, such as adapting to repeated flooding and adjusting agriculture to extreme weather irregularities. When aggregating those negative effects across time, those might add up to significant long-term costs.

Institutional quality and conflict

It is often argued that a country's long-term performance depends to a significant extent on the quality of its institutions, including its political and legal institutions (Acemoglu et al., 2005). Economic research mostly focuses on explaining long-term differences in growth rates. As seen above, some researchers argue that high inequality will reduce growth rates, among other things, because it can worsen institutional quality. However, besides facilitating economic growth, public institutions have other functions that matter from a long-term perspective. For example, disaster preparedness, education, public health, foreign policy, science policy, and many other areas could influence the expected value of the long-term future. If such things go badly, they could increase existential risk. Conversely, good institutions will help reduce existential risk. For many existential risk reduction strategies likely require public goods and collective action, which in turn require good public institutions (among other reasons, because some such public goods are unlikely to be provided by markets). So, it seems reasonable to assume that,

with most other societal goals, good institutions can help deliver existential risk reduction. Here is a cheesy analogy: targeted actions like washing your hands regularly or getting a flu shot can reduce your risk of dying from an infection. But you will also do well investing in a strong immune system, as that is an ‘all-purpose good’ in lowering your risk of dying from any bacterium or virus. Investing in good institutions might similarly be an all-purpose-good: rather than tackling individual sources of existential risk directly, we improve conditions for tackling whatever existential risks may come our way.

There are several reasons why higher inequality could weaken institutional capacities for longtermist public goods.

First, there is some direct evidence that, whatever the causal pathway, inequality reduces institutional quality (which in turn typically leads to more inequality) (Chong and Gradstein, 2007; Savoia et al., 2010).

Second, high inequality can lead to *elite capture*. Empirical work on studying political and de facto legal power is difficult, yet there is a growing consensus that high levels of inequality can lead to elite capture and thereby reduce the long-term quality of legal and political institutions (Acemoglu and Robinson, 2008, 2013; Bartels, 2018; Chong and Gradstein, 2007; Cummins and Rodriguez, 2010; Savoia et al., 2010; van Bavel, 2016). Further, if institutions are disproportionately geared towards elite interests, then they might be less likely to be geared towards positive long-term trajectories. We might see more rent-seeking and less investment in public goods. Moreover, if elite capture is strong enough, such capture, and the potential inequality that comes with it, can intensify going forward (Chong and Gradstein, 2007).

Now, one might object and wonder whether *elite interests* and longtermist interests will necessarily be misaligned. Could an enlightened elite not even be more longtermist than a more democratic system? Here are two potential arguments. First, wealthy donors fund a significant part of research and direct action on existential risk and longtermism (the Open Philanthropy Project, for example). Indirectly, inequality might thus reduce existential risk through such funding. Second, rich people might have a lower rate of pure time preference than less well-off people, which might make them more aligned with investing in long-term causes.

In response to the first argument, remember we here focus on income inequality reductions. Private funding only requires ‘enough’ wealth inequality going forward, it need not require elite capture. And reducing income inequality is unlikely to eradicate the required wealth inequality and the existence of big donors. In response to the second argument, we are sceptical that elite capture would translate a lower impatience rate into longtermist strategies in policy. First off, a successful transmission would require influence to be systematic and well-coordinated across time and, probably, across different elite actors. Yet lobbying and elite influence must often capitalise on shorter windows of opportunities, which makes well-coordinated intertemporal policy capture less likely. Second, even if rich people have a lower impatience rate in the sense that they might care more about returns on investment rather than direct consumption, this is quite different from being concerned with the far future. It would be a coincidence if being concerned with getting a good return in the next years (or even decades) on my own investment converged much with policies that protect the interests of far-future people.

Of course, such considerations are speculative. But, in any case, we think that, on balance, there are stronger reasons to believe elite capture would increase – rather than

decrease – existential risk. First, elite capture often comes with rent seeking, which lowers institutional quality (Chong and Gradstein, 2007). Second, industries like oil, gas, weapons and others are often concentrated and well organised in exerting influence in law and legislation. Their interests and influence overall are likely to be more short-term than longtermist. Third, recent decades have seen a shift towards a stronger shareholder value orientation in corporate governance. A common criticism of this shift is that it incentivises more short-term decisions. Accordingly, corporate influence into public institutions will likely display short-termist bias too. Finally, we can, of course, imagine that ‘pro-longtermist elite capture’ could happen and gamble on that possibility. However, if strong democratic and legal oversight and the power to check elite influence is lost, we might struggle to reverse our gamble.

Third, high inequality is likely to reduce social capital and trust (Alesina and La Ferrara, 2002; Knack and Keefer, 1997; Rothstein and Uslaner, 2005). Social capital and trust in public institutions in turn are important for effective public goods provision (Beugelsdijk et al., 2004; Knack and Keefer, 1997). Effective public goods provision, in turn, is important for (some) effective measures to reduce existential risk (and, more generally, to coordinate towards more valuable long-term trajectories). Therefore, high inequality could reduce societies’ capacities to effectively respond to large-scale challenges like existential risk.

Finally, some limited direct evidence suggests societies with higher social capital and lower inequality exhibit better preventive and adaptive outcomes for environmental risks and can show greater resilience to external shocks (Kahn, 2005; van Bavel et al., 2018). For example, Matthew Kahn provides some evidence that more equal countries, when controlled for GDP, have significantly lower death rates in natural catastrophes (Kahn, 2005). While smaller natural catastrophes are different from global catastrophic risk scenarios, resilience in such events might be somewhat indicative of societies’ resilience to catastrophic risks.

So, good social and institutional conditions could help reduce existential risk. Consider next how, conversely, bad conditions might *increase* existential risk. A key driver of existential risk is *conflict*, both between and within nation-states (or what (Ord, 2020: 175–9) calls a ‘risk factor’). Conflicts and arms races raise human-induced existential risks such as nuclear war, the outbreak of a bio-engineered virus or the launch of misaligned artificial intelligence. Note that an existential catastrophe could be set in motion either purposefully or accidentally. Both are more likely during conflict. Nuclear warheads, cyberweapons, and bioweapons could all be used purposefully to attack enemy states, leading to potential global escalation. But as past nuclear incidents and close calls during the Cold War show, arms races also increase the probability of accidental catastrophes (Schlosser, 2013).

Esteban and Schneider find that formal and empirical evidence suggests that political and social polarisation increases the risk of violent conflict, both intra-nationally and internationally (Esteban and Schneider, 2008). If income inequality increases polarisation, inequality may indirectly drive existential risk. Indeed, recent evidence suggests that income inequality can increase the degree of polarisation between groups of citizens. Bonica et al. find that the degree of polarisation within the US House of Representatives, for example, is accurately tracked by domestic income inequality, with correlation

coefficients rising up to 0.95 depending on the chosen time-period (Bonica et al., 2013: 105–8). Of course, correlation does not imply causation and the correlation is likely at least partially the result of reverse causation or a confounding variable. That said, we should assign a non-negligible credence to inequality partially *causing* polarisation. Moreover, inequality and polarisation might also play some role in getting polarising and populist candidates elected (Piketty, 2018). In a preliminary analysis of US election data, Darvas and Efstathiou find that more unequal states were more likely to vote for Donald Trump, after controlling for variables such as income, race and education (Darvas and Efstathiou, 2016). Populist politicians – like Trump, Bolsonaro, and others – are likely bad news for existential risk reduction. They are less cooperative in delivering regional and global public goods and typically prefer riskier, and more conflictual and nationalistic policy styles.

Differential progress

We have surveyed some reasons why inequality might translate into worse institutional conditions for longtermism. Beyond more formal institutions and avenues for collective action, we might also consider the cultural, moral and informal social norms that could potentially impact existential risk or whose underlying values might get locked in in the future.

The simple idea is that countries that sustain low levels of inequality will foster – and require for their support – a public moral culture that values solidarity and cooperation. More egalitarian policies might in turn move citizens and leaders towards more altruism and stronger regard to moral and social considerations in decision processes. Societies that actively work against income inequality may thereby reinforce broadly ‘pro-social’ social norms. Arguably, more egalitarian attitudes and norms might support public goods provision and favour expanding one’s moral circle to other countries and future generations. Countries with high levels of inequality, in contrast, might reinforce norms of competition, individualism, and personal responsibility. Policies that encourage competition and smaller moral circles also seem more likely to attract leaders that value individualism and competition. Indeed, as Wilkinson and Pickett note, more equal societies give more in development aid and score better on the Global Peace Index (Wilkinson and Pickett, 2010: 227). Again, we may wonder whether these relationships are not partially explained by confounding variables or reverse causality. That said, the causal link through social norms and public morality has some intuitive force. If true – and drawing on what we said above – a public commitment to equality might support a public moral culture that values solidarity and cooperation, which could help reduce existential risk and lower the risk of negative value lock-in.²⁰

A related idea is that egalitarian societies might provide better conditions for *differential progress* (Tomasik, 2015). The thought is that new technologies often pose a risk when they become available before society has developed the collective ‘wisdom’ to use them well. Technology should not develop too fast relative to progress in wisdom. Consider artificial intelligence for example. Bostrom argues that once artificial intelligences (AI’s) outsmart humans in AI-creation, systems might iteratively improve themselves and potentially set in motion an intelligence explosion (Bostrom, 2014). Quite quickly, it might become difficult to control AI and align it with our interest. Such a scenario, if it happens, might still be

some time away (or not). However, if we do not develop collective wisdom first, it might be too late by the time superintelligent AI arrives on the scene.

But what goes into the *wisdom* side of differential progress? Minimally, it requires effective institutions, values, and empirical insight and understanding. We have argued that equality might help strengthen the public institutions required for effective collective action to reduce existential risks. But society and the institutions governing it might also require public commitment to values conducive to longtermism. A commitment to equality and cooperation, and the norms required to sustain such a commitment, might help. Together then, equality could improve differential progress.²¹

Growth

As we concluded in Short-term effects, it seems slightly more probable that equality increases rather than reduces economic growth in developed countries. But that raises the question: under longtermism, is economic growth good or bad in expectation? For example, what if economic growth increases existential risk? Indirectly, equality would then increase existential risk too.

Theorists have advanced opposing views on whether economic growth is desirable under longtermism. On the one hand, faster economic growth *speeds up technological progress*, which gives us less time to work on their safety and can increase existential risk (Yudkowsky, 2013). Moreover, spill-over growth from developed countries can increase the number of nations with access to destructive technology. For example, as developing countries grow economically, they might increasingly afford nuclear technology. On the other hand, growth could also speed up the progress required to effectively manage existential risk. For example, very poor countries are less likely to fund innovative green technology or develop a vaccine during a global pandemic. Moreover, overall existential risk might drop dramatically once humanity becomes an interplanetary species (things would have to go wrong on two or more planets almost simultaneously in such a scenario, also see Ord, 2020: 194). Under higher growth rates, we might reach the ‘safe’ interplanetary state earlier, with less time overall for things to go wrong under a high-growth trajectory. And even in the here and now, as Kahn finds, richer countries are more resilient to shocks and have far fewer deaths in natural catastrophes (Kahn, 2005). Building on a model by Charles Jones, Leopold Aschenbrenner also argues that with higher incomes, humanity is willing to spend more on safety and proportionally less on existential-risk-increasing consumption (Aschenbrenner, 2020; Jones, 2016). Finally – and arguably most importantly – growth could strengthen cooperation by creating opportunities and incentives for positive-sum cooperation. Under stagnation, in contrast, self-interested behaviour primarily takes the form of zero-sum competition (Tomasik, 2015). Such zero-sum competition, in turn, increases the risk of conflict. More generally, Benjamin Friedman argues that in times of economic growth, countries tend to make more moral progress than during periods of stagnation (Friedman, 2006).

What are we to make of this discussion? Overall, our impression is that most longtermists are somewhat favourable of economic growth.²² At the same time, it is difficult to tell which of the above arguments should receive which weight. One reason is that economic growth rates do not go hand in hand with the rates of dangerous technological

growth. Imagine, for instance, a Cold War-like scenario between the United States and China. Such an arms race would probably slow down economic growth as both countries lose major trade partners but nevertheless speed up development of state-funded destructive technology. Economic growth is a rather coarse-grained variable. Relatedly, the relevant counterfactual for us would also be: what kind of economic growth would we have under conditions of stark inequality? There is some chance that economic growth under inequality would have different characteristics than more ‘egalitarian growth’. For example, if societies are less cooperative, less inclusive and emit more greenhouse gases, they might have a less desirable *type* of economic growth. Alas, these questions are beyond our current scope. Further research into economic growth and longtermism, including the more specific interactions suggested, are clearly valuable.

Let us take stock. In our long-term analysis, several mechanisms suggested equality could, in expectation, improve the value of the long-term future, particularly by reducing existential risk, while only the mechanism via growth was uncertain. Thus, given our current evidence, longtermists should support inequality reduction.

What follows?

We have argued that, no matter the time horizon, we have instrumental reason to reduce within-country economic inequality (at current margins). What follows from this argument for what we ought to do *all things considered*?²³

First, if you are a *utilitarian*, our argument shows that you ought to prefer more equality all things considered. Using a comparative and scalar notion, we can define utilitarianism as:

Utilitarianism: Out of two policy options, one ought to choose the policy that in evidence-relative expectation brings about a higher total well-being of all agents within the relevant timeframe.

For utilitarians, the pro-equality argument thus is not just *pro tanto* but all-things-considered and it robustly holds across a short, medium, and long-term time horizon.

But what do our arguments imply for theories other than utilitarianism? We now suggest that on most theories, our *pro tanto* argument either supplies an all-things-considered argument or, at least, a weighty *pro tanto* argument. To do so, we survey the ways in which someone can diverge from utilitarianism and whether that would challenge our argument. We will show that our *pro tanto* argument has important implications for how philosophers – of at least most stripes – should think about economic inequality. Of course, given space constraints, we cannot discuss all non-utilitarian positions in ethics and political philosophy. Instead, we focus on the most popular positions in contemporary discussions (and those we find somewhat promising).

Distributive concerns

Some reject utilitarianism because they care not only about aggregate wellbeing but also about its distribution. For example, in discussions on the value of equality, telic

distributive egalitarianism is a popular position: it holds that, other things equal, distributive inequality between persons is intrinsically bad (Parfit, 1997; Temkin, 1993).²⁴

How far distributive egalitarianism affects our arguments depends on its scope. If we think only within-country inequalities are intrinsically bad, or if those are disproportionately bad, then distributive egalitarianism would *strengthen* our conclusion: we would then have instrumental *and* intrinsic reasons to reduce inequality.

However, if egalitarian theories have a global scope, such that global inequality is just as intrinsically bad as within-country inequality, then they do not so obviously support our conclusions. Reducing within-country inequality can help reduce global inequality. But there often are other ways to reduce global inequality. And some measures might reduce global inequality yet increase domestic inequality (low-skilled migration can have that effect, for example). An additional question is whether distributive egalitarianism should extend to inequalities *across generations*. Again, this would complicate the picture. So, what follows from distributive egalitarianism across space and time is far from clear.

In any case, all distributive egalitarians we know are also pluralists in that they hold that distributive equality is only valuable *pro tanto*. Besides equality, it also matters how much wellbeing there is. If the marginal effects on aggregate wellbeing are large enough, pluralist egalitarians typically think they should carry the day. Given the potentially big marginal effects, particularly in the long term, pluralist distributive egalitarianism is thus unlikely to challenge the all-things-considered argument in favour of equality.²⁵

Non-welfarism

Some reject utilitarianism, because they reject a purely welfarist axiology (Sumner, 1996: 7). Under such theories, the goodness of outcomes also depends on values other than well-being. Popular candidates in contemporary discussions include health, beauty, knowledge, achievement, freedom, human excellence, autonomy, and biodiversity.²⁶ Given space constraints, we cannot discuss all such proposals. But the following considerations at least suggest that the most common non-welfarist proposals are unlikely to threaten our all-things-considered argument.

First, such non-welfarist goods could challenge our argument, if they correlated negatively with equality. We are not aware of any arguments or evidence to this effect. If anything, several such goods correlate positively with equality. For example, equality in OECD countries correlates with good somatic and mental health, good educational outcomes, trust, and lower greenhouse gas emissions (Wilkinson and Pickett, 2010).²⁷

Second, such non-welfarist goods could challenge our argument, if they pulled in a very different direction than wellbeing. While this may sometimes happen for individuals, we are not aware of population-level evidence to this effect. If anything, several such goods correlate positively with aggregate wellbeing. For example, wellbeing seems positively correlated with freedom (Bavetta et al., 2014; Inglehart et al., 2008), democracy (Orviska et al., 2014; Owen et al., 2008), and with somatic and mental health (Deaton, 2007; Kahneman and Deaton, 2010).

Finally, and most importantly, our longtermist arguments were mostly that equality could help reduce *existential risk*. Even non-welfarists care about existential risk, as extinction would trivially preclude non-welfare human goods to be preserved and promoted in the future.²⁸

Those reasons suggest that most non-welfarist axiologies are unlikely to challenge our all-things-considered argument.

Population ethics

Some people reject the total view in population ethics, that is, the view that we should rank outcomes based on how much aggregate personal goodness they contain. For example, some people worry about the so-called Repugnant Conclusion, whereas others believe that we do not have moral reason to bring happy people into existence (see Greaves, 2017b). As alternatives, some people could adopt views which would seem to threaten the longtermist case – average or person-affecting views, for example. Such views might then also challenge our longtermist argument for economic equality. But it is not clear how strong the challenge is (MacAskill, 2022: 8; Ord, 2020: 259–61).

First, even for average and person-affecting views, some longtermist conclusions can be established (Greaves and MacAskill, 2023; MacAskill, 2022: 8; Tarsney and Thomas, 2020; Thomas, 2022). This is particularly so for interventions that aim at positive trajectory-change conditional on there being future people.

Second, any rational agent who dismisses the total view should nevertheless assign a small credence to the total view being true anyway, particularly considering all other views have severe problems (see Arrhenius, 2000 for a well-known impossibility theorem). On an expected moral value calculation, the vast number of potential human descendants will then render the total view overwhelmingly important, even if it receives a low probability-mass. Indeed, Greaves and Ord conclude that under moral uncertainty over the correct population axiology, the total view becomes the dominant player (Greaves and Ord, 2017).²⁹

Of course, population ethics is complex, and much more could be said on this. But the point stands that many longtermist interventions do not require totalism and that, considering moral uncertainty, rational consequentialists who reject the total view should nevertheless favour inequality reduction based on longtermist considerations.

Non-consequentialism

Many reject not only utilitarianism but all forms of consequentialism: accordingly, considerations other than consequences – such as rights, motives, virtues, and duties – (also) determine whether an act is right or wrong.

To turn our *pro tanto* argument into an all-things-considered argument, we could draw on the High Stakes Argument: most non-consequentialist views typically hold that we do have a *pro tanto* moral duty to promote the good even though such a duty is also subject to constraints (rights for example). Such theories can still give you an all-things-considered duty to promote the good, either when promoting the good does not violate any constraints or when the marginal good you can do is large enough to override those constraints. Arguably, this applies to our argument, particularly to our longtermist argument: when we can impact the long-term future in expectation, the stakes are very high, given the long-term future's expected value (Greaves and MacAskill, 2023).³⁰

Of course, we are here more concerned with governmental policy and institutions rather than individual action. Some theorists argue that when moving from ethics towards

political philosophy, consequentialism becomes more plausible or even ‘inescapable’ (Goodin, 1995; Pettit, 2012). But most political theorists probably think political institutions come with their own non-consequentialist requirements, such as legitimacy, fairness, non-domination, justice, or rights. Many of those will reinforce our pro-equality argument. Relational egalitarians, for example, argue that stark domestic economic inequality often contributes to domination, oppression, and other inegalitarian relationships.³¹ Moreover, stark domestic inequalities could undermine fairness and equality of opportunity (Rawls, 1971; Roemer, 2000), democratic equality (Bartels, 2018; Scanlon, 2018), or undermine freedom as non-domination (Pettit, 2014). Many non-consequentialist views in political philosophy would thus strengthen our all-things-considered conclusion.

Other views, however, such as Nozick-style libertarianism, might challenge them.³² (Although, even for Nozick this is unclear, because he sets aside the question of whether side constraints could be overridden to ‘avoid catastrophic moral horror’ (Nozick, 1974: 29 footnote)). Surveying all non-consequentialist views in political philosophy unfortunately is beyond our current scope.³³ But, again, we think it reasonable to assume that even anti-egalitarian views should hold that states and societies have a *pro tanto* duty to promote the good or at least protect humanity’s long-term survival. If so, our longtermist argument for reducing economic inequality will at least provide a weighty *pro tanto* argument.

Limitations and further research

What precisely follows from our argument more practically will also depend on how one answers questions that we did not have space to address here. For example, as mentioned above, we mostly focused on income inequality but future work could zoom in on other forms of economic inequality (like wealth inequality) and ‘non-economic’ forms of inequality. Moreover, we argued that reducing domestic inequality at current margins is valuable but we did not discuss *how* to do so. Future research, both empirical and philosophical, could enquire which, if any, measures to reduce inequality are desirable (including from a longtermist perspective).

For various reasons, we only focussed on *domestic* inequality. But we believe future research that would probe *global* inequality’s effects across different time scales and across different types of global inequality would be valuable. Researchers on global inequality commonly distinguish (i) between-country inequality that compares countries on their aggregate achievement (say aggregate income), (ii) between-country inequality that compares the average achievement of each country (for example GDP per capita), and (iii) world inequality that simply looks at economic inequality at the global level treating the world’s population like one country (Milanovic, 2011, 2016). Of course, we can also look at regional inequalities, such as within Asia or Europe, and use the three different measures within a region rather than the entire world.

Future work could probe how far instrumental effects identified at the domestic level extrapolate to the regional or global level (each time considering differences between (i), (ii), and (iii)). For example, the decreasing marginal utility effect should mostly apply globally too (the ‘perceived unfairness’ less so). Moreover, it might be that stark inequalities globally and within regions also diminish the institutional quality of national and international political organisations like the European Union. At the same time, some

potential effects might be specific to the international arena. For example, addressing longtermist challenges like climate change or existential risk will require international coordination and cooperation. Stark between-country inequalities might make lower-income countries less willing to cooperate with richer countries to benefit future generations.³⁴ Finally, if one goes beyond Instrumentalism, how to assess inequalities beyond nation states raises its own philosophical questions (Beitz, 2001). Most distributive egalitarians, for example, view both national and global inequalities as intrinsically bad (Caney, 2006). Relational views, on the other hand, hold that distributive inequalities are non-instrumentally bad in virtue of affecting social relations, and such relations are quite different within groups, regions, countries and across borders (Ip, 2016).

Conclusions

Instrumental arguments against economic inequality often neglect the intertemporal consequences of inequality. This constitutes a large and important gap in the literature, both in philosophy and economics. In this article, we have assessed the instrumental case against within-country income inequality across three different time-horizons. The instrumental case for equality in the short term is strong. The case for inequality-reduction is epistemically slightly weaker for the medium term but nevertheless persistent. Finally, inequality reduction also seems supported from a longtermist perspective: mediated by climate change, lower institutional quality, polarisation and conflict, and lower differential progress, income inequality might increase existential risk and negative trajectory change. Therefore, we conclude, somewhat tentatively, that we have instrumental reason to favour income inequality reduction, regardless of our preferred time-horizon. Moreover, our instrumental case should weigh heavily. We argued that on most normative views in philosophy – including non-consequentialist views – our instrumental case either gives us an all-things-considered or, at least, a weighty *pro tanto* reason to prefer lower inequality.

Acknowledgements

We would like to thank Ryan Doody, Marc Fleurbaey, Hazel Browne, Nikhil Venkatesh, Phil Trammel, Angelo Imperiale, and two anonymous reviewers of *Politics, Philosophy & Economics* for helpful written comments and discussions, as well as participants of the Global Priorities Institute work-in-progress group in Oxford, the work-in-progress seminar at the Center for Population-Level Bioethics at Rutgers, and the Disaster Resilience Group in Groningen for helpful comments and discussions.


Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Andreas T. Schmidt  <https://orcid.org/0000-0002-2323-2838>

Notes

1. We briefly come back to non-instrumental egalitarian views in What follows?.
2. See, for example, (O'Neill, 2008; Scanlon, 2018; Woodard, 2019: 7) for philosophical arguments.
3. Future research that extends our question would clearly be valuable, including work on developing countries. Moreover, further work might probe other, non-economic forms of inequality, such as status or power inequalities. We here focus only on economic inequality. We do so to keep the paper feasible. But, still, economic inequality is more broadly important: first, we can arguably draw better conclusions about economic inequality than about other forms because there is better data and more research on it; second, economic inequality likely contributes to or otherwise impacts other forms of inequality (for example, below we discuss the nexus between economic and political inequality); third, various philosophical views identify economic inequality as potentially problematic (see What follows?); and, finally, there are some reasonably well-understood measures to reduce it.
4. The causes of growing inequality are various and complex (Atkinson, 2015; International Panel on Social Progress, 2018: 3). Relatedly, to reduce inequality is not a question of one policy measure alone. For example, Atkinson offers a package of policy proposals across several fields, including social security, labour market policies, competition policy, and income, capital, gift and inheritance tax (Atkinson, 2015). Different measures will have different effects and which ones to take or not will require both careful empirical investigation and engaging with normative views beyond our normative framework. (For example, relational egalitarians sometimes defend unconditional over means-tested benefits on relational grounds (Wolff, 1998)).
5. Of course, this categorisation and list is simplistic. More theories, including hybrid theories, are available. See (Lin, 2022a, 2022b) for an overview.
6. Alternatively, instead of intervals, we could use exponential discounting (this would make no difference for our argument). Economists use discount rates to measure how fast the value of consumption declines over time. Sometimes, economists also discount well-being itself (called a positive *rate of pure time preference* or a positive *rate of impatience*). Economists do not seem to agree on a unique rate of impatience (Gollier, 2012: 10–11). Most philosophers, however, argue for a zero rate of pure time preference (Broome, 1994; Cowen and Parfit, 1992; Greaves, 2017a; Parfit, 1984: 480–6; Tarsney, 2017); but also see Heath 2017; Mogensen 2022; Purves 2016). We here do not defend a particular time frame, so do not take a stance on this question.
7. Although being only about *pro tanto* reason, our comparative notion resonates with scalar views of consequentialism, as characterized in What follows? (also see Norcross 2008, 2009; Sinhababu 2018). Instead of a scalar version, one could use a maximising version but specify the option one ought to choose relative to a given option-space. Adjusting the option-space would then allow you to adjust how 'ideal' or 'non-ideal' you would want your theory to be.
8. See (Bailey, 1997; Barrett, 2022; Goodin, 1995; Halstead, 2017; Hardin, 1990; Lum, 1977; Pettit, 2012; Schmidt, 2023a; Viehoff, 2017; Woodard, 2019) on consequentialism and instrumentalism in political philosophy.

9. Easterlin et al. respond that the relationship disappears under long enough time frames (Easterlin, 2016; Easterlin et al., 2010). But (Albinsky, 2022; Kaiser and Vendrik, 2019) present methodological objections. Additionally, one might worry about the reliability of life satisfaction measures across time: ‘life satisfaction’ might simply mean something different when income and quality of life change (Cowen, 2018: 19).
10. Although (Layard et al., 2008) find that the marginal utility of income declines at a rate faster than a logarithmic relationship between income and well-being would indicate (technically, they find an elasticity of the marginal utility of income with respect to the level of income that is larger than 1). If true, this would further reinforce the decreasing marginal utility effect.
11. We write ‘typically’ because it depends on empirical conditions. For example, if people’s well-being is already close to an upper bound, then the effect might not hold.
12. In the Kahneman/Deaton study find that above 70,000 USD increases in income make no difference for well-being. However, using real-time rather than retrospective experience wellbeing data, Killingsworth argues there is no satiation point and wellbeing continues to increase logarithmically with growing income (albeit, again, more slowly than life satisfaction) (Killingsworth, 2021).
13. Also see (Oishi and Kesebir, 2015: 5). However, the relationship between inequality and life-satisfaction might not be linear. For instance, Caporale et al. find a *positive* effect of inequality on life satisfaction in lower-income, Eastern-European countries (Caporale et al., 2009: 20). Yu and Wang argue that in richer countries inequality creates a sense of unfairness and jealousy, whereas in (some) lower-income countries seeing others do well might make people hopeful about the future (Yu and Wang, 2017). Since we focus on richer countries, however, we can safely assume that the ‘social comparison effect’ of inequality on aggregate well-being is overall negative.
14. Also see (Pickett and Wilkinson, 2015) for a response.
15. We here draw heavily on two recent reports on inequality (International Panel on Social Progress, 2018; OECD, 2015).
16. As mentioned above, longtermism can come in a strong and a weak form. Given that Instrumentalism here is a *pro tanto* principle, one can remain neutral between them.
17. A different worry is that all actions – even helping an old lady across the street – can affect the long-term future. Accordingly, we are always clueless about an act’s actual consequences (Lenman, 2000). We agree with Greaves that many such actions are not problematic, as we can be rationally indifferent about the *expected* long term value, given a natural evidential symmetry (Greaves, 2016). This reply applies to Instrumentalism too which focuses on *expected* aggregate wellbeing.
18. One might worry that considering all potential astronomical suffering – be it human or non-human – extinction might be on balance good in expectation. One could respond that if you are uncertain about whether existence will be good or bad, you ought to reduce existential risk to win time to reduce such uncertainty. Given space constraints, we here simply assume that an existential catastrophe would be very bad in expectation. Also see (MacAskill, 2022: 9).
19. Existential risk can be extremely important even if we are not confident in such ‘high-risk’ estimates. First, if overall extinction risk is low (and we assume it is somewhat constant), but we can reduce it further, we have even stronger reason to reduce it. For the expected value of the long-term future becomes higher, the longer the future is expected to go (Ord, 2020: Appendix E). Second, under some conditions, uncertainty about risk can even make it more important. For example, uncertainty might raise the moral stakes for tail-end risks in certain existential risks, like climate change.

20. We here depart a little from the original question of whether, *ceteris paribus*, less inequality is better in expectation, as we here also plug in some ‘empirical’ conditions potentially required to sustain lower levels of inequality. Arguably, this is somewhat justified, as typical OECD countries with low inequality come with some public commitments to equality.
21. Does equality also facilitate differential *intellectual* progress (‘empirical insight and understanding’)? Such progress would require better technical insight – for example understanding existential risks better, better forecasting, better protective technology – and better insights in the humanities and social sciences. What matters here is the speed of progress in these fields *relative* to progress in those areas of technology and natural and applied sciences that increase existential risk. One could speculate that egalitarian societies incentivise better differential intellectual progress. First, in unequal societies, technological progress might be driven more through (less regulated) market forces and commercial applications, which could provide incentives to speed up technologies that increase existential risk. Second, much of the intellectual progress – for example in the social sciences but also partly in protective technology – are public goods likely undersupplied through markets. So, countries with a stronger focus on public good provisions might be more likely to supply such research, for example through state funding. Finally, degrees and research in the humanities and social sciences often yield lower incomes than those in technical fields. Redistribution and better safety nets make it easier to enrol in lower-paying degrees. Pro-social egalitarian norms might also improve their social recognition. Because they are so speculative, we here present those considerations merely as pathways potentially meriting further consideration.
22. See, for example, MacAskill’s arguments that ‘stagnation’ (which includes economic stagnation) is a severe long-term risk factor (MacAskill, 2022: 7).
23. The ‘all things considered’ here refers to whether we ought to prefer less inequality considering all *moral* reasons. Of course, an *empirical ceteris paribus* clause still applies. Importantly, even if you have all-things-considered reason to prefer more equality, you must still evaluate each egalitarian policy on its own merit.
24. Although most distributive egalitarians think distributive inequalities are bad (or unjust) only if they are attributable to luck but not free choice and many focus on a distribuendum other than wellbeing. See (Arneson, 1989; Cohen, 2011; Dworkin, 1981) for example.
25. One of us elsewhere argues that distributive egalitarianism is implausible, because its extension to intergenerational distributions is necessary yet implausible (Schmidt, 2023b). Alternatively, one could adopt prioritarianism which assigns decreasing marginal moral value to wellbeing the more wellbeing a person already has (Parfit, 1997). But, much like pluralist distributive egalitarianism, prioritarianism pays attention to the amount of wellbeing too. Given the high stakes involved, prioritarianism would also support our all-things-considered conclusion.
26. Another restriction we make here is that we do not discuss non-human animal wellbeing. This would complicate our picture, although it is not clear how it would change our conclusions (Budolfson and Spears, 2020).
27. One might respond with a ‘Nietzschean’ view, where elite cultural goods and achievements, like great operas, are far more important. But, arguably, even elite cultural goods like classical music seem, if anything, more common and better funded in egalitarian European countries (we do not claim any causality). We do not discuss this further here because of space constraints and because the elite view does not seem too auspicious to begin with.
28. See (Frick, 2017) for example.

29. One way to fuse different views in population ethics under moral uncertainty is to take a critical-level total view (MacAskill, 2022: 8).
30. See (Mogensen, 2019) for a reply and (Schmidt and Barrett, 2023) for a discussion.
31. See, for example, (Anderson, 1999; Bengtson and Lippert-Rasmussen, 2023; Fourie et al., 2015; Lippert-Rasmussen, 2018; Schemmel, 2021; Schmidt, 2021)
32. The situation becomes more complex, as several non-consequentialist theories also comprise views about intergenerational obligations that might entail a duty to reduce existential risk (also, see Ord, 2020: 2).
33. See (Schmidt and Barrett, 2023) for a discussion of longtermism and political philosophy.
34. Thanks to Marc Fleurbaey for this suggestion.

References

- Acaravci A and Ozturk I (2010) On the relationship between energy consumption, CO2 emissions and economic growth in Europe. *Energy* 35(12): 5412–5420. The 3rd International Conference on Sustainable Energy and Environmental Protection, SEEP 2009.
- Acemoglu D, Johnson S, and Robinson JA (2005) Chapter 6 institutions as a fundamental cause of long-run growth. In: Aghion P and Durlauf SN (eds) *Handbook of Economic Growth*. Amsterdam: Elsevier, pp. 385–472. DOI: 10.1016/S1574-0684(05)01006-3.
- Acemoglu D and Robinson JA (2008) Persistence of power, elites, and institutions. *American Economic Review* 98(1): 267–293.
- Acemoglu D and Robinson JA (2013) Economics versus politics: pitfalls of policy advice. *Journal of Economic Perspectives* 27(2): 173–192.
- Albinsky V (2022) Does Economic Growth Meaningfully Improve Well-being? An Optimistic Re-Analysis of Easterlin’s Research. Available at: <https://forum.effectivealtruism.org/posts/coryFCKmcMKdJb7Pz/does-economic-growth-meaningfully-improve-well-being-an> (accessed 20 October 2022).
- Alesina A and La Ferrara E (2002) Who trusts others? *Journal of Public Economics* 85(2): 207–234.
- Alesina A and Perotti R (1996) Income distribution, political instability, and investment. *European Economic Review* 40(6): 1203–1228.
- Anderson E (1999) What is the point of equality? *Ethics* 109(2): 287–337.
- Arneson RJ (1989) Equality and equal opportunity for welfare. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 56(1): 77–93.
- Arrhenius G (2000) An impossibility theorem for welfarist axiologies. *Economics and Philosophy* 16(2): 247–266. Cambridge University Press.
- Aschenbrenner L (2020) *Existential Risk and Growth*. Working paper. Oxford: Global Priorities Institute.
- Atkinson AB (2015) *Inequality*. Cambridge, Mass.: Harvard University Press.
- Atkinson AB and Brandolini A (2001) Promise and pitfalls in the use of ‘secondary’ data-sets: income inequality in OECD countries as a case study. *Journal of Economic Literature* 39(3): 771–799.
- Bailey JW (1997) *Utilitarianism, Institutions, and Justice*. Oxford: Oxford University Press.
- Barrett J (2022) Social Beneficence. Working paper No. 11-2022. Oxford: Global Priorities Institute. Available at: <https://globalprioritiesinstitute.org/jacob-barrett-social-beneficence-global-priorities-institute-university-of-oxford/page/12/>.

- Bartels LM (2018) *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton: Princeton University Press.
- Baum SD, Armstrong S, Ekenstedt T, et al. (2019) Long-term trajectories of human civilization. *Foresight (Los Angeles, Calif)* 21(1): 53–83.
- Bavetta S, Navarra P, Maimone D, et al. (2014) *Freedom and the Pursuit of Happiness: An Economic and Political Perspective*. Cambridge: Cambridge University Press.
- Beckstead N (2013) *On the Overwhelming Importance of Shaping the Far Future*. Newark: Rutgers University.
- Beitz CR (2001) Does global inequality matter? *Metaphilosophy* 32(1–2): 95–112.
- Bengtson A and Lippert-Rasmussen K (2023) Relational egalitarianism and moral unequals. *Journal of Political Philosophy* forthcoming: 1–24. DOI: 10.1111/jopp.12299.
- Beugelsdijk S, de Groot HLF, and van Schaik ABTM (2004) Trust and economic growth: a robustness analysis. *Oxford Economic Papers* 56(1): 118–134.
- Birdsall N (2001) Why inequality matters: some economic issues. *Ethics & International Affairs* 15(2): 3–28.
- Blanchflower D and Oswald A (2003) Does Inequality Reduce Happiness? Evidence from the States of the USA from the 1970s to the 1990s. *Mimeographed, Warwick University*.
- Bonica A, McCarty N, Poole KT, et al. (2013) Why hasn't democracy slowed rising inequality? *Journal of Economic Perspectives* 27(3): 103–124.
- Boström N (2014) *Superintelligence: Paths, Dangers, Strategies*. Oxford: Oxford University Press.
- Bowles S and Park Y (2005) Emulation, inequality, and work hours: was Thorsten Veblen right?*. *The Economic Journal* 115(507): F397–F412.
- Broome J (1994) Discounting the future. *Philosophy & Public Affairs* 23(2): 128–156.
- Budolfson M and Spears D (2020) Public policy, consequentialism, the environment, and non-human animals. In: Portmore, D (ed) *Oxford Handbook of Consequentialism*. Oxford: Oxford University Press, pp. 592–615.
- Caney S (2006) *Justice Beyond Borders: A Global Political Theory*. Oxford: Oxford University Press.
- Caporale GM, Georgellis Y, Tsitsianis N, et al. (2009) Income and happiness across Europe: do reference values matter? *Journal of Economic Psychology* 30(1): 42–51.
- Chong A and Gradstein M (2007) Inequality and institutions. *The Review of Economics and Statistics* 89(3): 454–465. MIT Press.
- Cingano F (2014) *Trends in Income Inequality and its Impact on Economic Growth*. OECD Social, Employment and Migration Working Papers 163. Paris: OECD. Available at: <https://doi.org/10.1787/5jxrxncwv6j-en>.
- Clark AE, Frijters P, and Shields MA (2008) Relative income, happiness, and utility: an explanation for the easterlin paradox and other puzzles. *Journal of Economic Literature* 46(1): 95–144.
- Cohen GA (2011) *On the Currency of Egalitarian Justice, and Other Essays in Political Philosophy*. Princeton: Princeton University Press. Available at: <http://www.jstor.org/stable/j.ctt7rp56> (accessed 22 January 2015).
- Cowen T (2004) Policy implications of zero discounting: an exploration in politics and morality. *Social Philosophy and Policy* 21(1): 121–140. Cambridge University Press.
- Cowen T (2018) *Stubborn Attachments: A Vision for a Society of Free, Prosperous, and Responsible Individuals*. San Francisco: Stripe Press.
- Cowen T and Parfit D (1992) Against the social discount rate. In: Laslett P and Fishkin JS (eds) *Justice Between Age Groups*. New Haven: Yale University Press, pp. 144–168.

- Cummins M and Rodriguez F (2010) Is there a numbers versus rights trade-off in immigration policy? What the data say. *Journal of Human Development and Capabilities* 11(2): 281–303.
- Cushing L, Morello-Frosch R, Wander M, et al. (2015) The haves, the have-nots, and the health of everyone: the relationship between social inequality and environmental quality. *Annual Review of Public Health* 36: 193–209.
- Darvas Z and Efstathiou K (2016) Income inequality boosted Trump vote. In: *Bruegel blog*. Available at: <https://european.economicblogs.org/bruegel/2016/darvas-and-konstantinos-efstathiou-income-inequality-boosted-trump-vote> (accessed 8 June 2020).
- Deaton A (2007) *Income, Aging, Health and Wellbeing Around the World: Evidence from the Gallup World Poll*. Working Paper Series 13317, Working Paper, August. Cambridge: National Bureau of Economic Research. DOI: 10.3386/w13317.
- Dworkin R (1981) What is equality? Part 2: equality of resources. *Philosophy & Public Affairs* 10(4): 283–345.
- Easterlin RA (1974) Does economic growth improve the human lot? Some empirical evidence. In: David PA and Reder MW (eds) *Nations and Households in Economic Growth*. New York: Academic Press, pp. 89–125. DOI: 10.1016/B978-0-12-205050-3.50008-7.
- Easterlin RA (2016) Paradox lost? *IZA Discussion Paper* (No. 9676). Available at: <http://ftp.iza.org/dp9676.pdf>.
- Easterlin RA, McVey LA, Switek M, et al. (2010) The happiness–income paradox revisited. *Proceedings of the National Academy of Sciences* 107(52): 22463–22468.
- Esteban J and Schneider G (2008) Polarization and conflict: theoretical and empirical issues. *Journal of Peace Research* 45(2): 131–141. SAGE Publications td.
- Ferrer-i-Carbonell A (2005) Income and well-being: an empirical analysis of the comparison income effect. *Journal of Public Economics* 89(5): 997–1019.
- Ferrer-i-Carbonell A and Ramos X (2012) *Inequality and Happiness: A Survey*. GINI Discussion Paper 38. Amsterdam: University of Amsterdam.
- Fitzgerald JB, Jorgenson AK, and Clark B (2015) Energy consumption and working hours: a longitudinal study of developed and developing nations, 1990–2008. *Environmental Sociology* 1(3): 213–223. Routledge.
- Foellmi R and Zweimüller J (2006) Income distribution and demand-induced innovations. *The Review of Economic Studies* 73(4): 941–960.
- Fourie C, Schuppert F, and Wallimann-Helmer I (2015) *Social Equality: On What It Means to Be Equals*. Oxford: Oxford University Press.
- Frick J (2017) On the survival of humanity. *Canadian Journal of Philosophy* 47(2–3): 344–367.
- Friedman BM (2006) *The Moral Consequences of Economic Growth*. New York: Vintage Books.
- Galor O and Moav O (2004) From physical to human capital accumulation: inequality and the process of development. *The Review of Economic Studies* 71(4): 1001–1026.
- Gassebner M, Lamla MJ, and Sturm J-E (2011) Determinants of pollution: what do we really know? *Oxford Economic Papers* 63(3): 568–595. Oxford Academic.
- Ghatak M and Jiang NN-H (2002) A simple model of inequality, occupational choice, and development. *Journal of Development Economics* 69(1): 205–226.
- Glaeser E, Scheinkman J, and Shleifer A (2003) The injustice of inequality. *Journal of Monetary Economics* 50(1): 199–222.
- Global Peace Index 2019: Measuring Peace in a Complex World (2019) June. Sydney: Institute for Economics & Peace. Available at: <http://visionofhumanity.org/reports>.

- Gollier C (2012) *Pricing the Planet's Future: The Economics of Discounting in an Uncertain World*. Princeton, NJ: Princeton University Press. Available at: <https://press.princeton.edu/books/hardcover/9780691148762/pricing-the-planets-future> (accessed 7 June 2020).
- Goodin RE (1995) *Utilitarianism as a Public Philosophy*. Cambridge: Cambridge University Press.
- Greaves H (2016) Cluelessness. *Proceedings of the Aristotelian Society* 116(3): 311–339.
- Greaves H (2017a) Discounting for public policy: a survey. *Economics & Philosophy* 33(3): 391–439.
- Greaves H (2017b) Population axiology. *Philosophy Compass* 12(11): e12442.
- Greaves H and MacAskill W (2023) The case for strong longtermism. In: Barrett J, Thorstad D, and Greaves H (eds) *Essays on Longtermism*. Oxford: Oxford University Press.
- Greaves H and Ord T (2017) Moral uncertainty about population axiology. *Journal of Ethics and Social Philosophy* 12(2): 135–167.
- Gruen C and Klasen S (2013) Income, inequality, and subjective well-being: an international and intertemporal perspective using panel data. *Jahrbuch für Wirtschaftsgeschichte/Economic History Yearbook* 54(1): 15–35.
- Grunewald N, Klasen S, Martínez-Zarzoso I, et al. (2012) *Income Inequality and Carbon Emissions*. ID 2013039, SSRN Scholarly Paper, 29 February. Rochester, NY: Social Science Research Network. DOI: 10.2139/ssrn.2013039.
- Halstead J (2017) High stakes instrumentalism. *Ethical Theory and Moral Practice* 20(2): 295–311.
- Hardin R (1990) *Morality Within the Limits of Reason*. Chicago: University of Chicago Press.
- Haybron DM (2008) *The Pursuit of Unhappiness: The Elusive Psychology of Well-Being: The Elusive Psychology of Well-Being*. Oxford: Oxford University Press.
- Heath J (2017) Climate ethics: justifying a positive social time preference. *Journal of Moral Philosophy* 14(4): 435–462.
- Heerink N, Mulatu A, and Bulte E (2001) Income inequality and the environment: aggregation bias in environmental Kuznets curves. *Ecological Economics* 38(3): 359–367.
- Holtz-Eakin D and Selden TM (1992) *Stoking the Fires? Co2 Emissions and Economic Growth*. Working Paper Series 4248, Working Paper, December. Cambridge: National Bureau of Economic Research. DOI: 10.3386/w4248.
- Inglehart R, Foa R, Peterson C, et al. (2008) Development, freedom, and rising happiness: a global perspective (1981–2007). *Perspectives on Psychological Science* 3(4): 264–285.
- International Panel on Social Progress (ed) (2018) *Rethinking Society for the 21st Century: Volume 1, Socio-Economic Transformations: Report of the International Panel on Social Progress*. Cambridge: Cambridge University Press.
- Ip KKW (2016) *Egalitarianism and Global Justice: From a Relational Perspective*. New York: Palgrave Macmillan.
- Jones CI (2016) Life and growth. *Journal of Political Economy* 124(2): 539–578. The University of Chicago Press.
- Jorgenson AK, Schor JB, Huang X, et al. (2015) Income inequality and residential carbon emissions in the United States: a preliminary analysis. *Human Ecology Review* 22(1): 93–106. [Society for Human Ecology, ANU Press].
- Jorgenson AK, Schor JB, Knight KW, et al. (2016) Domestic inequality and carbon emissions in comparative perspective. *Sociological Forum* 31(S1): 770–786.
- Kahn ME (2005) The death toll from natural disasters: the role of income, geography, and institutions. *The Review of Economics and Statistics* 87(2): 271–284.

- Kahneman D and Deaton A (2010) High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences* 107(38): 16489–16493.
- Kahneman D and Krueger AB (2006) Developments in the measurement of subjective well-being. *Journal of Economic Perspectives* 20(1): 3–24.
- Kahneman D and Sugden R (2005) Experienced utility as a standard of policy evaluation. *Environmental and Resource Economics* 32(1): 161–181.
- Kaiser CF and Vendrik MCM (2019) Different versions of the Easterlin Paradox: new evidence for European countries. In: Rojas M (ed.) *The Economics of Happiness: How the Easterlin Paradox Transformed Our Understanding of Well-Being and Progress*. Cham: Springer International Publishing, pp. 27–55. DOI: 10.1007/978-3-030-15835-4_2.
- Kaldor N (1955) Alternative theories of distribution. *The Review of Economic Studies* 23(2): 83–100. [Oxford University Press, Review of Economic Studies, Ltd.].
- Keefer P and Knack S (2002) Polarization, politics and property rights: links between inequality and growth. *Public Choice* 111(1): 127–154.
- Killingsworth MA (2021) Experienced well-being rises with income, even above \$75,000 per year. *Proceedings of the National Academy of Sciences* 118(4): e2016976118. Proceedings of the National Academy of Sciences.
- Knack S and Keefer P (1997) Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics* 112(4): 1251–1288.
- Knight KW, Rosa EA, and Schor JB (2013) Could working less reduce pressures on the environment? A cross-national panel analysis of OECD countries, 1970–2007. *Global Environmental Change* 23(4): 691–700.
- Knight KW, Schor JB, and Jorgenson AK (2017) Wealth inequality and carbon emissions in high-income countries. *Social Currents* 4(5): 403–412. SAGE Publications Inc.
- Kornai J (1992) *The Socialist System: The Political Economy of Communism*. Oxford: Clarendon Press.
- Layard R, Mayraz G, and Nickell S (2008) The marginal utility of income. *Journal of Public Economics* 92(8): 1846–1857. Special Issue: Happiness and Public Economics.
- Lenman J (2000) Consequentialism and cluelessness. *Philosophy and Public Affairs* 29(4): 342–370.
- Lerner AP (1978) Utilitarian marginalism (nozick, rawls, justice, and welfare). *Eastern Economic Journal* 4(1): 51–65. Palgrave Macmillan Journals.
- Li H and Zou H (1998) Income inequality is not harmful for growth: theory and evidence. *Review of Development Economics* 2(3): 318–334.
- Lin E (2022a) Well-being, part 1: the concept of well-being. *Philosophy Compass* 17(2): e12812.
- Lin E (2022b) Well-being, part 2: theories of well-being. *Philosophy Compass* 17(2): e12813.
- Lippert-Rasmussen K (2018) *Relational Egalitarianism: Living as Equals*. Cambridge: Cambridge University Press.
- Lum A (1977) Social utilitarianism in the philosophy of Mo Tzu. *Journal of Chinese Philosophy* 4(2): 187–207.
- MacAskill W (2022) *What We Owe the Future*. London: Hachette UK.
- Marmot M (2005) Social determinants of health inequalities. *The Lancet* 365(9464): 1099–1104.
- Milanovic B (2011) *Worlds Apart: Measuring International and Global Inequality*. Princeton: Princeton University Press.
- Milanovic B (2016) *Global Inequality: A New Approach for the Age of Globalization*. Cambridge: Harvard University Press.

- Mogensen AL (2019) Staking our future: deontic long-termism and the non-identity problem. working paper. Available at: <https://globalprioritiesinstitute.org/andreas-mogensen-staking-our-future-deontic-long-termism-and-the-non-identity-problem/>.
- Mogensen AL (2022) The only ethical argument for positive δ ? Partiality and pure time preference. *Philosophical Studies* 179(9): 2731–2750.
- Murphy KM, Shleifer A, and Vishny R (1989) Income distribution, market size, and industrialization. *The Quarterly Journal of Economics* 104(3): 537–564. Oxford Academic.
- Norcross A (2008) The scalar approach to utilitarianism. In: West H (ed) *The Blackwell Guide to Mill's Utilitarianism*. Oxford: Blackwell Publishing, pp. 217–232.
- Norcross A (2009) Reasons without demands: rethinking rightness. In: Dreier J (ed) *Contemporary Debates in Moral Theory*, 2nd ed. Oxford: John Wiley & Sons, pp. 38–44.
- Nozick R (1974) *Anarchy, State, and Utopia*. New York: Basic Books.
- OECD (2015) *In It Together: Why Less Inequality Benefits All*. Paris: Organisation for Economic Co-operation and Development. Available at: <http://www.oecd-ilibrary.org/content/book/9789264235120-en> (accessed 29 January 2018).
- Oishi S and Kesebir S (2015) Income inequality explains why economic growth does not always translate to an increase in happiness. *Psychological Science* 26(10): 1630–1638. SAGE Publications nc.
- Oishi S, Kesebir S, and Diener E (2011) Income inequality and happiness. *Psychological Science* 22(9): 1095–1100.
- O'Neill M (2008) What should egalitarians believe? *Philosophy & Public Affairs* 36(2): 119–156.
- Ord T (2020) *The Precipice: Existential Risk and the Future of Humanity*. London: Hachette UK.
- Orviska M, Caplanova A, and Hudson J (2014) The impact of democracy on well-being. *Social Indicators Research* 115(1): 493–508.
- Owen AL, Videras J, and Willemsen C (2008) Democracy, participation, and life satisfaction*. *Social Science Quarterly* 89(4): 987–1005.
- Parfit D (1984) *Reasons and Persons*. Oxford: Oxford University Press.
- Parfit D (1997) Equality and priority. *Ratio* 10(3): 202–221.
- Pettit P (2012) The inescapability of consequentialism. In: Heuer U and Lang G (eds) *Luck, Value, and Commitment: Themes From the Ethics of Bernard Williams*. New York: Oxford University Press, pp. 41.
- Pettit P (2014) *Just Freedom: A Moral Compass for a Complex World*. New York: W. W. Norton & Company.
- Pickett KE and Wilkinson RG (2015) Income inequality and health: a causal review. *Social Science & Medicine* 128: 316–326.
- Piketty T (2018) *Brahmin Left vs Merchant Right: Rising Inequality & the Changing Structure of Political Conflict (Evidence from France, Britain and the US, 1948-2017)*. 2018/7, WID.world WORKING PAPER, March. Paris: World Inequality Lab.
- Pörtner HO, Roberts DC, Tignor M, et al. (2022) *IPCC, 2022: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK and New York, NY, USA: Cambridge University Press. DOI: 10.1017/9781009325844.
- Purves D (2016) The case for discounting the future. *Ethics, Policy & Environment* 19(2): 213–230.
- Ramanathan R (2006) A multi-factor efficiency perspective to the relationships among world GDP, energy consumption and carbon dioxide emissions. *Technological Forecasting and Social Change* 73(5): 483–494.

- Ravallion M, Heil M, and Jalan J (2000) Carbon emissions and income inequality. *Oxford Economic Papers* 52(4): 651–669. Oxford Academic.
- Rawls J (1971) *A Theory of Justice*. Cambridge, Mass.: Harvard University Press.
- Roemer JE (2000) *Equality of Opportunity*. Cambridge, Mass.: Harvard University Press.
- Rothstein B and Uslaner EM (2005) All for all: equality, corruption, and social trust. *World Politics* 58(1): 41–72.
- Sacks D, Stevenson B, and Wolfers J (2012) The New Stylized Facts about Income and Subjective Well-Being. *IZA Discussion Paper* (No. 7105). Available at: <https://www.econstor.eu/bitstream/10419/69372/1/733999808.pdf>.
- Sandberg A and Bostrom N (2008) *Global Catastrophic Risks Survey*. Technical Report 2008–1. Oxford: Future of Humanity Institute, Oxford University.
- Savoia A, Easaw J, and McKay A (2010) Inequality, democracy, and institutions: a critical review of recent research. *World Development* 38(2): 142–154. Formal and Informal Institutions and Development.
- Scanlon TM (2018) *Why Does Inequality Matter?* Oxford: Oxford University Press.
- Schemmel C (2021) *Justice and Egalitarian Relations*. Oxford: Oxford University Press.
- Schkade DA and Kahneman D (1998) Does living in California make people happy? A focusing illusion in judgments of life satisfaction. *Psychological Science* 9(5): 340–346. SAGE Publications nc.
- Schlosser E (2013) *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety*. London: Penguin.
- Schmidt AT (2021) From relational equality to personal responsibility. *Philosophical Studies Online First*: 1–27. DOI: 10.1007/s11098-021-01711-3.
- Schmidt AT (2023b) Egalitarianism across generations. unpublished manuscript.
- Schmidt AT (2023a) Consequentialism and the role of practices in political philosophy. *Res Publica: A Journal of Legal and Social Philosophy* forthcoming.
- Schmidt AT and Barrett J (2023) Longtermist political philosophy: an agenda for future research. In: Barrett J, Thorstad D, and Greaves H (eds) *Essays on Longtermism*. Oxford: Oxford University Press.
- Sinhababu N (2018) Scalar consequentialism the right way. *Philosophical Studies* 175(12): 3131–3144.
- Stevenson B and Wolfers J (2008) *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox*. 14282, Working Paper, August. Cambridge: National Bureau of Economic Research. DOI: 10.3386/w14282.
- Stevenson B and Wolfers J (2013) Subjective well-being and income: is there any evidence of satiation? *American Economic Review* 103(3): 598–604.
- Sumner LW (1996) *Welfare, Happiness, and Ethics*. Oxford: Clarendon Press.
- Tarsney C (2017) Does a discount rate measure the costs of climate change? *Economics & Philosophy* 33(3): 337–365.
- Tarsney C and Thomas T (2020) Non-additive axiologies in large worlds. GPI Working Paper. Global Priorities Institute. Available at: <https://globalprioritiesinstitute.org/christian-tarsney-and-teruji-thomas-non-additive-axiologies-in-large-worlds/> (accessed 20 October 2022).
- Temkin LS (1993) *Inequality*. Oxford: Oxford University Press.
- Thomas T (2022) The Asymmetry, Uncertainty and the Long Term. *Philosophy and Phenomenological Research*, online first, pp. 1–31.
- Tomasik B (2015) Differential Intellectual Progress as a Positive-Sum Project. In: *Center on Long-Term Risk*. Available at: <https://longtermrisk.org/differential-intellectual-progress-as-a-positive-sum-project/> (accessed 10 June 2020).

- Valentini L (2012) Ideal vs. Non-ideal Theory: A Conceptual Map. DOI: 10.1111/j.1747-9991.2012.00500.x.
- van Bavel B (2016) *The Invisible Hand?: How Market Economies Have Emerged and Declined Since AD 500*. Oxford: Oxford University Press. Available at: <https://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199608133.001.0001/acprof-9780199608133> (accessed 23 May 2020).
- van Bavel B, Curtis DR, and Soens T (2018) Economic inequality and institutional adaptation in response to flood hazards: a historical analysis. *Ecology and Society* 23(4). Resilience Alliance Inc. DOI: 10.2307/26796872.
- Viehoff D (2017) XIV—The truth in political instrumentalism. *Proceedings of the Aristotelian Society* 117(3): 273–295.
- Wilkinson RG and Pickett K (2010) *The Spirit Level: Why Equality Is Better for Everyone*. London: Penguin Books.
- Wolff J (1998) Fairness, respect, and the egalitarian ethos. *Philosophy & Public Affairs* 27(2): 97–122.
- Woodard C (2019) *Taking Utilitarianism Seriously*. Oxford: Oxford University Press. DOI: 10.1093/oso/9780198732624.001.0001.
- Yu Z and Wang F (2017) Income inequality and happiness: an inverted U-shaped curve. *Frontiers in Psychology* 8. Frontiers. DOI: 10.3389/fpsyg.2017.02052.
- Yudkowsky E (2013) Do Earths with slower economic growth have a better chance at FAI? Available at: <https://www.lesswrong.com/posts/FS6NCWzzP8DHP4aD4/do-earths-with-slower-economic-growth-have-a-better-chance> (accessed 10 June 2020).
- Zweimüller J (2000) Schumpeterian entrepreneurs meet Engel's law: the impact of inequality on innovation-driven growth. *Journal of Economic Growth* 5(2): 185–206.

Author biographies

Andreas T Schmidt is an Associate Professor of Political Philosophy at the Faculty of Philosophy and the Centre for PPE at the University of Groningen in the Netherlands. His research focuses on longtermist political philosophy, socio-political freedom, inequality and egalitarianism, consequentialism, behavioural public policy, public health, and biomedical ethics.

Daan Juijn is a senior strategic advisor at the Dutch Ministry of Economic Affairs and Climate Policy. He works on AI strategy and policy, with a focus on the long-term impacts of powerful general-purpose AI systems.