10.3197/JPS.63799953906864

EDITORIAL INTRODUCTION

A Planet of 8 Billion and the Future of Humanity

David Samways – Editor

On 15 November 2022 the United Nations' Population Division marked the estimated birth of the 8 billionth member of the human population. António Guterres, United Nations Secretary-General, commented, 'The milestone is an occasion to celebrate diversity and advancements while considering humankind's shared responsibility for the planet' (UN, 2022). While he expressed concern about humanity's collective impact, the UN's general spin on 8 billion was positive and echoed the argument, most notably articulated by Julian Simon (1981), that every additional human being represents an opportunity rather than a problem. While it is clearly unfair to treat any of the 80 million individual children added to the global population each year as a problem, the ability to provide a good life to everyone whilst simultaneously tackling the environmental crisis becomes ever more difficult as the population grows (O'Neill et al., 2018).

Indeed, despite the overwhelming and growing scientific evidence of the (albeit indirect) role of population growth in the environmental crisis (IPCC, 2022; WWF 2022) the alarm around population growth has arguably been constantly diminishing since the publication of Paul and Anne Ehrlich's *The Population Bomb* (Ehrlich, 1968) in 1968. In part this is due to the success of the post WWII 'green revolution' in increasing agricultural yields, which contradicted claims of limits on food production (although it still entailed significant environmental externalities). Rather than the availability of food, the persistence of famine was recognised as due to social and political factors, with global inequality as the principal culprit.[1]

1 Also significant in the decline of population alarmism are discourses of population disavowalism (Coole, 2013; 2021).

In contrast, while population alarmism has seen a fairly steady decline, public concern about the environment has grown. Yet, despite accumulating evidence of the increasing toll of the human enterprise on natural systems and other species, public consciousness and concern has been somewhat spasmodic, rising in response to evidence of an impending crisis and abating as legislative and technical solutions are perceived to solve it. Two major nodes of environmental concern in the twentieth century, anxiety around industrial pollution and pesticides in the 1960s and the depletion of the ozone layer in late 1980s, can both be viewed as conforming to this pattern.

Both the increase in complacency about population growth and the chequered history of environmental concern may have a common root in the inability and unwillingness of individuals and communities to see beyond the relatively short term and acknowledge the broader consequences of the growth in the human enterprise. Environmental problems have largely been regarded as discrete issues rather than as symptoms of the wider and systemic consequences of human activity. Deeply embedded social discourses articulate the notion that the relatively recent past is indicative of the future and the evidence of the ever-greater refinement of our technical abilities is taken as a vindication of the idea of 'progress'.

Of course, the problem with the progressivist discourse lies not with the real and clearly observable improvements in human welfare, but with the largely hidden unsustainable environmental costs of progress. More recently, these environmental consequences have become more apparent with extreme events such a flooding, forest fires and droughts, alongside habitat destruction and accelerating species extinctions, reported in news media on an almost daily basis. Yet, there is little evidence that this knowledge and the genuine concern it has generated has prompted anything greater than moderate change in individual behaviour (see Taylor, 2012; Alcock et al., 2017; Fisher et al., 2018; Hill, 2019). Moreover, research suggests that the most significant voluntary changes in behaviour only occur after actual personal experience of catastrophic events caused by environmental change (Spence et al., 2011; Broomell et al., 2015; Demski et al. 2017).

Arguably, the long timescales involved in environmental and, particularly, demographic change engender complacency and a reluctance to act until the danger is imminent. From a sociological perspective, this might be explained by

the individual's focus upon the habitual and everyday dimensions of social life. While the broader environmental context is clearly acknowledged, agents have a 'hierarchy of purposes' and rank issues in order of priority with a tendency to focus upon more immediate or medium-term concerns.[2] Importantly, agents acknowledge the social structural context of action and the constraints they face in terms of their individual power and the collective nature of the problem. Moreover, the continuation of familiar socio-technical practices that have become axiomatic to 'a normal life' may help to preserve a sense of ontological security[3] in the face of underlying anxiety about potentially catastrophic environmental change.[4]

In our first article in this issue, William Rees argues that this inability or unwillingness of decision-makers and ordinary people to address the now abundantly clear biophysical overshoot of the human enterprise has a seldom considered evolutionary biological dimension. His central thesis is that cultural evolution and global social change have outpaced the biological evolution of the human brain and its cognitive processes leaving it 'functionally obsolete' and unable to cope with the ecological crisis.

Rees points out that the human brain evolved in a physical and social environment vastly different to that of the present day and was well adapted to conditions where social groups were small and the environmental conditions were largely cyclical and hence predictable. Where it came to coping with the unpredictable and unknown, such societies developed 'various tribal myths, gods and other forms of magical thinking' – thus, in sociological terms, providing the ontological security that human beings still desire. In contrast, modern techno-industrial (MTI) society represents a tiny fragment of our species' history and the challenges it presents are highly dynamic and complex. Arguably no challenge is greater or more complex than the impact that MTI society has had on the global environment. Rees argues that the lack of action in the face of the overwhelming

2 Evidence supports the idea that environmental concern is frequently displaced by anxiety about more immediate issues such as the economy or security (Kahn and Kotchen, 2011; Scruggs and Benegal, 2012; Taylor, 2012).

3 Ontological security, or security of being, is part of the agent's sense of contextual familiarity, of knowing how to proceed in various physical and social contexts. It is also concerned with the management of anxiety in the face of physical and social disruption.

4 For a discussion of environmental anxiety, see Clayton 2020.

evidence of impending catastrophe is symptomatic of the inability of our species to cope with the systemic complexity of the environmental crisis and that this maladaptation to the physical and social environment which we have created represents an existential threat.

Considering the problem of population growth, Rees notes that the UN's complacency, the reductionist simplicity of resistance to advocates of population reduction and, citing Nandita Bajaj and Kirsten Stade's article also published in this issue, pronatalism are obstacles to rationally dealing with human numbers as a factor in the environmental crisis.

Cataloguing the impact of the growth of consumption and population on the environment, like Rees, Bajaj and Stade argue that said impact not only represents an existential threat to many ecosystems and other species worldwide but will also mean enormous suffering for the poorest portion of humankind. They point out that organisations concerned with social and environmental justice have silenced discussion of human population growth but at the same time ignored the role of oppressive pronatalism in eroding reproductive autonomy. Bajaj and Stade's approach defines pronatalism in terms of 'cultural and institutional forces that compel reproduction', and as such challenges accepted notions of reproductive autonomy arising out of liberal rights discourse, as well as the notion of the authentic individual stepping outside of prevailing social discourses and making 'free' choices. In contrast, the authors identify a panoply of social, political, economic and cultural pronatalist pressures which shape reproductive decisions. Importantly however, they argue that by flinching from addressing population growth as a driver of the environmental crisis, those concerned with reproductive rights reinforce these pronatalist forces which limit reproductive autonomy.

As Bajaj and Stade's research makes clear, one of the most basic ways to reduce population growth is to the address the unmet need for contraception. Universal access to sexual, reproductive and child health care is an objective of the UN's Sustainable Development Goals (SDGs) and family planning is clearly central to this objective. Our third article by Aalok Chaurasia is concerned with how progress in meeting demand for family planning is measured. Chaurasia develops a composite index measuring progress in meeting family planning demand in three dimensions: provision of permanent methods (male and female

sterilisation); provision of modern spacing methods (such as inter-uterine devices, the contraceptive pill, condoms etc.); and expansion of choice in the method of family planning. This latter dimension is particularly important since the choice of method varies depending on the stage in the family building process, with spacing being more important in the early stages and permanent methods once desired family size has been achieved. The composite index thus considers both quantitative and qualitative aspects of family planning progress.

Chaurasia's analysis shows that progress in meeting demand for family planning is unsatisfactory in more than forty per cent of the 113 countries included in his research and that inter-country variation in progress is significant. In many countries, progress in some or all of the three dimensions of demand appears to have reversed. Importantly, Chaurasia notes that the opportunity to choose between spacing and permanent methods is not expanding in the majority of countries, suggesting that the family planning needs of both women and men are being neglected or not addressed at all. The differences between countries in family planning progress is shown to be largely the result of variation in meeting demand for permanent methods of birth control. Chaurasia remarks that, when the family planning movement was established nearly seventy years ago, reducing population growth was seen as central to the development of poor countries; however, while substantial progress has been made commitment to this objective appears to have waned. He concludes:

> Family planning needs to be treated as a development strategy for the realisation of the goal of planned family that is critical to sustainable development and human well-being rather than just an intervention to reduce fertility.

In our final full article of this issue, Theodore Lianos explores how some of the key elements of the modern steady-state economic model, particularly the notions of constant population and constant capital and wealth, can be found in the writings of Plato and Aristotle. Lianos argues that Plato and Aristotle are both concerned with the optimal relationship between the size of the population and the available land for a good standard of living. Importantly, Lianos observes that the central issue for these thinkers was the normative question of what is 'the best life' and how to achieve it. However, for the ancient Greeks, the notion of the best life

entailed more than just a material standard of living for the individual, embracing issues of collective good and social justice. Individual happiness, although dependent on sufficient wealth to live a temperate and generous lifestyle, was almost synonymous with a virtuous life. Lianos remarks that for these ancient Greek philosophers it was clear that regulating population size was axiomatic to a good life for all and that perhaps the ecological consequences of human numbers will lead to a reconsideration of their wisdom in modern societies.

The relatively simple environmental and social conditions of classical antiquity contrast starkly with those of the present. Reflecting on the ability of human beings to cope with complexity, as discussed earlier in this editorial introduction, it's clear that, as William Rees argues, averting the environmental crisis requires a systemic approach. Thus, rather than treating environmental problems as discrete issues to be tackled with technical and legislative patches, they must be seen as symptoms of the wider impact of humankind on the Earth's biophysical systems. By definition, if environmental sustainability entails an economy in a steady-state in terms of its biophysical footprint, it follows that, all other things being equal, a trade-off exists between the size of the population and per capita standard of living. What population size can be sustained at a given level of welfare depends on a number of factors, critical amongst them the socio-technical systems by which welfare is provided (O'Neill et al., 2018). However, shifting social conventions about what defines a good life, moving away from accumulative consumption and towards sufficiency and non-material factors while paying attention to social justice, as emphasised by both Plato and Aristotle, will also be a significant determinant of the size of population that can be socially and environmentally sustained.

We close this issue on a sad note with an obituary to Herman Daly, founding figure of the discipline of ecological economics, advocate of the steady-state economy and valued member of the JP&S editorial board, who died in October 2022.

References

Alcock, I., M.P. White, T. Taylor, D.F. Coldwell, M.O. Gribble, K.L. Evans, A. Corner, S. Vardoulakis and L.E. Fleming. 2017. '"Green" on the ground but not in the air: Pro-environmental attitudes are related to household behaviours but not discretionary air travel'. *Global Environmental Change* **42**: 136–47. https://doi.org/10.1016/j.gloenvcha.2016.11.005

Broomell, S.B., D.V. Budescu and H. Por. 2015. 'Personal experience with climate change predicts intentions to act'. *Global Environmental Change* **32**: 67–73. https://doi.org/10.1016/j.gloenvcha.2015.03.001

Coole, D. 2013. 'Too many bodies? The return and disavowal of the population question'. *Environmental Politics* **22** (2): 195–215. https://doi.org/10.1080/09644016.2012.730268

Coole, D. 2021. 'The toxification of population discourse. A genealogical study'. *The Journal of Development Studies*. https://doi.org/10.1080/00220388.2021.1915479

Clayton, S. 2020. 'Climate anxiety: Psychological responses to climate change'. *Journal of Anxiety Disorders*. https://doi.org/10.1016/j.janxdis.2020.102263

Demski, C., S. Capstick, N. Pidgeon, R. Gennaro Sposato and A. Spence. 2017. 'Experience of extreme weather affects climate change mitigation and adaptation responses'. *Climatic Change* 140: 149–164. https://doi.org/10.1007/s10584-016-1837-4

Ehrlich, P.R. 1968. *The Population Bomb*. New York: Balentine Books.

Fisher, S., R. Fitzgerald and W. Poortinga. 2018. 'Climate change. Social divisions in beliefs and behaviour'. In D. Phillips, J. Curtice, M. Phillips and J. Perry (eds), *British Social Attitudes 35*, pp. 146–71. London: The National Centre for Social Research.

Hill, L. 2019. *Aviation Index 2019 – Public attitudes towards aviation in the UK*. Paris: IPSOS Mori. https://www.ipsos.com/ipsos-mori/ en-uk/aviation-index-2019-public-attitudes-towards-aviation-uk (accessed 27 November 2019).

IPCC. 2022 *Climate Change 2022 Mitigation of Climate Change*, https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/

Kahn, M. and M. Kotchen. 2011. 'Business cycle effects on concern about climate change: the chilling effect of recession'. *Climate Change Economics* **2** (3): 257–73. https://doi.org/10.1142/S2010007811000292

O'Neill, D.W., A.L. Fanning, W.F. Lamb and J.K. Steinberger. 2018. 'A good life for all within planetary boundaries'. *Nature Sustainability* **1**: 88–95. https://doi.org/10.1038/s41893-018-0021-4

Scruggs, L. and S. Benegal. 2012. 'Declining public concern about climate change: can we blame the great recession?' *Global Environmental Change* 22: 505–15. https://doi.org/10.1016/j.gloenvcha.2012.01.002

Simon, J.L. 1981 *The Ultimate Resource*. Princeton: Princeton University Press.

Spence, A., W. Poortinga, C. Butler and N.F. Pidgeon. 2011. 'Perceptions of climate change and willingness to save energy related to flood experience'. *Nature Climate Change*. https://doi.org/10.1038/nclimate1059

Taylor, E. 2016. 'Concern about climate change: a paler shade of green?' In A. Park, J. Curtice, K. Thomson, M. Phillips, E. Clery, and S. Butt (eds), *British Social Attitudes: The 26th report*. pp. 91–118. London: Sage. https://dx.doi.org/10.4135/9781446212073

UN. 2022. Day of 8 Billion. https://www.un.org/en/dayof8billion

WWF. 2022. *Living Planet Report 2022 – Building a Nature-positive Society*. R.E.A. Almond, M. Grooten, D. Juffe Bignoli and T. Petersen (eds). Gland: WWF.